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<table>
<thead>
<tr>
<th>PDF CHAPTERS</th>
<th>ONLINE FILE NAMES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine &amp; Public Health</td>
<td>NEWS_13xx_medicine</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>NEWS_13xx_pharmacy</td>
</tr>
<tr>
<td>Dentistry</td>
<td>NEWS_13xx_dentistry</td>
</tr>
<tr>
<td>Biomedicine</td>
<td>NEWS_13xx_biomedicine</td>
</tr>
<tr>
<td>Psychology</td>
<td>NEWS_13xx_psychology</td>
</tr>
<tr>
<td>Mathematics</td>
<td>NEWS_13xx_mathematics</td>
</tr>
<tr>
<td>Statistics</td>
<td>NEWS_13xx_statistics</td>
</tr>
<tr>
<td>Computer Science</td>
<td>NEWS_13xx_computer_science</td>
</tr>
<tr>
<td>Chemistry</td>
<td>NEWS_13xx_chemistry</td>
</tr>
<tr>
<td>Engineering</td>
<td>NEWS_13xx_engineering</td>
</tr>
<tr>
<td>Energy</td>
<td>NEWS_13xx_energy</td>
</tr>
<tr>
<td>Physics</td>
<td>NEWS_13xx_physics</td>
</tr>
<tr>
<td>Materials Science</td>
<td>NEWS_13xx_materials</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>NEWS_13xx_earth_sciences</td>
</tr>
<tr>
<td>Geography</td>
<td>NEWS_13xx_geography</td>
</tr>
<tr>
<td>Environmental Sciences</td>
<td>NEWS_13xx_environment</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>NEWS_13xx_life_sciences</td>
</tr>
<tr>
<td>Economics/Management Science</td>
<td>NEWS_13xx_economics</td>
</tr>
<tr>
<td>Business for Professionals/Management</td>
<td>NEWS_13xx_business_management</td>
</tr>
<tr>
<td>Law</td>
<td>NEWS_13xx_law</td>
</tr>
<tr>
<td>Popular Science</td>
<td>NEWS_13xx_popular_sciences</td>
</tr>
<tr>
<td>Education</td>
<td>NEWS_13xx_education</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>NEWS_13xx_social_sciences</td>
</tr>
<tr>
<td>Philosophy</td>
<td>NEWS_13xx_philosophy</td>
</tr>
<tr>
<td>Linguistics</td>
<td>NEWS_13xx_linguistics</td>
</tr>
<tr>
<td>Humanities/Arts/Design</td>
<td>NEWS_13xx_humanities</td>
</tr>
<tr>
<td>Apress Business for Professionals</td>
<td>NEWS_13xx_Apress_professionals</td>
</tr>
<tr>
<td>Apress Professional Computing</td>
<td>NEWS_13xx_Apress_computing</td>
</tr>
<tr>
<td>Proceedings</td>
<td>NEWS_13xx_proceedings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITIONAL FILES</th>
<th>ONLINE FILE NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author Index</td>
<td>NEWS_13xx_author</td>
</tr>
<tr>
<td>Title Index</td>
<td>NEWS_13xx_title</td>
</tr>
</tbody>
</table>

*xx is replaced by the number of the month (1301–1312)
Contents

Author Index ................................................................. II
Title Index ................................................................. XVI
Proceedings .............................................................. 277
Orderform ................................................................. 285

Apress Business for Professionals ......................... 257
Apress Professional Computing ..................... 260
Biomedicine ................................................................. 42
Business for Professionals/Management ............... 207
Chemistry ................................................................. 93
Computer Science ...................................................... 82
Earth Sciences ............................................................. 161
Economics/Management Science ....................... 205
Education .................................................................. 228
Energy ....................................................................... 132
Engineering ............................................................... 101
Environmental Sciences ............................................. 175
Geography ................................................................. 171
Humanities/Arts/Design ............................................... 256
Law .......................................................................... 222
Life Sciences ............................................................... 184
Linguistics ............................................................... 253
Materials Science ...................................................... 159
Mathematics .............................................................. 63
Medicine & Public Health .............................................. 1
Philosophy ................................................................. 248
Physics ...................................................................... 137
Popular Science .......................................................... 227
Psychology ................................................................ 57
Social Sciences ............................................................ 238
Statistics ................................................................. 78

All titles are included in Springer’s eBook Collections on SpringerLink.com.
Exceptions are marked “Only available in print.”
<table>
<thead>
<tr>
<th>Author Index</th>
<th>Springer.com/NEWSonline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
</tr>
<tr>
<td>277 Ab. Hamid (Eds), Technology Partnership Malaysia - Japan Model</td>
<td>222 Ayad, A Model Harmonised International Arbitration Law Code for the Middle East and North Africa</td>
</tr>
<tr>
<td>63 Abbas, Introduction to Compactness Results in Symplectic Field Theory</td>
<td>102 Azadpour, SystemVerilog for Design and Verification using UVM</td>
</tr>
<tr>
<td>280 Abergel (Eds), Econophysics of Agent-based models (New Economic Windows)</td>
<td>280 Azevedo (Ed), Advances in Sustainable and Competitive Manufacturing Systems (Lecture Notes in Mechanical Engineering)</td>
</tr>
<tr>
<td>278 Abramowicz (Ed), Business Information Systems, BIS 2013 (Lecture Notes in Business Information Processing 157)</td>
<td>175 Azha Putra (Eds), Governments’ Responses to Climate Change: Selected Examples From Asia-Pacific (SpringerBriefs in Environment, Security, Development and Peace 10)</td>
</tr>
<tr>
<td>184 Abrol, Asiatic Honeybee Apis cerana</td>
<td></td>
</tr>
<tr>
<td>42 Adams, Autoimmune Disease, Genetics (SpringerBriefs in Public Health)</td>
<td></td>
</tr>
<tr>
<td>175 Agamuthu (Eds), Municipal Solid Waste Management in Asia and the Pacific Islands (Environmental Science and Engineering)</td>
<td></td>
</tr>
<tr>
<td>82 Agarwal et al., Online Collective Action (Lecture Notes in Social Networks)</td>
<td></td>
</tr>
<tr>
<td>238 Aggarwal (Eds), Linking Trade and Security, Europe (The Political Economy of the Asia Pacific)</td>
<td></td>
</tr>
<tr>
<td>57 Águeda Marujo (Eds), Positive Nations and Communities (Cross-Cultural Advancements in Positive Psychology 6)</td>
<td></td>
</tr>
<tr>
<td>1 Ahmazdadehfar (Eds), Clinical Applications of SPECT-CT</td>
<td></td>
</tr>
<tr>
<td>1 Akin (Eds), Atlas of Gynecologic Oncology Imaging (Atlas of Oncology Imaging)</td>
<td></td>
</tr>
<tr>
<td>171 Al-Fares, Historical Land Use/Land Cover Classification Using Remote Sensing (SpringerBriefs in Geography)</td>
<td></td>
</tr>
<tr>
<td>278 Albert (Ed), Logic-Based Program Synthesis and Transformation, LOPSTR 2012 (Lecture Notes in Computer Science, LNTCS 7844)</td>
<td></td>
</tr>
<tr>
<td>1 Alemanno (Eds), Anesthesia of the Upper Limb</td>
<td></td>
</tr>
<tr>
<td>281 Ali (Eds), Contemporary Challenges and Solutions in Applied Artificial Intelligence (Studies in Computational Intelligence 489)</td>
<td></td>
</tr>
<tr>
<td>278 Ali (Eds), Recent Trends in Applied Artificial Intelligence, Engineering and Other Applications of Applied Intelligent Systems (Lecture Notes in Computer Science, LNAI 7906)</td>
<td></td>
</tr>
<tr>
<td>63 Alladi (Eds), Combinatorial Analysis (Developments in Mathematics 32)</td>
<td></td>
</tr>
<tr>
<td>2 Allahbadia (Eds), Ovarian Stimulation Protocols</td>
<td></td>
</tr>
<tr>
<td>101 Amigoni (Eds), Methods and Experimental Techniques in Computer Engineering (SpringerBriefs in Applied Sciences and Technology)</td>
<td></td>
</tr>
<tr>
<td>101 Amine (Eds), Modeling Approaches and Algorithms for Advanced Computer Applications (Studies in Computational Intelligence 488)</td>
<td></td>
</tr>
<tr>
<td>184 Anderson (Eds), Wetland Techniques</td>
<td></td>
</tr>
<tr>
<td>185 Anderson (Eds), Wetland Techniques</td>
<td></td>
</tr>
<tr>
<td>82 Ang et al., Wireless Multimedia Sensor Networks on Reconfigurable Hardware</td>
<td></td>
</tr>
<tr>
<td>175 Angrick (Eds), Factor X (Eco-Efficiency in Industry and Science 29)</td>
<td></td>
</tr>
<tr>
<td>260 Antognini, Troubleshooting Oracle Performance. 2nd ed.</td>
<td></td>
</tr>
<tr>
<td>222 Antons (Eds), Intellectual Property and Free Trade Agreements in the Asia-Pacific Region (MPI Studies on Intellectual Property and Competition Law 20)</td>
<td></td>
</tr>
<tr>
<td>2 Anttila (Eds), Occupational Cancers</td>
<td></td>
</tr>
<tr>
<td>2 Antuña (Eds), Essentials In Elbow Surgery</td>
<td></td>
</tr>
<tr>
<td>184 Aon (Eds), Systems Biology of Metabolic and Signaling Networks (Springer Series in Biophysics 16)</td>
<td></td>
</tr>
<tr>
<td>159 Aoyagi/Ebara, Smart Biomaterials (NIMS Monographs)</td>
<td></td>
</tr>
<tr>
<td>93 Aparicio (Eds), Handbook of Olive Oil. 2nd ed.</td>
<td></td>
</tr>
<tr>
<td>238 Apt, Germany’s New Security Demographics (Demospheric Research Monographs)</td>
<td></td>
</tr>
<tr>
<td>57 Armstrong et al., Evidence-Based Interventions for Children with Challenging Behavior</td>
<td></td>
</tr>
<tr>
<td>228 Arnon et al., APOS Theory</td>
<td></td>
</tr>
<tr>
<td>101 Arslan, Modeling, Simulation, Testing, and Measurements of Wireless Communication Systems</td>
<td></td>
</tr>
<tr>
<td>3 Asherson (Ed), Handbook for Attention Deficit Hyperactivity Disorder</td>
<td></td>
</tr>
<tr>
<td>186 Asif, Progress and Opportunities of Doubled Haploid Production (SpringerBriefs in Plant Science 6)</td>
<td></td>
</tr>
<tr>
<td>3 Astoul (Eds), Thoracoscopy for Pulmonologists</td>
<td></td>
</tr>
<tr>
<td>207 Aubin, Time and Money (Lecture Notes in Economics and Mathematical Systems 670)</td>
<td></td>
</tr>
<tr>
<td>63 Aven/Jensen, Stochastic Models in Reliability (Stochastic Modelling and Applied Probability 41) 2nd ed.</td>
<td></td>
</tr>
<tr>
<td>222 Ayad, A Model Harmonised International Arbitration Law Code for the Middle East and North Africa</td>
<td></td>
</tr>
<tr>
<td>102 Azadpour, SystemVerilog for Design and Verification using UVM</td>
<td></td>
</tr>
<tr>
<td>280 Azevedo (Ed), Advances in Sustainable and Competitive Manufacturing Systems (Lecture Notes in Mechanical Engineering)</td>
<td></td>
</tr>
<tr>
<td>175 Azha Putra (Eds), Governments’ Responses to Climate Change: Selected Examples From Asia-Pacific (SpringerBriefs in Environment, Security, Development and Peace 10)</td>
<td></td>
</tr>
<tr>
<td>102 Baccour et al., Radio Link Quality Estimation in Low-Power Wireless Networks (SpringerBriefs in Electrical and Computer Engineering)</td>
<td></td>
</tr>
<tr>
<td>207 Backhaus (Ed), Encyclopedia of Law and Economics</td>
<td></td>
</tr>
<tr>
<td>42 Bae (Eds), Cancer Targeted Drug Delivery</td>
<td></td>
</tr>
<tr>
<td>102 Bagchi/Kulacki, Natural Convection in Superposed Fluid-Porous Layers (SpringerBriefs in Applied Sciences and Technology)</td>
<td></td>
</tr>
<tr>
<td>280 Bailey (Eds), Computational and Analytical Mathematics (Springer Proceedings in Mathematics &amp; Statistics 50)</td>
<td></td>
</tr>
<tr>
<td>93 Bajpai, Bleach Plant Effluents from the Pulp and Paper Industry (SpringerBriefs in Applied Sciences and Technology)</td>
<td></td>
</tr>
<tr>
<td>64 Bakry et al., Analysis and Geometry of Markov Diffusion Operators (Grundlehren der mathematischen Wissenschaften 348)</td>
<td></td>
</tr>
<tr>
<td>103 Balasinski, Design for Manufacturability</td>
<td></td>
</tr>
<tr>
<td>64 Baldeaux/Platen, Functionals of Multidimensional Diffusions with Applications to Finance (Bocconi &amp; Springer Series 5)</td>
<td></td>
</tr>
<tr>
<td>161 Balderer (Eds), Thermal and Mineral Waters (Environmental Earth Sciences)</td>
<td></td>
</tr>
<tr>
<td>42 Baldi, Ph.D. (Eds), Genetic Damage in Human Spermatozoa (Advances in Experimental Medicine and Biology 791)</td>
<td></td>
</tr>
<tr>
<td>222 Balouziyeh, A Legal Guide to United States Arbitration Law Code for the Middle East and North Africa</td>
<td></td>
</tr>
<tr>
<td>137 Baltuska/Cerullo, Tabletop Intense Femtosecond Pulse Sources and Their Applications</td>
<td></td>
</tr>
<tr>
<td>3 Barh (Ed), Omics Approaches in Breast Cancer, Prognosis</td>
<td></td>
</tr>
</tbody>
</table>
News 6/2013

43 Barh (Eds), Omics for Personalized Medicine
278 Barratt (Eds), Information Processing in Computer-Assisted Interventions, IPCAI 2013 (Lecture Notes in Computer Science, LNIP 7915)
64 Barreira, Dimension Theory of Hyperbolic Flows (Springer Monographs in Mathematics)
277 Barrero Meneses (Eds), LACAME 2012, (LACAME 2012) held in Medellin
207 Barreto/Leal, Race, Class, and Precinct Quality in American Cities
238 Barrett et al, Family Care and Social Capital: Transitions in Informal Care
186 Barth (Ed), Yarrowia lipolytica (Microbiology Monographs 25)
186 Barth (Ed), Yarrowia lipolytica, Genomics (Microbiology Monographs 24)
103 Bartling (Eds), Opening Science
278 Baumeister (Eds), Agile Processes in Software Engineering and Extreme Programming, XP 2013 (Lecture Notes in Business Information Processing 149)
103 Bazan/Jaseemuddin, Beamforming Antennas in Multi-Hop Wireless Networks (SpringerBriefs in Electrical and Computer Engineering)
280 Beilina (Ed), Applied Inverse Problems (Springer Proceedings in Mathematics & Statistics 48)
280 Beilina (Eds), Inverse Problems and Large-Scale Computations (Springer Proceedings in Mathematics & Statistics 52)
104 Belyaev (Eds), Mechanics and Model-Based Control of Advanced Engineering Systems
187 Bence (Ed), Protein Tyrosine Phosphatase Control of Metabolism
137 Bendiscoli, Fenomeni radioattivi (UNITEXT, Collana di Fisica e Astronomia) 2nd ed.
187 Bendix (Eds), Ecosystem Services, Biodiversity and Environmental Change in a Tropical Mountain Ecosystem of South Ecuador (Ecological Studies 221)
137 Benediktovich et al, Theoretical Concepts of X-Ray Nanoscale Analysis (Springer Series in Materials Science 183)
4 Bentley (Ed), Surgical Orthopaedics and Traumatology
161 Benveniste et al, Inland Water Altimetry
228 Benz (Eds), Early Mathematics Learning
208 Berg, Retail Branding and Store Loyalty. Store Accessibility (Reihe Handel und Internationales Marketing / Series Retailing and International Marketing)
159 Bergmann/Stumpf, Dental Ceramics (Topics in Mining, Metallurgy and Materials Engineering)
257 Berkman, Due Diligence and the Business Transaction
277 Berlo (Eds), Ambient Intelligence - Software and Applications (Advances in Intelligent Systems and Computing 219)
278 Beyer (Eds), Formal Techniques for Distributed Systems, FMOODS/FORTE 2013 (Lecture Notes in Computer Science, LNPSE 7892)
208 Bhowmik/Saha, Financial Inclusion of the Marginalised (India Studies in Business and Economics)
82 Birta/Arbez, Modelling and Simulation (Simulation Foundations, Methods and Applications) 2nd ed.
278 Blesa (Eds), Hybrid Metaheuristics, HM 2013 (Lecture Notes in Computer Science, LNTCS 7919)
260 Blewett et al., Pro Asynchronous Programming with .NET
228 Blömeke (Eds), International Perspectives on Teacher Knowledge, Beliefs and Opportunities to learn (Advances in Mathematics Education)
65 Bobrowski/Kimmel, An Operator Semigroup in Mathematical Genetics (SpringerBriefs in Applied Sciences and Technology)
4 Boet (Eds), La simulation en santé : de la théorie à la pratique
277 Bolay (Eds), Technologies for Sustainable Development
278 Bonacina (Ed), Automated Deduction -- CADE-24, Lake Placid (Lecture Notes in Computer Science, LNAI 7898)
43 Bonavida (Ed), Resistance to Immunotherapeutic Antibodies in Cancer (Resistance to Targeted Anti-Cancer Therapeutics 2)
278 Bonifaci (Eds), Experimental Algorithms, SEA 2013 (Lecture Notes in Computer Science, LNPE 7933)
229 Boone et al, Applying Rasch Measurement in Science Education Research
4 Booth et al., Breathlessness Management in Clinical Practice
83 Borenstein (Eds), Theory and Principled Methods for the Design of Metaheuristics (Natural Computing Series)
44 Borisova, Cholesterol and Presynaptic Glutamate Transport in the Brain (SpringerBriefs in Neuroscience 12)
104 Borja, Plasticity
65 Boucksom (Eds), An Introduction to the Kähler-Ricci Flow (Lecture Notes in Mathematics 2086)
260 Bramhall, Beginning Xcode
5 Brandes (Eds), Advanced Male Urethral and Genital Reconstructive Surgery (Current Clinical Urology) 2nd ed.
138 Brenneman, Measuring the Angular Momentum of Supermassive Black Holes (SpringerBriefs in Astronomy)
239 Brian (Ed), Revue de synthèse (Revue de Synthèse)
176 Brils (Eds), Risk-Informed Management of European River Basins (The Handbook of Environmental Chemistry 29)
223 Bu, Corporate Governance in China
261 Bucanek, Learn iOS App Development
171 Buchroithner (Eds), Cartography from Pole to Pole, Volume 1 (Lecture Notes in Geoinformation and Cartography 8)
171 Buchroithner (Eds), Cartography from Pole to Pole, Volume 2 (Lecture Notes in Geoinformation and Cartography 9)
257 Bujarski et al., How to Do Business in Latin America, Make Deals
278 Bulatov (Eds), Computer Science - Theory and Applications, CSR 2013 (Lecture Notes in Computer Science, LNTCS 7913)
208 Burke (Eds), Search Methodologies. 2nd ed.
280 Burr (Eds), Frontiers of Fundamental Physics and Physics Education Research (Springer Proceedings in Physics 145)
138 Bustos Molina, Kinetic Simulations of Ion Transport in Fusion Devices (Springer Theses)

C

83 Campisi (Ed), Security and Privacy in Biometrics
104 Cao (Eds), Fuzzy Information & Engineering and Operations Research & Management (Advances in Intelligent Systems and Computing 211)
253 Cao, The Variation Theory of Comparative Literature
<table>
<thead>
<tr>
<th>Author Index</th>
<th>springer.com/NEWSonline</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 Carbajo/Neira, NMR for Chemists and Biologists</td>
<td>139 Cristelli, Complexity in Financial Markets (Springer Theses)</td>
</tr>
<tr>
<td>138 Carroll/Lopes, Alien Seas</td>
<td>140 Curueanu, Dai buchi neri all’adroterapia (I blu)</td>
</tr>
<tr>
<td>277 Casillas (Eds), Management Intelligent Systems</td>
<td>58 Cusinato, La persona competente</td>
</tr>
<tr>
<td>105 Castrillón Mazo/Leupers, Programming Heterogeneous MPSoCs</td>
<td>248 Cutter (Eds), In Pursuit of Nanoethics (The International Library of Ethics, Law and Technology 10)</td>
</tr>
<tr>
<td>44 Catalano, Essential Elements for a GMP Analytical Chemistry Department</td>
<td>D</td>
</tr>
<tr>
<td>57 Cena (Rédacteurs), Teoria psicoanalitica e neuroscienze</td>
<td>67 Dai Pra/Caravenna, Probabilità (UNITEXT, La Matematica per il 3+2)</td>
</tr>
<tr>
<td>261 Cervo/Bebb, Pro Arduino Games</td>
<td>140 De Angelis/Pimenta, Particle and Astroparticle Physics (Undergraduate Lecture Notes in Physics 7)</td>
</tr>
<tr>
<td>83 Cervone (Eds), Data Mining for Geoinformatics</td>
<td>140 de Aquino, Beyond Standard Model Phenomenology at the LHC (Springer Theses)</td>
</tr>
<tr>
<td>93 Ceulemans, Group Theory applied to Chemistry (Theoretical Chemistry and Computational Modelling)</td>
<td>7 De Cecco/Rengo, MDCT and MRI of the Heart (A-Z notes in Radiological Practice and Reporting)</td>
</tr>
<tr>
<td>5 Chabrot (Eds), Embolization</td>
<td>45 De Nardo (Eds), The Inflamasome (Methods in Molecular Biology 1040)</td>
</tr>
<tr>
<td>5 Challacombe (Eds), Diagnostic Techniques in Urology</td>
<td>278 De Nicola (Eds), Coordination Models and Languages, COORDINATION 2013 (Lecture Notes in Computer Science, LNPS 7890)</td>
</tr>
<tr>
<td>278 Cellier (Eds), Formal Concept Analysis, ICFCA 2013 (Lecture Notes in Computer Science, LNAI 7880)</td>
<td>67 Debussche et al., The Dynamics of Nonlinear Reaction-Diffusion Equations with Small Lévy Noise (Lecture Notes in Mathematics 2085)</td>
</tr>
<tr>
<td>58 Cena (Rédacteurs), Teoria psicoanalitica e neuroscienze</td>
<td>8 Dekker (Ed), Exercise and Physical Functioning in Osteoarthritis (SpringerBriefs in Behavioral Medicine)</td>
</tr>
<tr>
<td>209 Choi (Ed), Handbook of EOQ Inventory Problems (International Series in Operations Research &amp; Management Science 197)</td>
<td>94 Del Nobile/Conte, Packaging for Food Preservation (Food Engineering Series)</td>
</tr>
<tr>
<td>277 Chu (Eds), Advances in Aerospace Guidance, Navigation and Control</td>
<td>45 del Río (Ed), Peroxisomes and their Key Role in Cellular Signaling and Metabolism (Subcellular Biochemistry 69)</td>
</tr>
<tr>
<td>66 Chui/Jiang, Applied Mathematics, Spectral Methods (Mathematics Textbooks for Science and Engineering 2)</td>
<td>262 Dellinger, Pro Android and Cloud Services</td>
</tr>
<tr>
<td>278 Cimiano (Eds), The Semantic Web: Semantics and Big Data, ESWC 2013 (Lecture Notes in Computer Science, LNISA 7882)</td>
<td>78 DeMaris/Selman, Converting Data into Evidence</td>
</tr>
<tr>
<td>6 Citrome, Handbook of Treatment-resistant Schizophrenia</td>
<td>209 Demartini, Performance Management Systems (Contributions to Management Science)</td>
</tr>
<tr>
<td>139 Clark, Viewing and Imaging the Solar System (The Patrick Moore Practical Astronomy Series 7)</td>
<td>209 Dennhardt, User-Generated Content and its Impact on Branding</td>
</tr>
</tbody>
</table>
News 6/2013

Author Index

8 Deterbeck/Kiefer, Video - assisted Thoracoscopic Lobectomy (Operation Primers 13)
210 Devos (Eds), Information Systems for Small and Medium-sized Enterprises (Progress in IS)
162 Dey, Fluivial Hydrodynamics (GeoPlanet: Earth and Planetary Sciences)
46 Dhawan (Eds), Genotoxicity Assessment (Methods in Molecular Biology 1044)
94 Dhir, Physiochemical Interactions of Amino Acids and Peptides in Aqueous Media
176 Dhir, Phytoremediation: Role of Aquatic Plants in Environmental Clean-Up
262 DiMarzio, Android Game Recipes
8 Dimick (Eds), Success in Academic Surgery: Health Services Research (Success in Academic Surgery)
210 Ding (Eds), Innovation and Marketing in the Pharmaceutical Industry, Research (International Series in Quantitative Marketing 20)
278 Dolev (Eds), Optical Supercomputing, OSC 2012 (Lecture Notes in Computer Science, LNTCS 7715)
278 Dowling (Eds), Distributed Applications and Interoperable Systems, DAIS 2013 (Lecture Notes in Computer Science, LNCCN 7891)
223 Dragos (Eds), Alternative Dispute Resolution in Administrative Proceedings
46 Ducry (Ed), Antibody-Drug Conjugates (Methods in Molecular Biology 1045)
68 Duren (Eds), Memahen Max Schiffer: Selected Papers Volume 2 (Contemporary Mathematicians)
277 Dziech (Eds), Multimedia Communications, Services and Security, MCSS 2013 (Communications in Computer and Information Science 368)

E

85 Ehlers, Open Learning Cultures, Evaluation
106 El Aroudi, Bifurcation Behavior in Switched Mode Power Supplies (Lecture Notes in Electrical Engineering 119)
68 Eldering, Normally Hyperbolic Invariant Manifolds (Atlantis Series in Dynamical Systems 2)
46 Emili (Eds), Systems Analysis of Chromatin-Related Protein Complexes in Cancer
239 Encyclopedia of Migration
106 Ergen, Mobile Broadband. 2nd ed.
94 Escríbano Cuesta, New Gold-Catalyzed Reactions and Applications for the Synthesis of Alkaloids (Springer Theses)
106 Evans, Partnership in Space (Springer Praxis Books)
262 Evans/Hailey, Data Virtualization

F

107 Fasthuber et al., Energy-Efficient Communication Processors
278 Fernández-Gago (Eds), Trust Management VII, IFIPTM 2013 (IFIP Advances in Information and Communication Technology 401)
278 Fernández-Izquierdo (Eds), Modeling and Simulation in Engineering, Economics, and Management, MS 2013 (Lecture Notes in Business Information Processing 145)
278 Fernández Vicente (Eds), Natural and Artificial Computation in Engineering and Medical Applications, IWINAC 2013 (Lecture Notes in Computer Science, LNTCS 7931)
278 Fernández Vicente (Eds), Natural and Artificial Models in Computation and Biology, IWINAC 2013 (Lecture Notes in Computer Science, LNTCS 7930)
159 Ferrara/Bengisu, Materials that Change Color (SpringerBriefs in Applied Sciences and Technology)
230 Ferrari et al., Developing Wisdom Through Education (SpringerBriefs in Education)
9 Ferrari et al., Nipple Sparing Mastectomy
69 Ferrario, Local Variance Estimation for Uncensored and Censored Observations
9 Ferro (Ed), Neuropsychiatric Symptoms of Cerebrovascular Diseases (Neuropsychiatric Symptoms of Neurological Disease)
280 Fesenko (Eds), Nanomaterials Imaging Techniques, Surface Studies, and Applications, August 26-September 2 (Springer Proceedings in Physics 146)
58 Fetzer (Eds), Simulations for Personnel Selection
59 Finkel (Eds), Behavior Genetics of Cognition Across the Lifespan (Advances in Behavior Genetics 1)
141 Fischer, Relativity for Everyone
230 Fleury Mortimer (Eds), Conceptual Profile: A Theory of Teaching and Learning Scientific Concepts (Contemporary Trends and Issues in Science Education 43)
248 Fleistad (Ed), Ethics or Moral Philosophy (Contemporary Philosophy: A New Survey 11)
162 Fort (Eds), Landscapes and Landforms of France (World Geomorphological Landscapes)
278 Franch (Eds), Advanced Information Systems Engineering Workshops, Valencia (Lecture Notes in Business Information Processing 148)
47 Freed (Ed), Advances in HIV-1 Assembly and Release
211 Friedli (Eds), Leading Operational Excellence in the Pharmaceutical Industry
211 Friedli et al., Strategic Management of Global Manufacturing Networks, Configuration (Management for Professionals)
263 Friedman, Practical ASP.NET MVC 4 Projects
141 Friedrich, Scattering Theory (Lecture Notes in Physics 872)
239 Fritz (Ed), Moving Toward a Just Peace (Clinical Sociology: Research and Practice)
141 Frémont, Young-Type Interferences with Electrons (Springer Series on Atomic, Optical, and Plasma Physics 77)
161 Fuente et al., Origin, Evolution and Biogeographic History of South American Turtles (Springer Earth System Sciences)
189 Fuerst (Ed), Planctomycetes: Cell Structure, Origins and Biology
162 Fuller, Our Beautiful Moon and its Mysterious Magnetism (SpringerBriefs in Earth Sciences)
163 Funk (Eds), Information Technology in Environmental Technology (Environmental Science and Engineering)
85 Furht, Survey of Cloud Computing (SpringerBriefs in Computer Science)
107 Furmans, Material Handling and Production Systems Modelling - based on Queueing Models
9 Furst, The Heart and Circulation
263 Futral/Greene, Intel® Trusted Execution Technology for Server Platforms

G

278 Gaborit (Ed), Post-Quantum Cryptography, PQCrypto 2013 (Lecture Notes in Computer Science, LNSC 7932)
Author Index

277 Gabriel (Eds), Biomedical Engineering
Systems and Technologies, BIOSPECT
2012 (Communications in Computer and
Information Science 357)

177 Golinska (Ed), Corporate Social Responsibility
in the Manufacturing and Services Sectors
(EcoProduction)

279 Guyot (Ed), Advanced Infocomm Technology,
ICAIT 2012 (Lecture Notes in Computer Science,
LNCCN 7593)

10 Gaddi (Eds), eHealth, Care and Quality of Life

107 Gajurel, Performance-Based Contracts for Road
Projects

108 Guzzanti, Pediatric and Adolescent Sports
Traumatology

224 Gallo (Eds), Same-Sex Couples before National,
Supranational and International Jurisdictions

163 Górski, Seismic Events in Glaciers (GeoPlanet:
Earth and Planetary Sciences)

211 Gan, Yin (Eds), Data you need to know about
China

189 Gang (Ed), 50 Years of Phytochemistry Research
(Recent Advances in Phytochemistry 43)

121 Ge (Eds), Nanomedicine (Nanostructure
Science and Technology)

13 Guo, Principles of Thinking

212 Geertman (Eds), Planning Support Systems
for Sustainable Urban Development (Lecture
Notes in Geoinformation and Cartography 195)

12 Geiringer (Eds), Radiotherapy in Prostate Cancer
(Medical Radiology)

95 Ge (Eds), Nanomedicine (Nanostructure
Science and Technology)

86 Geller/Cristea, Web Dynpro ABAP for
Practitioners. 2nd ed.

143 Handbook of Spintronics

142 Gendler (Ed), Lessons from the Masters (The
Patrick Moore Practical Astronomy Series 179)

142 Ghisellini, Radiative Processes in High Energy
Astrophysics (Lecture Notes in Physics 873)

212 Gebert, Performance Control in Buyer-Supplier-
Relationships (Supply Chain Management 3)

116 Gellert (Ed), Lessons from the Masters (The
Patrick Moore Practical Astronomy Series 179)

50 Gellert/Cristea, Web Dynpro ABAP for
Practitioners. 2nd ed.

86 Gerth, Business Process Models (Lecture Notes
in Computer Science, LNISA 7849)

142 Giorgi (Eds), Traces and Emergence of
Nonlinear Programming

142 Ghisellini, Radiative Processes in High Energy
Astrophysics (Lecture Notes in Physics 873)

69 Gill, Atlas of Laparoscopic and Robotic Urology

122 Glaser (Ed), The Protection of Human Rights
through International Law and International
Criminal Law

11 Gleich, Principles and Applications of
Magnetic Particle Imaging (Aktuelle Forschung
Medizintechnik 4)

280 Godara (Eds), Wireless Mobile Communication
and Healthcare, MobiHealth 2012 (Lecture
Notes of the Institute for Computer Sciences,
Social-Information and Telecommunications
Engineering 61)

108 Goel (Eds), Biologically Inspired Design

11 Goisis (Ed), Injections in Aesthetic Medicine

263 Goldmeier, Dashboards for Excel

279 Guyot (Ed), Advanced Infocomm Technology,
ICAIT 2012 (Lecture Notes in Computer Science,
LNCCN 7593)

13 Guzzanti, Pediatric and Adolescent Sports
Traumatology

163 Górski, Seismic Events in Glaciers (GeoPlanet:
Earth and Planetary Sciences)

H

279 Haller (Eds), Web Information Systems
Engineering, Sydney (Lecture Notes in
Computer Science, LNISA 7652)

212 Hallerstedt, Managing the Lifecycle of
Open Innovation Platforms (Markt- und
Unternehmensentwicklung / Markets and
Organisations)

108 Hall, Jr. et al., Intellectual Property in Consumer
Electronics, Software and Technology Startups

108 Han (Eds), High Performance Cloud Auditing
and Applications

143 Handbook of Spintronics

191 Hanson (Eds), Photosynthesis in Bryophytes
and Early Land Plants (Advances in
Photosynthesis and Respiration 37)

70 Harima et al., The Lefschetz Properties (Lecture
Notes in Mathematics 2080)

13 Harisinghani (Eds), Genitourinary Imaging - A
Case Based Approach

230 Harpaz, Teaching and Learning in a Community
of Thinking

14 Harris (Eds), Irritable Bowel Syndrome (Clinical
Gastroenterology)

14 Haslam (Eds), Controversies in Obesity

264 Havewala, Building the Oracle Cloud with
Enterprise Manager 12c

264 Hayat/Qazi, Web 3.0 Search Engine
Performance

191 Hayes (Eds), USDA Forest Service Experimental
Forests and Ranges

109 He et al., Interactive Segmentation Techniques
(SpringerBriefs in Electrical and Computer
Engineering)

280 Helber (Eds), Operations Research Proceedings
2012, Leibniz University of Hannover
(Operations Research Proceedings)

79 Held/Sabanes Bove, Applied Statistical
Inference

14 Hellinger (Ed), Pediatric Cardiovascular
Computed Tomography Angiography
Author Index

177 Hellmüller (Eds), Is Local Beautiful? (SpringerBriefs in Environment, Security, Development and Peace)

87 Hempel/Sasse, Human Target (SpringerBriefs in Cybersecurity)

253 Hendriks, Asymmetries between Language Production and Comprehension (Studies in Theoretical Psycholinguistics 42)

164 Hermance, Historical Variability of Rainfall in the African East Sahel of Sudan (SpringerBriefs in Earth Sciences)

109 Hülsmann (Eds), Evolutionary Paths Towards the Mobility Patterns of the Future (Lecture Notes in Mobility)

192 Hobohm (Ed), Endemism in Vascular Plants (Plant and Vegetation 9)

205 Hofmann et al., Performance Measurement and Incentive Systems in Purchasing (Professional Supply Management 3)

79 Holický, Introduction to Probability and Supply Management 3)

213 Holzhacker (Eds), Freedom, Security, and Statistics for Engineers

Incentive Systems in Purchasing (Professional Supply Management 3)

265 Inoue, Tateishi (Ed), Cancer Staging Diagnosis and of Crystalline Nanostructures (UNITEXT, Collana di Fisica e Astronomia)

144 Iadonisi et al., Elements of Solid State Physics and of Crystalline Nanostructures (UNITECH, Collana di Fisica e Astronomia)

133 Iannaccone et al., Smart-Eco Buildings towards 2020/2030 (SpringerBriefs in Applied Sciences and Technology)

192 Iavazzo (Rédacteurs), Le culture del cibo, tradizioni

249 Ibeke- Suane-San Juan (Eds), Theories of Information, Communication and Knowledge (Studies in History and Philosophy of Science 34)

231 Ifenthaler (Eds), Digital Knowledge Maps in Higher Education

265 Ihrig, Pro Node.js for Developers

109 Ikeda/Murota, Bifurcation Theory for Hexagonal Agglomeration in Economic Geography

164 Ilki (Eds), Seismic Evaluation and Rehabilitation of Structures (Geotechnical, Geological and Earthquake Engineering 26)

144 Inglis, Observer’s Guide to Star Clusters (The Patrick Moore Practical Astronomy Series)

110 Inoue, Tatsushi (Ed), Cancer Staging Diagnosis with PET/CT

71 Iosevich/Liflyand, Decay of the Fourier Transform

165 Ivanov, Geocology of the Western Arctic Shelf of Russia

224 Jaku, International Space Law

87 Jakus et al., Concepts, Ontologies, and Knowledge Representation (SpringerBriefs in Computer Science)

110 Jalali-Farahani et al., Digital Background Calibration of Analog to Digital Converters (Analog Circuits and Signal Processing)

144 Jarlskog (Ed), Portrait of Gunnar Källén

110 Jin (Eds), Nonlinear Approaches in Engineering Applications 2

192 Jensen (Eds), Peptide Synthesis and Applications (Methods in Molecular Biology 1047) 2nd ed.

193 Jensen-Jarolim (Ed), Comparative Medicine

213 Jho, Building Telecom Markets (The Political Economy of the Asia Pacific)

110 Jia, Modern Earthquake Engineering for Offshore and Onland Structures

87 Jia/Yang, Security for Cloud Storage Systems (SpringerBriefs in Computer Science)

111 Jiménez et al., Introduction to Embedded Systems


279 Jin et al., Nonlinear Analysis of Gas-Water/Oil-Water Two-Phase Flow in Complex Networks (SpringerBriefs in Applied Sciences and Technology)

193 Joel (Ed), Parasitc Orobanchaceae

280 Johann (Eds), Recent Trends in Dynamical Systems (Springer Proceedings in Mathematics & Statistics 35)

279 Johansson (Eds), Advances in Cryptology — EUROCRYPT 2013, Athens (Lecture Notes in Computer Science, LNCS 7881)

266 John, Learn Spring Framework

279 Johnsen (Eds), Integrated Formal Methods, IFM 2013 (Lecture Notes in Computer Science, LNPS 7940)

15 Jolesz (Ed), Intraoperative Imaging and Image-Guided Therapy

48 Joseph (Eds), Microglia (Methods in Molecular Biology 1041)

240 Junger-Tas (Eds), Reforming Juvenile Justice

133 Junginger (Eds), International Bioenergy Trade, status & outlook on securing sustainable bioenergy supply (Lecture Notes in Energy 52)

K

71 Kaashoek (Eds), Advances in Structured Operator Theory and Related Areas (Operator Theory: Advances and Applications 237)

16 Kadushin, Kadushin’s Behavioral Neuroscience Dictionary

145 Kagan, Modern trends in Superconductivity and Superfluidity (Lecture Notes in Physics 873)

95 Kallert/Scholz, Acid-Base Diagrams

145 Kamal, Nuclear Physics (Graduate Texts in Physics)

145 Kamal, Particle Physics (Graduate Texts in Physics)
<table>
<thead>
<tr>
<th>Author Index</th>
<th>Springer.com/NewsOnline</th>
</tr>
</thead>
<tbody>
<tr>
<td>165 Kammerer (Eds), Early Evolutionary History of the Synapsida (Vertebrate Paleobiology and Palaeoanthropology)</td>
<td>166 Kremer (Eds), Risk and Management of Current and Future Storm Surges</td>
</tr>
<tr>
<td>146 Kanas, Solar System Maps (Springer Praxis Books)</td>
<td>113 Krishnaraj et al., Drilling of Polymer-Matrix Composites (SpringerBriefs in Applied Sciences and Technology)</td>
</tr>
<tr>
<td>111 Kang (Ed), Fiber Optic Sensing and Imaging</td>
<td>194 Kriska, Freshwater Invertebrates in Central Europe</td>
</tr>
<tr>
<td>266 Kaplan-Moss et al., The Definitive Guide to Django. 3rd ed.</td>
<td>279 Kropatsch (Eds), Graph-Based Representations in Pattern Recognition, GBPR 2013 (Lecture Notes in Computer Science, LNIP 7877)</td>
</tr>
<tr>
<td>112 Karande/Talbar, Independent Component Analysis of Edge Information for Face Recognition (SpringerBriefs in Applied Sciences and Technology)</td>
<td>114 Kubiak, Static and Dynamic Buckling of Thin-Walled Plate Structures</td>
</tr>
<tr>
<td>213 Karasavvoglou (Eds), Economic Crisis in Europe and the Balkans (Contributions to Economics)</td>
<td>279 Kuijper (Eds), Scale Space and Variational Methods in Computer Vision, SSVM 2013 (Lecture Notes in Computer Science, LNIP 7893)</td>
</tr>
<tr>
<td>112 Karrenberg, Signals, Processes, and Systems. 3rd ed.</td>
<td>114 Kulkarni/Agrawal, TCP Performance Analysis for Data Center Networks (SpringerBriefs in Electrical and Computer Engineering)</td>
</tr>
<tr>
<td>266 Keith/Schincariol, Pro JPA 2. 2nd ed.</td>
<td>160 Kurlov/Gusev, Tungsten Carbides (Springer Series in Materials Science 184)</td>
</tr>
<tr>
<td>231 Kell/Kell, Literacy and Language in East Asia (Education in the Asia-Pacific Region: Issues, Concerns and Prospects 24)</td>
<td>232 Kunnick/Blatchford, Effective Group Work in Primary School Classrooms (Professional Learning and Development in Schools and Higher Education 8)</td>
</tr>
<tr>
<td>279 Keller (Eds), Reliable Software Technologies -- Ada-Europe 2013, Berlin (Lecture Notes in Computer Science, LNPS 896)</td>
<td>279 Kutylowski (Eds), Information Security and Cryptology, Inscrypt 2012 (Lecture Notes in Computer Science, LNCS 7763)</td>
</tr>
<tr>
<td>267 Kennedy, Arduino, Sensors, and the Internet of Things</td>
<td>72 Kyprianou, Fluctuations of Lévy Processes with Applications (Universitext) 2nd ed.</td>
</tr>
<tr>
<td>240 Kennedy, Gaziarifoglu (Eds), Transnational Criminology and Counterterrorism (SpringerBriefs in Criminology)</td>
<td>146 Landi Degl’Innocenti, Atomic spectroscopy and radiative processes (UNITEXT, Collana di Fisica e Astronomia) 2nd ed.</td>
</tr>
<tr>
<td>112 Kim (Eds), Handbook of Photonics in Biomedical Engineering</td>
<td>146 Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series / Advanced Materials and Technologies 11</td>
</tr>
<tr>
<td>193 Kim, The Demilitarized Zone (DMZ) of Korea</td>
<td>147 Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series / Condensed Matter 34A</td>
</tr>
<tr>
<td>59 Kirmayer (Eds), Cultural Consultation (International and Cultural Psychology)</td>
<td>147 Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series / Physical Chemistry 12C</td>
</tr>
<tr>
<td>178 Kitazato (Eds), Experimental Approaches in Foraminifera (Environmental Science and Engineering)</td>
<td>268 Lanting, SQL Server 2012 DBA Recipes</td>
</tr>
<tr>
<td>96 Klinger, Light-Sensitive Polymeric Nanoparticles Based on Photo-Cleavable Chromophores (Springer Theses)</td>
<td>232 Larsson (Eds), Handbook of Learning Analytics (Computer-Supported Collaborative Learning Series 10000)</td>
</tr>
</tbody>
</table>
115 Lasance (Eds), Thermal Management for LED Applications (Solid State Lighting Technology and Application Series 2)

194 Latimer/Stacey, Yarish (Eds), Long Island Sound (Springer Series on Environmental Management)

96 Lau, Toward Dual and Targeted Cancer Therapy with Novel Phthalocyanine-based Photosensitizers (Springer Theses)

17 Launois (Eds), The Posterior Intrahepatic Approach in Liver Surgery (Medical Intelligence Unit)

72 Lax/Terrell, Calculus With Applications (Undergraduate Texts in Mathematics) 2nd ed.

268 Layka, Learn Java for Web Development

17 Layon (Eds), Textbook of Neurointensive Care. 2nd ed.

134 Leal (Eds), Global Energy Policy and Security (Lecture Notes in Energy 16)

114 Lech (Eds), Mental Health Informatics (Studies in Computational Intelligence 491)

17 Ledermann (Eds), Controversies in the Management of Gynecological Cancers

281 Lee (Ed), Computer and Information Science (Studies in Computational Intelligence 493)

281 Lee (Ed), Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (Studies in Computational Intelligence 492)


96 Lee/Ofori-Boateng, Sustainability of Biofuel Production from Oil Palm Biomass (Green Energy and Technology)

166 Leppäranta, Freezing of Lakes and Evolution of their Ice Cover (Springer Earth System Sciences)

18 Levy (Eds), Autoimmune (IgG4-related) Pancreatitis and Cholangitis

250 Li (Ed), Values of Our Times

147 Licata/Fiscalletti, Quantum potential: Physics, Geometry and Algebra (SpringerBriefs in Physics)

60 Lieury, Una memoria d’elefant? (I blu)

194 Likens, Biogeochemistry of a Forested Ecosystem. 3rd ed.

214 Lin et al., National Intellectual Capital and the Financial Crisis in Indonesia, Malaysia, The Philippines, and Thailand (SpringerBriefs in Economics 17)

166 Lin, Diversity, Biomineralization and Rock Magnetism of Magnetotactic Bacteria (Springer Theses)

233 Lindström, Human Knowledge Construction (SpringerBriefs in Education)

258 Lipscomb Jr, Funding Your Startup, Angels

167 Liss (Eds), Ocean-Airshphere Interactions of Gases and Particles (Springer Earth System Sciences)

148 Littlejohn, Electrical Properties of Graphite Nanoparticles in Silicone (Springer Theses)

214 Liu (Eds), Contemporary Logistics in China of Year 2013

115 Liu/Wang, Parallel Kinematics, Kinematics (Springer Tracts in Mechanical Engineering)

116 Liu/Xu, Trace-Based Post-Silicon Validation for VLSI Circuits (Lecture Notes in Electrical Engineering 252)

73 Llibre/Teruel, Introduction to the Qualitative Theory of Differential Systems (Birkhäuser Advanced Texts Basler Lehrbücher)

280 Lloret Mauri (Eds), Green Communication and Networking, GreeneNet2 2012 (Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering 113)

214 Lohr, Subsidiary Internationalization and Cross-Border Subsidiary Mandates

50 Longo, The Rise of Fetal and Neonatal Physiology (Perspectives in Physiology 1)

195 Longo/Montévil, Biological Time, Symmetries and Singularities (Lecture Notes in Morphogenesis)

279 Lopez (Eds), Network and System Security, NSS 2013 (Lecture Notes in Computer Science, LNCS 7873)

269 Ludin, Learn BlackBerry 10 Apps Development

279 Luengo Hendriks (Eds), Mathematical Morphology and Its Applications to Signal and Image Processing, ISMM 2013 (Lecture Notes in Computer Science, LNIP 7883)

269 Mabbutt et al., Pro ASP.NET 4.5 in VB. 5th ed.

18 MacGarty (Eds), Disaster Medicine

279 Machado (Eds), Model-Based Methodologies for Pervasive and Embedded Software, MOMPES 2012 (Lecture Notes in Computer Science, LNPSE 7706)

269 Mackintosh, Pro Object-Oriented JavaScript

116 Maestre (Eds), Distributed Model Predictive Control Made Easy (Intelligent Systems, Control and Automation: Science and Engineering 69)

258 Mahady, Developing Local Economies, Expand the Tax Base

148 Mahoney, Mercury

270 Mainwaring, Beginning HTML5 Apps

50 Makovets (Ed), DNA Electrophoresis (Methods in Molecular Biology 1054)

51 Malek (Eds), Ovarian Cancer (Methods in Molecular Biology 1049)

270 Maltiar/Hazrati, Concurrent Application Development using Akka with Scala

179 Mammino (Ed), Chemical Issues in Biomass Burning in Sub-Saharan Africa

51 Mamou (Eds), Quantitative Ultrasound in Soft Tissues

97 Mangani (Ed), Disruption of Protein-Protein Interfaces

18 Marchand (Eds), Mental Health and Pain

19 Marucci (Eds), A Case Approach to Perioperative Drug-Drug Interactions

97 Marek, Biomimetic Dye Aggregate Solar Cells (Springer Theses)

88 Markantonakis (Eds), Secure Smart Embedded Devices, Platforms and Applications

256 Marranci (Ed), Handbook of Contemporary Islam and Muslim Lives

195 Marsh (Eds), Primates in Fragments (Developments in Primatology: Progress and Prospects 49) 2nd ed.

225 Marten, Port State Jurisdiction and the Regulation of International Merchant Shipping (Hamburg Studies on Maritime Affairs 26)

97 Martini, Sonocrystallization of Fats (SpringerBriefs in Food, Health, and Nutrition)

98 Marwan, Nanostructured Palladium Electrochemistry (Nanostructure Science and Technology)

215 Marzo, Dynamic Stochastic General Equilibrium Models: the Macro-Finance Link

51 Masoudi-Nejad et al., Next Generation Sequencing and Sequence Assembly (SpringerBriefs in Systems Biology 4)

19 Massi/LeBoit, Histological Diagnosis of Nevi and Melanoma. 2nd ed.

134 Mathew (Eds), Energy-Efficient Fault-Tolerant Systems
Author Index

19 Matsui (Eds), Endoscopy in the Diagnosis of Small Intestine Diseases
20 Matucci-Cerinic (Eds), Skin Manifestations in Rheumatic Disease
20 Mauffrey/Hak, Passport for the Orthopaedic Boards Revalidation
278 Mayr (Eds), Information Systems: Methods, Models, and Applications, UNISCON 2012 (Lecture Notes in Business Information Processing 137)
270 McClung, Beginning Dart
241 McEniry, Early Life Conditions and Rapid Demographic Changes in the Developing World
215 McGreal (Ed), Real Estate Investment Trusts in Europe, Regulation
73 McNerney, First Steps in Differential Geometry, Contact (Undergraduate Texts in Mathematics)
195 McNes (Eds), Wetlands Encyclopedia. Volume II. Wetlands Management
52 Meissner (Eds), Epigenetic Mechanisms in Cellular Reprogramming (Epigenetics and Human Health)
271 Membrey, Beginning Git
20 Menci et al., Minimally Invasive Surgery of the Lumbar Spine
88 Meng et al., Moving Objects Management, Techniques and Applications. 2nd ed.
148 Merkus (Eds), Particle Characteristics and Product Development (Particle Technology Series 19)
21 Mesko, Social Media in Clinical Practice
21 Meyer (Eds), Bronchiolitis Obliterans Syndrome in Lung Transplantation (Respiratory Medicine 8)
167 Miall, Fluvial Depositional Systems (Springer Geology)
116 Mihelj et al., Virtual Reality Technology and Applications (Intelligent Systems, Control and Automation: Science and Engineering 67)
52 Millan (Ed), Phosphatase Modulators (Methods in Molecular Biology 1053)
21 Min (Eds), Multimodality Imaging for Transcatheter Aortic Valve Replacement
117 Mitiche/Agarwal, Computer Vision Analysis of Image Motion by Variational Methods (Springer Topics in Signal Processing 10)
196 Mitra, Sensitivity of Mangrove Ecosystem to Changing Climate
233 Miwa (Eds), Quality Assurance in LIS Education
98 Mizunara, Development of Novel Anti-HIV Pyrimidobenzothiazine Derivatives (Springer Theses)
196 Müller/Kuttler, Mathematical Models in Biology (Lecture Notes on Mathematical Modelling in the Life Sciences)
149 Mobberley, It Came From Outer Space Wearing an RAF Blazer!
134 Model (Eds), Rectenna Solar Cells
149 Modinos, From Aristotle to Sjöring (Undergraduate Lecture Notes in Physics)
22 Mody (Ed), Musculoskeletal Health in Women
89 Mogavero, Logics in Computer Science (Atlantis Studies in Computing 3)
277 Mohamad (Ed), 7th International Conference on Practical Applications of Computational Biology & Bioinformatics (Advances in Intelligent Systems and Computing 222)
149 Mohan (Ed), New Trends in Atomic and Molecular Physics (Springer Series on Atomic, Optical, and Plasma Physics 76)
22 Moore (Ed), Handbook of Pain and Palliative Care
271 Moreira, Being Agile
60 Morewitz (Eds), Handbook of Forensic Sociology and Psychology
135 Morrell (Eds), Uranium Processing and Properties
22 Moulopoulos/Koutoulidis, Bone Marrow MRI
23 Munoz (Eds), Handbook of Pediatric Cardiovascular Drugs. 2nd ed.
23 Murphy (Eds), Interventional Neuroradiology (Techniques in Interventional Radiology)
215 Murschetz (Ed), State Aid for Newspapers, Cases (Media Business and Innovation) 2nd ed.
23 Muto (Eds), Atlas of Endoscopy with Narrow Band Imaging
205 Mutum (Eds), Marketing Cases from Emerging Markets
117 Muñoz-Rojas (Ed), Optimization of Structures and Components (Advanced Structured Materials 43)

N

80 Nair et al., Quantile-Based Reliability Analysis (Statistics for Industry and Technology)
242 Nazarinia Roy et al., Transition to Parenthood
24 Neff (Ed), Passing the General Surgery Oral Board Exam. 2nd ed.
172 Nekrasov, Innovative Application of Airborne Radars (SpringerBriefs in Earth Sciences)
196 Nelson (Ed), Encyclopedia of Metagenomics
117 Nepal (Eds), Security, Privacy and Trust in Cloud Systems
73 Nečasová (Eds), Selected works of J. Nečas (Advances in Mathematical Fluid Mechanics )
52 Nguyen (Ed), Multidisciplinary Tools for Investigating Synaptic Plasticity (Neuromethods 81)
279 Nguyen (Ed), Transactions on Computational Collective Intelligence X (Lecture Notes in Computer Science, TCCI 7776)
250 Nazzi, Qu-b al-Din Shirāzī and the Configuration of the Heavens (Archimedes 35)
197 Nielsen (Eds), Peptide Nucleic Acids (Methods in Molecular Biology 1050)
280 Nishizaki (Eds), Theory and Practice of Communication, Manipula (Proceedings in Information and Communications Technology 7)
271 Nolan, Android Best Practices
80 Nolan/Temple Lang, XML and Web Technologies for Data Sciences with R (Use R! 46)
24 Normura, Morphological Aspects of Inner Ear Disease
118 Nonami et al., Hydraulically Actuated Hexapod Robots (Intelligent Systems, Control and Automation: Science and Engineering 66)
24 Norman/Young, Atlas of Geriatric Dermatology
150 Novakova, Standard Model Measurements with the ATLAS Detector (Springer Theses)
179 Nüsser (Ed), Large Dams in Asia (Advances in Asian Human-Environmental Research)
53 Ntamb, Ph.D. (Ed), Stearoyl-CoA Desaturase Genes in Lipid Metabolism
278 Nurcan (Eds), Enterprise, Business-Process and Information Systems Modeling, BPMDS 2013 (Lecture Notes in Business Information Processing 147)
118 Nurmi (Eds), Computing Platforms for Software-Defined Radio (Signals and Communication Technology 183)

O

242 O’Callaghan/Vivoda, Regulatory Regimes and Risk in Asia (The Political Economy of the Asia Pacific)
Shafarevich, Basic Algebraic Geometry 1. 3rd ed.

Shafarevich, Basic Algebraic Geometry 2. 3rd ed.

Shapiro/de Berredo-Peixoto, Lecture Notes on Newtonian Mechanics (Undergraduate Lecture Notes in Physics)

Sharma (Eds), The rise of acid reflux in Asia

Shav-Tal (Ed), Imaging Gene Expression (Methods in Molecular Biology 1042)

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Sheehan et al., Galactic Encounters

Shen (Ed), Dao Companion to Classical Confucian Philosophy (Dao Companions to Chinese Philosophy)

Shi/Sommerlad, Cleft Lip and Palate Primary Care (SpringerBriefs in Law)

Shivani, Metrology for Fire Experiments in Environment

Shukla et al., Lichens to Biomonitor the Environment

Sharma (Eds), The rise of acid reflux in Asia

Showan (Eds), Run-time Management Techniques for Many-core Architectures

Shi/Sommerlad, Cleft Lip and Palate Primary Care (SpringerBriefs in Law)

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Skelton, Soft City Culture and Technology

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Sokolowska (Eds), Symplasmic Transport in Vascular Plants

Solorio (Eds), Biophysics of the Failing Heart (Biological and Medical Physics, Biomedical Engineering)

Song (Eds), Dynamic Behavior of Materials, Volume 1 (Conference Proceedings of the Society for Experimental Mechanics Series)

Soomere (Eds), Preventive Methods for Coastal Protection

Sorokin (Eds), Dynamics of Information Systems: Algorithmic Approaches (Springer Proceedings in Mathematics & Statistics 51)

Sousa Campomirhos, Stone Cladding Science

Sozański, Digital Signal Processing in Power Electronics Control Circuits (Power Systems)

Spiess (Eds), Tourism Development in the GCC States

Spini (Eds), War, Community, and Social Change (Peace Psychology Book Series 17)

Spirakis (Eds), Algorithms and Complexity. CIAC 2013 (Lecture Notes in Computer Science, LNCTS 7878)

Springer (Eds), Periprosthetic Joint Infection of the Hip and Knee

Sreejesh et al., Surrogate Approaches in Development of Antibody-Based Therapeutics

Sun (Eds), Proceedings of 2013 Chinese Intelligent Automation Conference (Lecture Notes in Electrical Engineering 255)

Sun (Eds), Proceedings of 2013 Chinese Intelligent Automation Conference (Lecture Notes in Electrical Engineering 254)

Sun et al., Wireless Power Transfer for Medical Microsystems

Sunderaman, Practical Ext JS 4

Sutherland, Beginning Android C++ Game Development

Suarez Grau, Abdominal Wall Hernia

Swischuk/Jadhav, Emergency Musculoskeletal Imaging in Children

Szubko-Sitarek (Eds), Language Learning, Discourse and Communication (Second Language Learning and Teaching)

Szubko-Sitarek, Multilingual Lexical Recognition in the Mental Lexicon of Third Language Users (Second Language Learning and Teaching)

Tabrizi/Figueroa, Surrogate Approaches in Development of Antibody-Based Therapeutics

Tanguchi (Eds), Handbook of Glycosyltransferases and Related Genes. 2nd ed.

Tardini, From the Rule of Thumb to the Beginning of Structural Mechanics in France (SpringerBriefs in Applied Sciences and Technology)

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Tavano et al., Protocollo MEC

Taylor, Managing Breakthrough Cancer Pain

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Terra, Harmonic Analysis on Symmetric Spaces—Euclidean Space, the Sphere, and the Poincaré Upper Half Plane. 2nd ed.
<table>
<thead>
<tr>
<th>Author Index</th>
<th>Springer.com/NEWSonline</th>
</tr>
</thead>
<tbody>
<tr>
<td>126 Terzic et al., Ultrasonic Fluid Quantity Measurement in Dynamic Vehicular Applications</td>
<td>156 van Schooten, Optically Active Charge Traps and Chemical Defects in Semiconductor Nanocrystals Probed by Pulsed Optically Detected Magnetic Resonance (Springer Theses)</td>
</tr>
<tr>
<td>201 Tester (Eds), The Plant Sciences</td>
<td>174 Vandenbroucke (Eds), Geographic Information Science at the Heart of Europe (Lecture Notes in Geoinformation and Cartography)</td>
</tr>
<tr>
<td>219 Thakur, Cross-Border Due Diligence (SpringerBriefs in Business)</td>
<td>37 Varon/Fromm, Acute and Critical Care Formulas and Laboratory Values</td>
</tr>
<tr>
<td>201 The Mycota 11</td>
<td>180 Vaseashta (Eds), Advanced Sensors for Safety and Security (NATO Science for Peace and Security Series B: Physics and Biophysics)</td>
</tr>
<tr>
<td>225 Thielbürger, The Right(s) to Water</td>
<td>220 Veit/Hunteburth, Foundations of Digital Government (Springer Texts in Business and Economics)</td>
</tr>
<tr>
<td>173 Thrill (Ed), Spatial Analysis and Location Modeling in Urban and Regional Systems (Advances in Geographic Information Science)</td>
<td>169 Velde (Eds), Minor Element Geochemistry at the Earth’s Surface, transport</td>
</tr>
<tr>
<td>37 Thompson (Ed), Textbook of Cardiovascular Intervention</td>
<td>204 Venkataramanan (Eds), Ecology and Conservation of Tropical Marine Faunal Communities</td>
</tr>
<tr>
<td>202 Thompson (Eds), Encyclopedia of Food and Agricultural Ethics</td>
<td>38 Venkataramanujam (Eds), Melatonin and melatonergic drugs in clinical practice</td>
</tr>
<tr>
<td>155 Thutupalli, Towards Autonomous Soft Matter Systems (Springer Theses)</td>
<td>181 Viana (Ed), Urban Air Quality in Europe (The Handbook of Environmental Chemistry 26)</td>
</tr>
<tr>
<td>259 Toigo, Office Automation 2.0</td>
<td>129 Vinson, Electrical Overstress</td>
</tr>
<tr>
<td>202 Tollefsbol (Ed), Biological Aging (Methods in Molecular Biology 1048) 2nd ed.</td>
<td>245 Virchow (Ed), Visual Politics of the Far Right (Edition Rechtsextremismus 100)</td>
</tr>
<tr>
<td>235 Tong (Ed), Geoscience Research and Education (Innovations in Science Education and Technology 20)</td>
<td>277 Vittorini (Eds), 2nd International Workshop on Evidence-based Technology Enhanced Learning (Advances in Intelligent Systems and Computing 218)</td>
</tr>
<tr>
<td>235 Tong (Ed), Geoscience Research and Outreach (Innovations in Science Education and Technology 21)</td>
<td>275 Vogel, ASP.NET Web API Recipes</td>
</tr>
<tr>
<td>99 Topics in Heterocyclic Chemistry 33</td>
<td>275 Wadia et al., Pro JSF and HTML5. 2nd ed.</td>
</tr>
<tr>
<td>156 Toplis (Eds), Quantifying the Martian Geochemical Reservoirs (Space Sciences Series of ISSI 44)</td>
<td>275 Walch, Pro IIS</td>
</tr>
<tr>
<td>136 Topolov et al., Piezo-Active Composites (Springer Series in Materials Science 185)</td>
<td>236 Waldstein (Ed), Behavioral and Social Science in Medicine</td>
</tr>
<tr>
<td>156 Torres-Rincón, Hadronic Transport Coefficients from Effective Field Theories (Springer Theses)</td>
<td>246 Walton-Roberts (Eds), Territoriality and Migration in the E.U. Neighbourhood (International Perspectives on Migration 5)</td>
</tr>
<tr>
<td>136 Tortajada (Eds), Impacts of Large Dams: A Global Assessment (Water Resources Development and Management)</td>
<td>245 Tropea (Ed), The Role of Religion in Eastern Europe Today</td>
</tr>
<tr>
<td>Author Index</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td></td>
</tr>
<tr>
<td>170 Zaborska/Pempkowiak, Carroll (Ed), Sediments and Sedimentation Regime in the Barents Sea (GeoPlanet: Earth and Planetary Sciences)</td>
<td></td>
</tr>
<tr>
<td>279 Zaiane (Eds), Advances in Artificial Intelligence, Canadian AI 2013 (Lecture Notes in Computer Science, LNAI 7884)</td>
<td></td>
</tr>
<tr>
<td>280 Zannier (Ed), Colloquium De Giorgi 2010-2012 (Publications of the Scuola Normale Superiore 4)</td>
<td></td>
</tr>
<tr>
<td>277 Zappia (Eds), Advances in Nutrition and Cancer (Cancer Treatment and Research 159)</td>
<td></td>
</tr>
<tr>
<td>277 Zelinka (Eds), Nostradamus 2013: Prediction, Modeling and Analysis of Complex Systems (Advances in Intelligent Systems and Computing 210)</td>
<td></td>
</tr>
<tr>
<td>81 Zeng (Eds), State-Space Models (Statistics and Econometrics for Finance 1)</td>
<td></td>
</tr>
<tr>
<td>247 Zeng et al., Households and Consumption Forecasting (The Springer Series on Demographic Methods and Population Analysis 9004)</td>
<td></td>
</tr>
<tr>
<td>158 Zhang, Beam Diagnostics in Superconducting Accelerating Cavities (Springer Theses)</td>
<td></td>
</tr>
<tr>
<td>226 Zhang, The Tradition and Modern Transition of Chinese Law</td>
<td></td>
</tr>
<tr>
<td>131 Zhao et al., Design of Special Planar Linkages (Springer Tracts in Mechanical Engineering)</td>
<td></td>
</tr>
<tr>
<td>280 Zhi-zhong (Eds), Ad Hoc Networks, ADHOCNETS 2012 (Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering 111)</td>
<td></td>
</tr>
<tr>
<td>182 Zhou et al., Mercury Emission and its Control in Chinese Coal-Fired Power Plants (Advanced Topics in Science and Technology in China)</td>
<td></td>
</tr>
<tr>
<td>131 Ziegler, Social Web Artifacts for Boosting Recommenders (Studies in Computational Intelligence 487)</td>
<td></td>
</tr>
<tr>
<td>41 Zini (Eds), Sperm Chromatin for the Clinician</td>
<td></td>
</tr>
<tr>
<td>131 Živčák et al, Methodology, Models and Algorithms in Thermographic Diagnostics (Topics in Intelligent Engineering and Informatics 5)</td>
<td></td>
</tr>
<tr>
<td>170 Zolesi/Cander, Ionospheric Prediction and Forecasting (Springer Geophysics)</td>
<td></td>
</tr>
<tr>
<td>183 Zorn (Eds), The Turkmen Lake Altyn Asyr and Water Resources in Turkmenistan (The Handbook of Environmental Chemistry 28)</td>
<td></td>
</tr>
<tr>
<td>Title Index</td>
<td>Springer.com/NEWSonline</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td></td>
</tr>
<tr>
<td>19  A Case Approach to Perioperative Drug-Drug Interactions</td>
<td></td>
</tr>
<tr>
<td>39  A Case Based Guide to Clinical Rheumatology</td>
<td></td>
</tr>
<tr>
<td>222 A Legal Guide to United States Business Organizations</td>
<td></td>
</tr>
<tr>
<td>222 A Model Harmonised International Arbitration Law Code for the Middle East and North Africa</td>
<td></td>
</tr>
<tr>
<td>236 A New Cultural Revolution?</td>
<td></td>
</tr>
<tr>
<td>35  Abdominal Wall Hernia</td>
<td></td>
</tr>
<tr>
<td>95  Acid-Base Diagrams</td>
<td></td>
</tr>
<tr>
<td>37  Acute and Critical Care Formulas and Laboratory Values</td>
<td></td>
</tr>
<tr>
<td>280 Ad Hoc Networks</td>
<td></td>
</tr>
<tr>
<td>280 Adaptation and Autonomy: Adaptive Preferences in Enhancing and Ending Life</td>
<td></td>
</tr>
<tr>
<td>252 Adaptive Logics for Defeasible Reasoning</td>
<td></td>
</tr>
<tr>
<td>30  Adherence to Antipsychotics in Schizophrenia</td>
<td></td>
</tr>
<tr>
<td>188 Adhesion Protein Protocols</td>
<td></td>
</tr>
<tr>
<td>49  Adipose Tissue and Cancer</td>
<td></td>
</tr>
<tr>
<td>34  Advanced Cosmetic Otoplasty</td>
<td></td>
</tr>
<tr>
<td>279 Advanced Infocomm Technology</td>
<td></td>
</tr>
<tr>
<td>278 Advanced Information Systems Engineering Workshops</td>
<td></td>
</tr>
<tr>
<td>5   Advanced Male Urethral and Genital Reconstructive Surgery</td>
<td></td>
</tr>
<tr>
<td>180 Advanced Sensors for Safety and Security</td>
<td></td>
</tr>
<tr>
<td>277 Advancement of Optical Methods in Experimental Mechanics, Volume 3</td>
<td></td>
</tr>
<tr>
<td>217 Advances in Advertising Research (Vol. IV)</td>
<td></td>
</tr>
<tr>
<td>277 Advances in Aerospace Guidance, Navigation and Control</td>
<td></td>
</tr>
<tr>
<td>279 Advances in Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>118 Advances in Bio-Mechanical Systems and Materials</td>
<td></td>
</tr>
<tr>
<td>277 Advances in Combinatorics</td>
<td></td>
</tr>
<tr>
<td>279 Advances in Cryptology -- EUROCRYPT 2013</td>
<td></td>
</tr>
<tr>
<td>100 Advances in Food Process Engineering Research and Applications</td>
<td></td>
</tr>
<tr>
<td>47  Advances in HIV-1 Assembly and Release</td>
<td></td>
</tr>
<tr>
<td>277 Advances in Nutrition and Cancer</td>
<td></td>
</tr>
<tr>
<td>123 Advances in Product Family and Product Platform Design</td>
<td></td>
</tr>
<tr>
<td>71  Advances in Structured Operator Theory and Related Areas</td>
<td></td>
</tr>
<tr>
<td>280 Advances in Sustainable and Competitive Manufacturing Systems</td>
<td></td>
</tr>
<tr>
<td>55  Adverse Events of Biomedicines</td>
<td></td>
</tr>
<tr>
<td>278 Agile Processes in Software Engineering and Extreme Programming</td>
<td></td>
</tr>
<tr>
<td>201 Agricultural Applications</td>
<td></td>
</tr>
<tr>
<td>280 Algebraic Methods in Functional Analysis</td>
<td></td>
</tr>
<tr>
<td>77  Algebraic Theory of Quadratic Numbers</td>
<td></td>
</tr>
<tr>
<td>279 Algorithms and Complexity</td>
<td></td>
</tr>
<tr>
<td>138 Alien Seas</td>
<td></td>
</tr>
<tr>
<td>223 Alternative Dispute Resolution in Administrative Proceedings</td>
<td></td>
</tr>
<tr>
<td>277 Ambient Intelligence - Software and Applications</td>
<td></td>
</tr>
<tr>
<td>33  An Introduction to Health Policy</td>
<td></td>
</tr>
<tr>
<td>86  An Introduction to Network Programming with Java</td>
<td></td>
</tr>
<tr>
<td>65  An Introduction to the Kähler-Ricci Flow</td>
<td></td>
</tr>
<tr>
<td>65  An Operator Semigroup in Mathematical Genetics</td>
<td></td>
</tr>
<tr>
<td>64  Analysis and Geometry of Markov Diffusion Operators</td>
<td></td>
</tr>
<tr>
<td>271 Android Best Practices</td>
<td></td>
</tr>
<tr>
<td>262 Android Game Recipes</td>
<td></td>
</tr>
<tr>
<td>267 Android on x86</td>
<td></td>
</tr>
<tr>
<td>1   Anesthesia of the Upper Limb</td>
<td></td>
</tr>
<tr>
<td>90  Annual Dynamics of Daylight Variability and Contrast</td>
<td></td>
</tr>
<tr>
<td>46  Antibody-Drug Conjugates</td>
<td></td>
</tr>
<tr>
<td>6   Anus</td>
<td></td>
</tr>
<tr>
<td>228 APOS Theory</td>
<td></td>
</tr>
<tr>
<td>77  Application of Integrable Systems to Phase Transitions</td>
<td></td>
</tr>
<tr>
<td>280 Applied Inverse Problems</td>
<td></td>
</tr>
<tr>
<td>66  Applied Mathematics</td>
<td></td>
</tr>
<tr>
<td>173 Applied Meteorology on the Grid</td>
<td></td>
</tr>
<tr>
<td>213 Applied Regional Growth and Innovation Models</td>
<td></td>
</tr>
<tr>
<td>79  Applied Statistical Inference</td>
<td></td>
</tr>
<tr>
<td>229 Applying Rasch Measurement in Science Education Research</td>
<td></td>
</tr>
<tr>
<td>267 Arduino, Sensors, and the Internet of Things</td>
<td></td>
</tr>
<tr>
<td>182 Arthur H. Westing</td>
<td></td>
</tr>
<tr>
<td>279 Artificial Intelligence and Soft Computing</td>
<td></td>
</tr>
<tr>
<td>279 Artificial Intelligence in Medicine</td>
<td></td>
</tr>
<tr>
<td>184 Asiatic Honeybee Apis cerana</td>
<td></td>
</tr>
<tr>
<td>275 ASP.NET Web API Recipes</td>
<td></td>
</tr>
<tr>
<td>237 Assessment for Learning Improvement and Accountability</td>
<td></td>
</tr>
<tr>
<td>168 Asymmetric Continuum</td>
<td></td>
</tr>
<tr>
<td>253 Asymmetries between Language Production and Comprehension</td>
<td></td>
</tr>
<tr>
<td>23  Atlas of Endoscopy with Narrow Band Imaging</td>
<td></td>
</tr>
<tr>
<td>24  Atlas of Geriatric Dermatology</td>
<td></td>
</tr>
<tr>
<td>1   Atlas of Gynecologic Oncology Imaging</td>
<td></td>
</tr>
<tr>
<td>11  Atlas of Laparoscopic and Robotic Urology</td>
<td></td>
</tr>
<tr>
<td>40  Atlas of Single-Incision Laparoscopic Operations in General Surgery</td>
<td></td>
</tr>
<tr>
<td>226 Atoll Island States and International Law</td>
<td></td>
</tr>
<tr>
<td>146 Atomic spectroscopy and radiative processes</td>
<td></td>
</tr>
<tr>
<td>18  Autoimmune (IgG4-related) Pancreatitises and Cholangitis</td>
<td></td>
</tr>
<tr>
<td>42  Autoimmune Disease</td>
<td></td>
</tr>
<tr>
<td>278 Automated Deduction -- CADE-24</td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
</tr>
<tr>
<td>153 Balances</td>
<td></td>
</tr>
<tr>
<td>75  Basic Algebraic Geometry 1</td>
<td></td>
</tr>
<tr>
<td>76  Basic Algebraic Geometry 2</td>
<td></td>
</tr>
<tr>
<td>173 Basic and Clinical Environmental Approaches in Landscape Planning</td>
<td></td>
</tr>
<tr>
<td>127 Basics of Cutting and Abrasive Processes</td>
<td></td>
</tr>
<tr>
<td>78  Basics of Modern Mathematical Statistics</td>
<td></td>
</tr>
<tr>
<td>158 Beam Diagnostics in Superconducting Accelerating Cavities</td>
<td></td>
</tr>
<tr>
<td>103 Beamforming Antennas in Multi-Hop Wireless Networks</td>
<td></td>
</tr>
<tr>
<td>274 Beginning Android C++ Game Development</td>
<td></td>
</tr>
<tr>
<td>272 Beginning Big Data with Java</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Calcium and Magnesium Stable Isotope Chemistry</td>
<td>164</td>
</tr>
<tr>
<td>Calculation and Computation in the Preelectronic Era</td>
<td>91</td>
</tr>
<tr>
<td>Calculus With Applications</td>
<td>72</td>
</tr>
<tr>
<td>Cancer Staging Diagnosis with PET/CT</td>
<td>15</td>
</tr>
<tr>
<td>Cancer Targeted Drug Delivery</td>
<td>42</td>
</tr>
<tr>
<td>Cartography from Pole to Pole, Volume 1</td>
<td>171</td>
</tr>
<tr>
<td>Cartography from Pole to Pole, Volume 2</td>
<td>171</td>
</tr>
<tr>
<td>Changes in the Brain</td>
<td>6</td>
</tr>
<tr>
<td>Charge Multiplicity Asymmetry Correlation Study Searching for Local Parity Violation at RHIC for STAR Collaboration</td>
<td>157</td>
</tr>
<tr>
<td>Chemical Issues in Biomass Burning in Sub-Saharan Africa</td>
<td>179</td>
</tr>
<tr>
<td>Cholesterol and Presynaptic Glutamate Transport in the Brain</td>
<td>44</td>
</tr>
<tr>
<td>Choosing and Using Astronomical Eyepieces</td>
<td>151</td>
</tr>
<tr>
<td>Classroom-oriented Research</td>
<td>253</td>
</tr>
<tr>
<td>Cleft Lip and Palate Primary Repair</td>
<td>34</td>
</tr>
<tr>
<td>Climate Change and Water Resources</td>
<td>182</td>
</tr>
<tr>
<td>Climate Politics as Investment</td>
<td>246</td>
</tr>
<tr>
<td>Climatic and Environmental History of Isla de los Estados, Argentina</td>
<td>167</td>
</tr>
<tr>
<td>Clinical Applications of SPECT-CT</td>
<td>1</td>
</tr>
<tr>
<td>Clinical Ophthalmic Oncology</td>
<td>26</td>
</tr>
<tr>
<td>Cloud Computing Basics</td>
<td>125</td>
</tr>
<tr>
<td>Cognitive Networked Sensing and Big Data</td>
<td>121</td>
</tr>
<tr>
<td>Collected Works I</td>
<td>78</td>
</tr>
<tr>
<td>Colloquium De Giorgi 2010-2012</td>
<td>280</td>
</tr>
<tr>
<td>Combinatory Analysis</td>
<td>63</td>
</tr>
<tr>
<td>Comfortable Net Zero Energy Buildings</td>
<td>132</td>
</tr>
<tr>
<td>Commingled and Disarticulated Human Remains</td>
<td>243</td>
</tr>
<tr>
<td>Comparative Medicine</td>
<td>193</td>
</tr>
<tr>
<td>Complexity in Financial Markets</td>
<td>139</td>
</tr>
<tr>
<td>Compressed Sensing &amp; Sparse Filtering</td>
<td>105</td>
</tr>
<tr>
<td>Computation, Logic, Games, and Quantum Foundations - The Many Facets of Samson Abramsky</td>
<td>85</td>
</tr>
<tr>
<td>Computational and Analytical Mathematics</td>
<td>280</td>
</tr>
<tr>
<td>Computational Intelligence Methods for Bioinformatics and Biostatistics</td>
<td>279</td>
</tr>
<tr>
<td>Computer and Information Science</td>
<td>281</td>
</tr>
<tr>
<td>Computer Science - Theory and Applications</td>
<td>278</td>
</tr>
<tr>
<td>Computer Vision Analysis of Image Motion by Variational Methods</td>
<td>117</td>
</tr>
<tr>
<td>Computing Platforms for Software-Defined Radio</td>
<td>118</td>
</tr>
<tr>
<td>Concepts, Ontologies, and Knowledge Representation</td>
<td>87</td>
</tr>
<tr>
<td>Conceptual Profile: A Theory of Teaching and Learning Scientific Concepts</td>
<td>230</td>
</tr>
<tr>
<td>Contemporary Challenges and Solutions in Applied Artificial Intelligence</td>
<td>281</td>
</tr>
<tr>
<td>Contemporary Logistics in China of Year 2013</td>
<td>214</td>
</tr>
<tr>
<td>Controversies in Obesity</td>
<td>14</td>
</tr>
<tr>
<td>Controversies in the Management of Gynecological Cancers</td>
<td>17</td>
</tr>
<tr>
<td>Converting Data into Evidence</td>
<td>78</td>
</tr>
<tr>
<td>Coordination Models and Languages</td>
<td>278</td>
</tr>
<tr>
<td>Copper Wire Bonding</td>
<td>105</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>40</td>
</tr>
<tr>
<td>Corporate Governance in China</td>
<td>223</td>
</tr>
<tr>
<td>Corporate Social Responsibility in the Global Business World</td>
<td>221</td>
</tr>
<tr>
<td>Corporate Social Responsibility in the Manufacturing and Services Sectors</td>
<td>177</td>
</tr>
<tr>
<td>Correct-by-Construction System on Chip Design</td>
<td>123</td>
</tr>
<tr>
<td>Cosmic Dawn</td>
<td>152</td>
</tr>
<tr>
<td>Creative JavaScript</td>
<td>265</td>
</tr>
<tr>
<td>Cross-Border Due Diligence</td>
<td>219</td>
</tr>
<tr>
<td>Cultural Consultation</td>
<td>59</td>
</tr>
<tr>
<td>Cultural Psychology of Cinema</td>
<td>61</td>
</tr>
<tr>
<td>Cyberspace and International Relations</td>
<td>241</td>
</tr>
<tr>
<td>Title Index</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
</tr>
<tr>
<td>140          Dai buchi neri all’adroterapia</td>
<td></td>
</tr>
<tr>
<td>251          Dao Companion to Classical Confucian Philosophy</td>
<td></td>
</tr>
<tr>
<td>250          Dao Companion to Japanese Buddhist Philosophy</td>
<td></td>
</tr>
<tr>
<td>263          Dashboards for Excel</td>
<td></td>
</tr>
<tr>
<td>83           Data Mining for Geoinformatics</td>
<td></td>
</tr>
<tr>
<td>262          Data Virtualization</td>
<td></td>
</tr>
<tr>
<td>211          Data you need to know about China</td>
<td></td>
</tr>
<tr>
<td>49           Deafness</td>
<td></td>
</tr>
<tr>
<td>71           Decay of the Fourier Transform</td>
<td></td>
</tr>
<tr>
<td>206          Decision Making with the Analytic Network Process</td>
<td></td>
</tr>
<tr>
<td>159          Dental Ceramics</td>
<td></td>
</tr>
<tr>
<td>34           Dental Pathology</td>
<td></td>
</tr>
<tr>
<td>103          Design for Manufacturability</td>
<td></td>
</tr>
<tr>
<td>131          Design of Special Planar Linkages</td>
<td></td>
</tr>
<tr>
<td>258          Developing Local Economies</td>
<td></td>
</tr>
<tr>
<td>272          Developing Secure Applications</td>
<td></td>
</tr>
<tr>
<td>230          Developing Wisdom Through Education</td>
<td></td>
</tr>
<tr>
<td>98           Development of Novel Anti-HIV Pyrimidobenzothiazine Derivatives</td>
<td></td>
</tr>
<tr>
<td>241          Development-Oriented Refugee Assistance</td>
<td></td>
</tr>
<tr>
<td>5            Diagnostic Techniques in Urology</td>
<td></td>
</tr>
<tr>
<td>199          Dictyostelids</td>
<td></td>
</tr>
<tr>
<td>28           Diet and Nutrition in Critical Care</td>
<td></td>
</tr>
<tr>
<td>110          Digital Background Calibration of Analog to Digital Converters</td>
<td></td>
</tr>
<tr>
<td>231          Digital Knowledge Maps in Higher Education</td>
<td></td>
</tr>
<tr>
<td>125          Digital Signal Processing in Power Electronics Control Circuits</td>
<td></td>
</tr>
<tr>
<td>64           Dimension Theory of Hyperbolic Flows</td>
<td></td>
</tr>
<tr>
<td>113          Dimensionality Reduction with Unsupervised Nearest Neighbors</td>
<td></td>
</tr>
<tr>
<td>98           Direct Observation of Crystalline State Reactions</td>
<td></td>
</tr>
<tr>
<td>18           Disaster Medicine</td>
<td></td>
</tr>
<tr>
<td>259          Disruption by Design</td>
<td></td>
</tr>
<tr>
<td>97           Disruption of Protein-Protein Interfaces</td>
<td></td>
</tr>
<tr>
<td>89           Distributed Algorithms for Message-Passing Systems</td>
<td></td>
</tr>
<tr>
<td>278          Distributed Applications and Interoperable Systems</td>
<td></td>
</tr>
<tr>
<td>277          Distributed Computing and Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>116          Distributed Model Predictive Control Made Easy</td>
<td></td>
</tr>
<tr>
<td>205          Diversification, Industry Dynamism, and Economic Performance</td>
<td></td>
</tr>
<tr>
<td>166          Diversity, Biominerualization and Rock Magnetism of Magnetotactic Bacteria</td>
<td></td>
</tr>
<tr>
<td>50           DNA Electrophoresis</td>
<td></td>
</tr>
<tr>
<td>113          Drilling of Polymer-Matrix Composites</td>
<td></td>
</tr>
<tr>
<td>257          Due Diligence and the Business Transaction</td>
<td></td>
</tr>
<tr>
<td>277          Dynamic Behavior of Materials, Volume 1</td>
<td></td>
</tr>
<tr>
<td>92           Dynamic Secrets in Communication Security</td>
<td></td>
</tr>
<tr>
<td>215          Dynamic Stochastic General Equilibrium Models: the Macro-Finance Link</td>
<td></td>
</tr>
<tr>
<td>129          Dynamic Thermal Analysis of Machines in Running State</td>
<td></td>
</tr>
<tr>
<td>280          Dynamics of Information Systems: Algorithmic Approaches</td>
<td></td>
</tr>
<tr>
<td>168          Dynamics of Vortex Structures in a Stratified Rotating Fluid</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
</tr>
<tr>
<td>165          Early Evolutionary History of the Synapsida</td>
<td></td>
</tr>
<tr>
<td>241          Early Life Conditions and Rapid Demographic Changes in the Developing World</td>
<td></td>
</tr>
<tr>
<td>228          Early Mathematics Learning</td>
<td></td>
</tr>
<tr>
<td>204          Ecology and Conservation of Tropical Marine Faunal Communities</td>
<td></td>
</tr>
<tr>
<td>213          Economic Crisis in Europe and the Balkans</td>
<td></td>
</tr>
<tr>
<td>280          Econophysics of Agent-based models</td>
<td></td>
</tr>
<tr>
<td>187          Ecosystem Services, Biodiversity and Environmental Change in a Tropical Mountain Ecosystem of South Ecuador</td>
<td></td>
</tr>
<tr>
<td>232          Effective Group Work in Primary School Classrooms</td>
<td></td>
</tr>
<tr>
<td>10           eHealth, Care and Quality of Life</td>
<td></td>
</tr>
<tr>
<td>129          Electrical Overstress</td>
<td></td>
</tr>
<tr>
<td>148          Electrical Properties of Graphite Nanoparticles in Silicone</td>
<td></td>
</tr>
<tr>
<td>160          Electrohydrodynamic Patterning of Functional Materials</td>
<td></td>
</tr>
<tr>
<td>133          Electromagnetic Transients in Power Cables</td>
<td></td>
</tr>
<tr>
<td>144          Elements of Solid State Physics and of Crystalline Nanostructures</td>
<td></td>
</tr>
<tr>
<td>5            Embolization</td>
<td></td>
</tr>
<tr>
<td>35           Emergency Musculoskeletal Imaging in Children</td>
<td></td>
</tr>
<tr>
<td>120          Emerging Therapies in Neurorehabilitation</td>
<td></td>
</tr>
<tr>
<td>127          EMI-Resilient Amplifier Circuits</td>
<td></td>
</tr>
<tr>
<td>202          Encyclopedia of Food and Agricultural Ethics</td>
<td></td>
</tr>
<tr>
<td>207          Encyclopedia of Law and Economics</td>
<td></td>
</tr>
<tr>
<td>196          Encyclopedia of Metagenomics</td>
<td></td>
</tr>
<tr>
<td>239          Encyclopedia of Migration</td>
<td></td>
</tr>
<tr>
<td>25           Encyclopedia of Trauma Care</td>
<td></td>
</tr>
<tr>
<td>41           Encyclopedia of Tuberculosis</td>
<td></td>
</tr>
<tr>
<td>192          Endemism in Vascular Plants</td>
<td></td>
</tr>
<tr>
<td>56           Endocannabinoid Regulation of Monoamines in Psychiatric and Neurological Disorders</td>
<td></td>
</tr>
<tr>
<td>19           Endoscopy in the Diagnosis of Small Intestine Diseases</td>
<td></td>
</tr>
<tr>
<td>107          Energy-Efficient Communication Processors</td>
<td></td>
</tr>
<tr>
<td>134          Energy-Efficient Fault-Tolerant Systems</td>
<td></td>
</tr>
<tr>
<td>120          Engineering Economics and Finance for Transportation Infrastructure</td>
<td></td>
</tr>
<tr>
<td>219          Enterprise Governance</td>
<td></td>
</tr>
<tr>
<td>278          Enterprise, Business-Process and Information Systems Modeling</td>
<td></td>
</tr>
<tr>
<td>52           Epigenetic Mechanisms in Cellular Reprogramming</td>
<td></td>
</tr>
<tr>
<td>254          Error Correction in the Foreign Language Classroom</td>
<td></td>
</tr>
<tr>
<td>44           Essential Elements for a GMP Analytical Chemistry Department</td>
<td></td>
</tr>
<tr>
<td>2           Essentials In Elbow Surgery</td>
<td></td>
</tr>
<tr>
<td>169          Estuaries of Australia in 2050 and beyond</td>
<td></td>
</tr>
<tr>
<td>248          Ethics or Moral Philosophy</td>
<td></td>
</tr>
<tr>
<td>244          Ethnographic Worldviews</td>
<td></td>
</tr>
<tr>
<td>57           Evidence-Based Interventions for Children with Challenging Behavior</td>
<td></td>
</tr>
<tr>
<td>48           Evolution of Visual and Non-visual Pigments</td>
<td></td>
</tr>
<tr>
<td>198          Evolutionary Biology: Exobiology and Evolutionary Mechanisms</td>
<td></td>
</tr>
<tr>
<td>Title Index</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>280</td>
<td>Frontiers of Fundamental Physics and Physics Education Research</td>
</tr>
<tr>
<td>64</td>
<td>Functionals of Multidimensional Diffusions with Applications to Finance</td>
</tr>
<tr>
<td>27</td>
<td>Fundamentals of Evidence Based Medicine</td>
</tr>
<tr>
<td>226</td>
<td>Fundamentals of Space Law and Policy</td>
</tr>
<tr>
<td>258</td>
<td>Funding Your Startup</td>
</tr>
<tr>
<td>104</td>
<td>Fuzzy Information &amp; Engineering and Operations Research &amp; Management</td>
</tr>
<tr>
<td>199</td>
<td>G Protein-Coupled Receptor Signaling in Plants</td>
</tr>
<tr>
<td>154</td>
<td>Galactic Encounters</td>
</tr>
<tr>
<td>25</td>
<td>General Trauma Care and Related Aspects</td>
</tr>
<tr>
<td>42</td>
<td>Genetic Damage in Human Spermatozoa</td>
</tr>
<tr>
<td>13</td>
<td>Genitourinary Imaging - A Case Based Approach</td>
</tr>
<tr>
<td>46</td>
<td>Genotoxicity Assessment</td>
</tr>
<tr>
<td>165</td>
<td>Geocology of the Western Arctic Shelf of Russia</td>
</tr>
<tr>
<td>174</td>
<td>Geographic Information Science at the Heart of Europe</td>
</tr>
<tr>
<td>72</td>
<td>Geometric Analysis of the Bergman Kernel and Metric</td>
</tr>
<tr>
<td>235</td>
<td>Geoscience Research and Education</td>
</tr>
<tr>
<td>235</td>
<td>Geoscience Research and Outreach</td>
</tr>
<tr>
<td>238</td>
<td>Germany's New Security Demographics</td>
</tr>
<tr>
<td>54</td>
<td>Giardia as a Foodborne Pathogen</td>
</tr>
<tr>
<td>170</td>
<td>GIS Landslide</td>
</tr>
<tr>
<td>54</td>
<td>Glioma Cell Biology</td>
</tr>
<tr>
<td>180</td>
<td>Global and Regional Approaches to Arms Control in the Middle East</td>
</tr>
<tr>
<td>134</td>
<td>Global Energy Policy and Security</td>
</tr>
<tr>
<td>233</td>
<td>Global Teachers, Australian Perspectives</td>
</tr>
<tr>
<td>220</td>
<td>Goals, Control and Conflicts in Family Offices</td>
</tr>
<tr>
<td>175</td>
<td>Governments' Responses to Climate Change: Selected Examples From Asia-Pacific</td>
</tr>
<tr>
<td>279</td>
<td>Graph-Based Representations in Pattern Recognition</td>
</tr>
<tr>
<td>280</td>
<td>Green Communication and Networking</td>
</tr>
<tr>
<td>93</td>
<td>Group Theory applied to Chemistry</td>
</tr>
<tr>
<td>156</td>
<td>Hadronic Transport Coefficients from Effective Field Theories</td>
</tr>
<tr>
<td>3</td>
<td>Handbook for Attention Deficit Hyperactivity Disorder</td>
</tr>
<tr>
<td>256</td>
<td>Handbook of Contemporary Islam and Muslim Lives</td>
</tr>
<tr>
<td>209</td>
<td>Handbook of EOQ Inventory Problems</td>
</tr>
<tr>
<td>60</td>
<td>Handbook of Forensic Sociology and Psychology</td>
</tr>
<tr>
<td>201</td>
<td>Handbook of Glycosyltransferases and Related Genes</td>
</tr>
<tr>
<td>232</td>
<td>Handbook of Learning Analytics</td>
</tr>
<tr>
<td>93</td>
<td>Handbook of Olive Oil</td>
</tr>
<tr>
<td>22</td>
<td>Handbook of Pain and Palliative Care</td>
</tr>
<tr>
<td>23</td>
<td>Handbook of Pediatric Cardiovascular Drugs</td>
</tr>
<tr>
<td>112</td>
<td>Handbook of Photonics in Biomedical Engineering</td>
</tr>
<tr>
<td>143</td>
<td>Handbook of Spintronics</td>
</tr>
<tr>
<td>6</td>
<td>Handbook of Treatment-resistant Schizophrenia</td>
</tr>
<tr>
<td>76</td>
<td>Harmonic Analysis on Symmetric Spaces—Euclidean Space, the Sphere, and the Poincaré Upper Half Plane</td>
</tr>
<tr>
<td>77</td>
<td>Harnack Inequalities for Stochastic Partial Differential Equations</td>
</tr>
<tr>
<td>30</td>
<td>Health Impact Assessment in the United States</td>
</tr>
<tr>
<td>191</td>
<td>Heavy Metal Stress in Plants</td>
</tr>
<tr>
<td>108</td>
<td>High Performance Cloud Auditing and Applications</td>
</tr>
<tr>
<td>19</td>
<td>Histological Diagnosis of Nevi and Melanoma</td>
</tr>
<tr>
<td>157</td>
<td>Historical Evolution toward Achieving Ultrahigh Vacuum in JEOL Electron Microscopes</td>
</tr>
<tr>
<td>171</td>
<td>Historical Land Use/Land Cover Classification Using Remote Sensing</td>
</tr>
<tr>
<td>164</td>
<td>Historical Variability of Rainfall in the African East Sahel of Sudan</td>
</tr>
<tr>
<td>225</td>
<td>History of Social Law in Germany</td>
</tr>
<tr>
<td>247</td>
<td>Households and Consumption Forecasting</td>
</tr>
<tr>
<td>257</td>
<td>How to Do Business in Latin America</td>
</tr>
<tr>
<td>15</td>
<td>Hughes Syndrome: Highways and Byways</td>
</tr>
<tr>
<td>163</td>
<td>Human Environment Interactions - Volume 2</td>
</tr>
<tr>
<td>233</td>
<td>Human Knowledge Construction</td>
</tr>
<tr>
<td>Page</td>
<td>Title</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>87</td>
<td>Human Target</td>
</tr>
<tr>
<td>248</td>
<td>Hume’s Critique of Religion: ‘Sick Men’s Dreams’</td>
</tr>
<tr>
<td>278</td>
<td>Hybrid Metaheuristics</td>
</tr>
<tr>
<td>118</td>
<td>Hydraulically Actuated Hexapod Robots</td>
</tr>
<tr>
<td>95</td>
<td>Hydroxamic Acids</td>
</tr>
<tr>
<td>202</td>
<td>Imaging and Tracking Stem Cells</td>
</tr>
<tr>
<td>33</td>
<td>Imaging Gene Expression</td>
</tr>
<tr>
<td>12</td>
<td>Imaging in Clinical Oncology</td>
</tr>
<tr>
<td>29</td>
<td>Imaging of Foreign Bodies in Organs</td>
</tr>
<tr>
<td>31</td>
<td>Imaging Spine After Treatment</td>
</tr>
<tr>
<td>189</td>
<td>Immobilization of Enzymes and Cells</td>
</tr>
<tr>
<td>55</td>
<td>Immuno Systems Biology</td>
</tr>
<tr>
<td>136</td>
<td>Impacts of Large Dams: A Global Assessment</td>
</tr>
<tr>
<td>248</td>
<td>In Pursuit of Nanoethics</td>
</tr>
<tr>
<td>112</td>
<td>Independent Component Analysis of Edge Information for Face Recognition</td>
</tr>
<tr>
<td>278</td>
<td>Information Processing in Computer-Assisted Interventions</td>
</tr>
<tr>
<td>279</td>
<td>Information Security and Cryptology</td>
</tr>
<tr>
<td>278</td>
<td>Information Security Theory and Practice. Security of Mobile and Cyber-Physical Systems</td>
</tr>
<tr>
<td>210</td>
<td>Information Systems for Small and Medium-sized Enterprises</td>
</tr>
<tr>
<td>278</td>
<td>Information Systems: Methods, Models, and Applications</td>
</tr>
<tr>
<td>280</td>
<td>Information Technology Convergence</td>
</tr>
<tr>
<td>163</td>
<td>Information Technology in Environmental Technology</td>
</tr>
<tr>
<td>11</td>
<td>Injections in Aesthetic Medicine</td>
</tr>
<tr>
<td>161</td>
<td>Inland Water Altimetry</td>
</tr>
<tr>
<td>210</td>
<td>Innovation and Marketing in the Pharmaceutical Industry</td>
</tr>
<tr>
<td>220</td>
<td>Innovation Through Cooperation</td>
</tr>
<tr>
<td>172</td>
<td>Innovative Application of Airborne Radars</td>
</tr>
<tr>
<td>249</td>
<td>Institutions, Emotions, and Group Agents</td>
</tr>
<tr>
<td>67</td>
<td>Integral Methods in Science and Engineering</td>
</tr>
<tr>
<td>279</td>
<td>Integrated Formal Methods</td>
</tr>
<tr>
<td>278</td>
<td>Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems</td>
</tr>
<tr>
<td>263</td>
<td>Intel® Trusted Execution Technology for Server Platforms</td>
</tr>
<tr>
<td>222</td>
<td>Intellectual Property and Free Trade Agreements in the Asia-Pacific Region</td>
</tr>
<tr>
<td>108</td>
<td>Intellectual Property in Consumer Electronics, Software and Technology Startups</td>
</tr>
<tr>
<td>109</td>
<td>Interactive Segmentation Techniques</td>
</tr>
<tr>
<td>216</td>
<td>Internal Brand Management in an International Context</td>
</tr>
<tr>
<td>277</td>
<td>International Asia Conference on Industrial Engineering and Management Innovation (IEMI2012) Proceedings</td>
</tr>
<tr>
<td>133</td>
<td>International Bioenergy Trade</td>
</tr>
<tr>
<td>232</td>
<td>International Education Hubs</td>
</tr>
<tr>
<td>223</td>
<td>International Handbook of Cooperative Law</td>
</tr>
<tr>
<td>228</td>
<td>International Perspectives on Teacher Knowledge, Beliefs and Opportunities to learn</td>
</tr>
<tr>
<td>224</td>
<td>International Space Law</td>
</tr>
<tr>
<td>23</td>
<td>Interventional Neuroradiology</td>
</tr>
<tr>
<td>15</td>
<td>Intraoperative Imaging and Image-Guided Therapy</td>
</tr>
<tr>
<td>63</td>
<td>Introduction to Compactness Results in Symplectic Field Theory</td>
</tr>
<tr>
<td>111</td>
<td>Introduction to Embedded Systems</td>
</tr>
<tr>
<td>79</td>
<td>Introduction to Probability and Statistics for Engineers</td>
</tr>
<tr>
<td>130</td>
<td>Introduction to Reversible and Quantum Circuits</td>
</tr>
<tr>
<td>119</td>
<td>Introduction to Scientific Publishing</td>
</tr>
<tr>
<td>70</td>
<td>Introduction to Tensor Analysis and the Calculus of Moving Surfaces</td>
</tr>
<tr>
<td>73</td>
<td>Introduction to the Qualitative Theory of Differential Systems</td>
</tr>
<tr>
<td>280</td>
<td>Inverse Problems and Large-Scale Computations</td>
</tr>
<tr>
<td>170</td>
<td>Ionospheric Prediction and Forecasting</td>
</tr>
<tr>
<td>14</td>
<td>Irritable Bowel Syndrome</td>
</tr>
<tr>
<td>177</td>
<td>Is Local Beautiful?</td>
</tr>
<tr>
<td>254</td>
<td>Issues in Teaching, Learning and Testing Speaking in a Second Language</td>
</tr>
<tr>
<td>149</td>
<td>It Came From Outer Space Wearing an RAF Blazer!</td>
</tr>
<tr>
<td>198</td>
<td>Jellyfish Blooms</td>
</tr>
<tr>
<td>16</td>
<td>Kadushin’s Behavioral Neuroscience Dictionary</td>
</tr>
<tr>
<td>138</td>
<td>Kinetic Simulations of Ion Transport in Fusion Devices</td>
</tr>
<tr>
<td>7</td>
<td>L’immagine digitale in diagnostica per immagini</td>
</tr>
<tr>
<td>58</td>
<td>La persona competente</td>
</tr>
<tr>
<td>4</td>
<td>La simulation en santé : de la théorie à la pratique</td>
</tr>
<tr>
<td>277</td>
<td>LACAME 2012</td>
</tr>
<tr>
<td>162</td>
<td>Landscapes and Landforms of France</td>
</tr>
<tr>
<td>254</td>
<td>Language Learning, Discourse and Communication</td>
</tr>
<tr>
<td>279</td>
<td>Language Processing and Intelligent Information Systems</td>
</tr>
<tr>
<td>32</td>
<td>Laparoscopy in Children</td>
</tr>
<tr>
<td>179</td>
<td>Large Dams in Asia</td>
</tr>
<tr>
<td>130</td>
<td>Laser Pulse Heating of Surfaces and Thermal Stress Analysis</td>
</tr>
<tr>
<td>47</td>
<td>Lateran Gene Transfer in Evolution</td>
</tr>
<tr>
<td>192</td>
<td>Le culture del cibo</td>
</tr>
<tr>
<td>211</td>
<td>Leading Operational Excellence in the Pharmaceutical Industry</td>
</tr>
<tr>
<td>269</td>
<td>Learn BlackBerry 10 Apps Development</td>
</tr>
<tr>
<td>261</td>
<td>Learn iOS App Development</td>
</tr>
<tr>
<td>268</td>
<td>Learn Java for Web Development</td>
</tr>
<tr>
<td>266</td>
<td>Learn Spring Framework</td>
</tr>
<tr>
<td>153</td>
<td>Lecture Notes on Newtonian Mechanics</td>
</tr>
<tr>
<td>251</td>
<td>Legal Scholarship as a Source of Law</td>
</tr>
<tr>
<td>151</td>
<td>Leonid Isaakovich Mandelstam</td>
</tr>
<tr>
<td>32</td>
<td>Les soins de support en cancérologie</td>
</tr>
<tr>
<td>142</td>
<td>Lessons from the Masters</td>
</tr>
<tr>
<td>252</td>
<td>Lesniewski’s Systems of Logic and Foundations of Mathematics</td>
</tr>
<tr>
<td>180</td>
<td>Lichens to Biomonitors the Environment</td>
</tr>
</tbody>
</table>
### Light-Sensitive Polymeric Nanoparticles Based on Photo-Cleavable Chromophores

96

### Lighting Circuits Characterization and Modeling

132

### Lip Cancer

16

### Literacy and Language in East Asia

231

### Local Variance Estimation for Uncensored and Censored Observations

69

### Logic-Based Program Synthesis and Transformation

278

### Logics in Computer Science

89

### Logistics Operations and Management for Recycling and Reuse

194

### Long Island Sound

125

### Low-Frequency Noise in Semiconductors

203

### Low-Oxygen Stress in Plants

100

### László Zechmeister

227

### MacLeod's Introduction to Medicine

258

### Male Infertility for the Clinician

26

### Management Intelligent Systems

277

### Management of Hematological Cancers in Older People

39

### Management of Neuroendocrine Tumors of the Pancreas and Digestive Tract

29

### Managing Breakthrough Cancer Pain

36

### Managing the Lifecycle of Open Innovation Platforms

212

### Manual of Pediatric Nephrology

27

### Marketing Cases from Emerging Markets

205

### Material Handling and Production Systems Modelling - based on Queuing Models

107

### Materials that Change Color

159

### Mathematical and Numerical Models for Eddy Currents and Magnetostatics

74

### Mathematical Economics

216

### Mathematical Modelling of the Cell Cycle Stress Response

152

### Mathematical Models in Biology

196

### Mathematical Morphology and Its Applications to Signal and Image Processing

279

### Mathematics of Planet Earth

7

### Measuring the Angular Momentum of Supermassive Black Holes

138

### Mechanics and Model-Based Control of Advanced Engineering Systems

104

### Melatonin and melatonergic drugs in clinical practice

38

### MEMS Product Engineering

119

### Menahem Max Schiffer: Selected Papers Volume 2

68

### Mental Health and Pain

18

### Mental Health Informatics

114

### Mercury

148

### Mercury Emission and its Control in Chinese Coal-Fired Power Plants

182

### Meteorite Impact Structures

131

### Methodology, Models and Algorithms in Thermographic Diagnostics

131

### Methods and Experimental Techniques in Computer Engineering

101

### Methods in Neuroethological Research

53

### Methods of Solving Complex Geometry Problems

70

### Metrology for Fire Experiments in Outdoor Conditions

154

### Microglia

48

### Migration, Gender and Social Justice

245

### Mineral Resource Estimation

168

### Minimally Invasive Spinal Deformity Surgery

39

### Minimally Invasive Surgery of the Lumbar Spine

20

### Minor Element Geochemistry at the Earth's Surface

169

### Mobile Broadband

106

### Model-Based Methodologies for Pervasive and Embedded Software

279

### Modeling and Planning of Manufacturing Processes

113

### Modeling and Simulation in Engineering, Economics, and Management

278

### Modeling Approaches and Algorithms for Advanced Computer Applications

101

### Modeling, Simulation, Testing, and Measurements of Wireless Communication Systems

101

### Modelling and Simulation

82

### Models and Methods in Economics and Management Science

210

### Modern Earthquake Engineering for Offshore and Onland Structures

110

### Modern trends in Superconductivity and Superfluidity

145

### Molecular Diagnosis of Deafness

38

### Morphogenesis in Living Systems

197

### Morphological Aspects of Inner Ear Disease

24

### Moving Objects Management

88

### Moving Toward a Just Peace

239

### Multi Tenancy for Cloud-Based In-Memory Column Databases

217

### Multi-Stage Simultaneous Lot-Sizing and Scheduling

218

### Multidisciplinary Tools for Investigating Synaptic Plasticity

52

### Multilayered Security and Privacy Protection in Car-to-X Networks

91

### Multilingual Lexical Recognition in the Mental Lexicon of Third Language Users

255

### Multimedia Communications, Services and Security

277

### Multimodality Imaging for Transcatheter Aortic Valve Replacement

21

### Multiple Sclerosis Immunology

56

### Multiscale Robotics for Microsystems

120

### Municipal Solid Waste Management in Asia and the Pacific Islands

175

### Musculoskeletal Health in Women

22

### Nanocrystalline Materials

146

### Nanomaterials Imaging Techniques, Surface Studies, and Applications

280

### Nanomechanical Analysis of High Performance Materials

127

### Nanomedicine

95

### Nanostructured Palladium Electrochemistry

98
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Intellectual Capital and the Financial Crisis in Indonesia, Malaysia, The Philippines, and Thailand</td>
<td>214</td>
</tr>
<tr>
<td>Natural and Artificial Computation in Engineering and Medical Applications</td>
<td>278</td>
</tr>
<tr>
<td>Natural and Artificial Models in Computation and Biology</td>
<td>278</td>
</tr>
<tr>
<td>Natural Convection in Superposed Fluid-Porous Layers</td>
<td>102</td>
</tr>
<tr>
<td>Network and System Security</td>
<td>279</td>
</tr>
<tr>
<td>Network GIS</td>
<td>174</td>
</tr>
<tr>
<td>Neurological Emergencies in Clinical Practice</td>
<td>29</td>
</tr>
<tr>
<td>Neurology at the Bedside</td>
<td>16</td>
</tr>
<tr>
<td>Neuramathematics of Vision</td>
<td>74</td>
</tr>
<tr>
<td>Neuropsychiatric Symptoms of Cerebrovascular Diseases</td>
<td>9</td>
</tr>
<tr>
<td>New Gold-Catalyzed Reactions and Applications for the Synthesis of Alkaloids</td>
<td>94</td>
</tr>
<tr>
<td>New Trends in Atomic and Molecular Physics</td>
<td>149</td>
</tr>
<tr>
<td>Next Generation of Information Technology in Educational Management</td>
<td>278</td>
</tr>
<tr>
<td>Next Generation Sequencing and Sequence Assembly</td>
<td>51</td>
</tr>
<tr>
<td>Next Generation Sequencing in Cancer Research</td>
<td>56</td>
</tr>
<tr>
<td>Nipple Sparing Mastectomy</td>
<td>9</td>
</tr>
<tr>
<td>NMR for Chemists and Biologists</td>
<td>44</td>
</tr>
<tr>
<td>Nonlinear Analysis of Gas-Water/Oil-Water Two-Phase Flow in Complex Networks</td>
<td>111</td>
</tr>
<tr>
<td>Nonlinear Approaches in Engineering Applications 2</td>
<td>110</td>
</tr>
<tr>
<td>Nonlinear Elastic Waves in Materials</td>
<td>121</td>
</tr>
<tr>
<td>Normally Hyperbolic Invariant Manifolds</td>
<td>68</td>
</tr>
<tr>
<td>Nostradamus 2013: Prediction, Modeling and Analysis of Complex Systems</td>
<td>277</td>
</tr>
<tr>
<td>Novel Targeted Drugs for the Treatment of Lymphoma</td>
<td>25</td>
</tr>
<tr>
<td>Nuclear Medicine Technology</td>
<td>28</td>
</tr>
<tr>
<td>Nuclear Physics</td>
<td>145</td>
</tr>
<tr>
<td>Nucleic Acid Detection</td>
<td>49</td>
</tr>
<tr>
<td>Observer's Guide to Star Clusters</td>
<td>144</td>
</tr>
<tr>
<td>Observing Photons in Space</td>
<td>143</td>
</tr>
<tr>
<td>Occupational Cancers</td>
<td>2</td>
</tr>
<tr>
<td>Ocean-Atmosphere Interactions of Gases and Particles</td>
<td>167</td>
</tr>
<tr>
<td>OCT-Atlas</td>
<td>41</td>
</tr>
<tr>
<td>Oeuvres - Collected Papers</td>
<td>75</td>
</tr>
<tr>
<td>Office Automation 2.0</td>
<td>259</td>
</tr>
<tr>
<td>Office Urology</td>
<td>37</td>
</tr>
<tr>
<td>Offshore Risk Assessment</td>
<td>128</td>
</tr>
<tr>
<td>Offshore Risk Assessment vol 1.</td>
<td>128</td>
</tr>
<tr>
<td>Offshore Risk Assessment vol 2.</td>
<td>128</td>
</tr>
<tr>
<td>Oil Pollution in the Baltic Sea</td>
<td>178</td>
</tr>
<tr>
<td>Omics Approaches in Breast Cancer</td>
<td>3</td>
</tr>
<tr>
<td>Omics for Personalized Medicine</td>
<td>43</td>
</tr>
<tr>
<td>On the Economics of Marriage</td>
<td>212</td>
</tr>
<tr>
<td>Online Collective Action</td>
<td>82</td>
</tr>
<tr>
<td>Open Learning Cultures</td>
<td>85</td>
</tr>
<tr>
<td>Opening Science</td>
<td>103</td>
</tr>
<tr>
<td>Operations Research Proceedings 2012</td>
<td>280</td>
</tr>
<tr>
<td>Optical Supercomputing</td>
<td>278</td>
</tr>
<tr>
<td>Optically Active Charge Traps and Chemical Defects in Semiconducting Nanocrystals Probed by Pulsed Optically Detected Magnetic Resonance</td>
<td>156</td>
</tr>
<tr>
<td>Optimization and Security Challenges in Smart Power Grids</td>
<td>135</td>
</tr>
<tr>
<td>Optimization for Computer Vision</td>
<td>91</td>
</tr>
<tr>
<td>Optimization of Structures and Components</td>
<td>117</td>
</tr>
<tr>
<td>Origin, Evolution and Biogeographic History of South American Turtles</td>
<td>161</td>
</tr>
<tr>
<td>Otolaryngology Essentials for Primary Care</td>
<td>12</td>
</tr>
<tr>
<td>Our Beautiful Moon and its Mysterious Magnetism</td>
<td>162</td>
</tr>
<tr>
<td>Our National River Ganga</td>
<td>179</td>
</tr>
<tr>
<td>Ovarian Cancer</td>
<td>51</td>
</tr>
<tr>
<td>Ovarian Stimulation Protocols</td>
<td>2</td>
</tr>
<tr>
<td>Packaging for Food Preservation</td>
<td>94</td>
</tr>
<tr>
<td>Parallel Kinematics</td>
<td>115</td>
</tr>
<tr>
<td>Parasitic Orobanchaceae</td>
<td>193</td>
</tr>
<tr>
<td>Particle and Astroparticle Physics</td>
<td>140</td>
</tr>
<tr>
<td>Particle Characteristics and Product Development</td>
<td>148</td>
</tr>
<tr>
<td>Particle Physics</td>
<td>145</td>
</tr>
<tr>
<td>Partnership in Space</td>
<td>106</td>
</tr>
<tr>
<td>Passing the General Surgery Oral Board Exam</td>
<td>24</td>
</tr>
<tr>
<td>Passport for the Orthopaedic Boards Revalidation</td>
<td>20</td>
</tr>
<tr>
<td>Pattern Recognition and Image Analysis</td>
<td>279</td>
</tr>
<tr>
<td>Pediatric and Adolescent Sports Traumatology</td>
<td>13</td>
</tr>
<tr>
<td>Pediatric Cardiovascular Computed Tomography Angiography</td>
<td>14</td>
</tr>
<tr>
<td>People on the Move in a Changing Climate</td>
<td>243</td>
</tr>
<tr>
<td>Peptide Nucleic Acids</td>
<td>197</td>
</tr>
<tr>
<td>Peptide Synthesis and Applications</td>
<td>192</td>
</tr>
<tr>
<td>Performance Control in Buyer-Supplier-Relationships</td>
<td>212</td>
</tr>
<tr>
<td>Performance Management Systems</td>
<td>209</td>
</tr>
<tr>
<td>Performance Measurement and Incentive Systems in Purchasing</td>
<td>205</td>
</tr>
<tr>
<td>Performance-Based Contracts for Road Projects</td>
<td>107</td>
</tr>
<tr>
<td>Periprosthetic Joint Infection of the Hip and Knee</td>
<td>35</td>
</tr>
<tr>
<td>Peroxisomes and their Key Role in Cellular Signaling and Metabolism</td>
<td>45</td>
</tr>
<tr>
<td>Pharmaceutical Biotechnology</td>
<td>45</td>
</tr>
<tr>
<td>Pharmacotherapy of Pulmonary Hypertension</td>
<td>47</td>
</tr>
<tr>
<td>Phenology: An Integrative Environmental Science</td>
<td>200</td>
</tr>
<tr>
<td>Phosphatase Modulators</td>
<td>52</td>
</tr>
<tr>
<td>Photosynthesis in Bryophytes and Early Land Plants</td>
<td>191</td>
</tr>
<tr>
<td>Physiochemical Interactions of Amino Acids and Peptides in Aqueous Media</td>
<td>94</td>
</tr>
<tr>
<td>Physiological, Developmental and Behavioral Effects of Marine Pollution</td>
<td>181</td>
</tr>
<tr>
<td>Phytoremediation: Role of Aquatic Plants in Environmental Clean-Up</td>
<td>176</td>
</tr>
<tr>
<td>Planctomycetes: Cell Structure, Origins and Biology</td>
<td>136</td>
</tr>
<tr>
<td>Planerectomes: Cell Structure, Origins and Biology</td>
<td>189</td>
</tr>
<tr>
<td>Planning Support Systems for Sustainable Urban Development</td>
<td>176</td>
</tr>
<tr>
<td>Plant Transposable Elements</td>
<td>197</td>
</tr>
</tbody>
</table>
104 Plasticity
100 Polymer Blends Handbook
225 Port State Jurisdiction and the Regulation of International Merchant Shipping
144 Portrait of Gunnar Källén
57 Positive Nations and Communities
278 Post-Quantum Cryptography
263 Practical ASP.NET MVC 4 Projects
274 Practical Ext JS 4
36 Prevenire gli eventi avversi nella pratica clinica
76 Preventive Methods for Coastal Protection
195 Primates in Fragments
11 Principles and Applications of Magnetic Particle Imaging
262 Pro Android and Cloud Services
261 Pro Arduino Games
269 Pro ASP.NET 4.5 in VB
260 Pro Asynchronous Programming with .NET
275 Pro IIS
266 Pro JPA 2
275 Pro JSF and HTML5
265 Pro Node.js for Developers
269 Pro Object-Oriented JavaScript
268 Pro Puppet
267 Pro SharePoint 2013 Development
274 Pro SharePoint 2013 Performance Optimization
272 Pro WordPress Theme Development
67 Probabilità
280 Proceedings of 2013 Chinese Intelligent Automation Conference
105 Programming Heterogeneous MPSoCs
186 Progress and Opportunities of Doubled Haploid Production
279 Progress in Cryptology -- AFRICACRYPT 2013
157 Progress in Ultrafast Intense Laser Science X
187 Protein Tyrosine Phosphatase Control of Metabolism
36 Protocollo MEC
62 Psicopatologia web mediata
58 Psycho-social Career Meta-capacities
99 Purification of Peptides in High-Complexity Arrays
Q
233 Quality Assurance in LIS Education
156 Quantifying the Martian Geochemical Reservoirs
80 Quantile-Based Reliability Analysis
51 Quantitative Ultrasound in Soft Tissues
150 Quantum Mechanics for Pedestrians 1: Fundamentals
150 Quantum Mechanics for Pedestrians 2: Applications and Extensions
147 Quantum potential: Physics, Geometry and Algebra
277 Quantum Theory: A Two-Time Success Story
151 Quantum Uncertainty Structures
250 Quṭb al-Dīn Shirāzī and the Configuration of the Heavens
R
207 Race, Class, and Precinct Quality in American Cities
142 Radiative Processes in High Energy Astrophysics
102 Radio Link Quality Estimation in Low-Power Wireless Networks
10 Radiotherapy in Prostate Cancer
215 Real Estate Investment Trusts in Europe
278 Recent Trends in Applied Artificial Intelligence
280 Recent Trends in Dynamical Systems
134 Rectenna Solar Cells
240 Reforming Juvenile Justice
90 Registration Methods for Pulmonary Image Analysis
74 Regularity of Optimal Transport Maps and Applications
242 Regulatory Regimes and Risk in Asia
141 Relativity for Everyone
279 Reliable Software Technologies -- Ada-Europe 2013
43 Resistance to Immunotherapeutic Antibodies in Cancer
208 Retail Branding and Store Loyalty
188 Reviews in Ecological Economics, Volume 1
239 Revue de synthèse
166 Risk and Management of Current and Future Storm Surges
176 Risk-Informed Management of European River Basins
276 Run, Roll, Fly: Arduino Bots and Tools
123 Run-time Management techniques for Manycore Architectures
S
224 Same-Sex Couples before National, Supranational and International Jurisdictions
279 Scale Space and Variational Methods in Computer Vision
141 Scattering Theory
208 Search Methodologies
277 2nd International Workshop on Evidence-based Technology Enhanced Learning
88 Secure Smart Embedded Devices, Platforms and Applications
83 Security and Privacy in Biometrics
84 Security and Privacy Preserving in Social Networks
87 Security for Cloud Storage Systems
117 Security, Privacy and Trust in Cloud Systems
170 Sediments and Sedimentation Regime in the Barents Sea
164 Seismic Evaluation and Rehabilitation of Structures
163 Seismic Events in Glaciers
65 Selected Papers
66 Selected Papers
73 Selected works of J. Nečas
147 Semiconductor Quantum Structures - Growth and Structuring
196 Sensitivity of Mangrove Ecosystem to Changing Climate
277 7th International Conference on Practical Applications of Computational Biology & Bioinformatics
Title Index

112 Signals, Processes, and Systems
58 Simulations for Personnel Selection
69 Singular Phenomena and Scaling in Mathematical Models
60 Skill and knowledge acquisition for complex technical tasks
20 Skin Manifestations in Rheumatic Disease
122 Sliding Mode Control and Observation
159 Smart Biomaterials
133 Smart-Eco Buildings towards 2020/2030
54 Smoking and Lung Inflammation
21 Social Media in Clinical Practice
131 Social Web Artifacts for Boosting Recommenders
124 Soft City Culture and Technology
281 Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing
88 Software Engineering: A Hands-On Approach
178 Soil Security for Ecosystem Management
146 Solar System Maps
97 Sonocrystallization of Fats
249 Sourcebook for the History of the Philosophy of Mind
122 SpaceX
173 Spatial Analysis and Location Modeling in Urban and Regional Systems
41 Sperm Chromatin for the Clinician
268 SQL Server 2012 DBA Recipes
150 Standard Model Measurements with the ATLAS Detector
215 State Aid for Newspapers
81 State-Space Models
114 Static and Dynamic Buckling of Thin-Walled Plate Structures
53 Stearoyl-CoA Desaturase Genes in Lipid Metabolism
203 Stem Cell Niche
200 Stem Cells Handbook
10 Stereotactic Body Radiotherapy
48 Sterile Product Development
63 Stochastic Models in Reliability
124 Stone Cladding Engineering
211 Strategic Management of Global Manufacturing Networks
99 Structures and Interactions of Ionic Liquids
214 Subsidiary Internationalization and Cross-Border Subsidiary Mandates
26 Success in Academic Surgery: Clinical Trials
27 Success in Academic Surgery: Developing a Career in Surgical Education
8 Success in Academic Surgery: Health Services Research
31 Sudden Infant Death Syndrome
160 Superplasticity
4 Surgical Orthopaedics and Traumatology
55 Surrogate Approaches in Development of Antibody-Based Therapeutics
85 Survey of Cloud Computing
257 Surviving Your Divorce
198 Sustainability and Process Development
96 Sustainability of Biofuel Production from Oil Palm Biomass
89 Sustainable Web Ecosystem Design
200 Symplasmic Transport in Vascular Plants
99 Synthesis and Modifications of Porphyrinoids
46 Systems Analysis of Chromatin-Related Protein Complexes in Cancer
204 Systems Biology of Influenza Research
184 Systems Biology of Metabolic and Signaling Networks
147 Systems from Dy-Er...Ir-Y
102 SystemVerilog for Design and Verification using UVM
T
137 Tabletop Intense Femtosecond Pulse Sources and Their Applications
155 Tackling the Inverse Problem for Non-Autonomous Systems
114 TCP Performance Analysis for Data Center Networks
230 Teaching and Learning in a Community of Thinking
235 Teaching and Research in Contemporary Higher Education
234 Teaching Compassion - Humane Education in Early Childhood
277 Technologies for Sustainable Development
277 Technology Partnership Malaysia - Japan Model
57 Teoria psicoanalitica e neuroscienze
246 Territoriality and Migration in the E.U. Neighbourhood
37 Textbook of Cardiovascular Intervention
17 Textbook of Neurointensive Care
7 The Atlas of Ocular and Orbital Trauma
32 The Behavioral Consequences of Stroke
242 The Bologna Process in Central and Eastern Europe
152 The Constellation Observing Atlas
227 The Craft of Scientific Writing
266 The Definitive Guide to Django
265 The Definitive Guide to MongoDB
193 The Demilitarized Zone (DMZ) of Korea
67 The Dynamics of Nonlinear Reaction-Diffusion Equations with Small Lévy Noise
219 The Economics of Epidemiology
251 The Feminist Philosophy Collection
31 The Glaucomas
169 The Greenhouse Gas Balance of Italy
71 The Hardy Space H1 with Non-doubling Measures and Their Applications
9 The Heart and Circulation
246 The Impact of Private Actors on Security Governance
45 The Inflammasome
30 The International Handbook of the Demography of Race and Ethnicity
132 The Kuroshio Power Plant
70 The Lefschetz Properties
13 The MassGeneral Hospital for Children Handbook of Pediatric Global Health
229 The Mathematics Teacher in the Digital Era
231 The New Development of Technology Enhanced Learning: Concept, Research and Best Practices

XXIV
277 The 19th International Conference on Industrial Engineering and Engineering Management
201 The Plant Sciences
17 The Posterior Intrahepatic Approach in Liver Surgery
224 The Protection of Human Rights through International Law and International Criminal Law
225 The Right(s) to Water
33 The rise of acid reflux in Asia
50 The Rise of Fetal and Neonatal Physiology
245 The Role of Religion in Eastern Europe Today
216 The Run to the Pennant
278 The Semantic Web: Semantics and Big Data
226 The Tradition and Modern Transition of Chinese Law
183 The Turkmen Lake Altyn Asyr and Water Resources in Turkmenistan
253 The Variation Theory of Comparative Literature
236 The Yuanpei Program in Peking University
244 Their Members’ Voice?
137 Theoretical Concepts of X-Ray Nanoscale Analysis
142 Theoretical Femtosecond Physics
249 Theories of Information, Communication and Knowledge
278 Theory and Applications of Models of Computation
280 Theory and Practice of Computation
83 Theory and Principled Methods for the Design of Metaheuristics
161 Thermal and Mineral Waters
135 Thermal energy storage for medium and high temperatures
115 Thermal Management for LED Applications
3 Thoracoscopy for Pulmonologists
207 Time and Money
153 Time-Dependent CP Violation Measurements
244 Time-Out in the Land of Apu
124 To Orbit and Back Again
280 Topics in Applied Statistics
121 Topological Signal Processing
264 TouchDevelop
218 Tourism Development in the GCC States
96 Toward Dual and Targeted Cancer Therapy with Novel Phthalocyanine-based Photosensitizers
155 Towards Autonomous Soft Matter Systems
129 Towards the Re-Industrialization of Europe
116 Trace-Based Post-Silicon Validation for VLSI Circuits
69 Traces and Emergence of Nonlinear Programming
172 Traditional Wisdom and Modern Knowledge for the Earth’s Future
279 Transactions on Computational Collective Intelligence X
40 Transesophageal Echocardiography for Congenital Heart Disease
242 Transition to Parenthood
240 Translational Criminology and Counterterrorism
277 Trends in Practical Applications of Agents and Multiagent Systems
260 Troubleshooting Oracle Performance
278 Trust Management VII
12 Tumor Estromal Gastrointestinal (GIST)
277 Tumor Microenvironment and Cellular Stress
160 Tungsten Carbides

U

155 Ultra-Short Pulsed Laser Engineered Metal-Glass Nanocomposites
126 Ultrasonic Fluid Quantity Measurement in Dynamic Vehicular Applications
60 Una memoria d’elefante?
280 Unifying Electrical Engineering and Electronics Engineering
135 Uranium Processing and Properties
181 Urban Air Quality in Europe
191 USDA Forest Service Experimental Forests and Ranges
209 User-Generated Content and its Impact on Branding
90 Using Event-B for Critical Device Software Systems

V

250 Values of Our Times
61 Valutazione e gestione della violenza
8 Video - assisted Thoracoscopic Lobectomy
139 Viewing and Imaging the Solar System
53 Viral Entry into Host Cells
116 Virtual Reality Technology and Applications
245 Visual Politics of the Far Right

W

61 War, Community, and Social Change
86 Web Dynpro ABAP for Practitioners
279 Web Information Systems Engineering
279 Web Services and Formal Methods
264 Web 3.0 Search Engine Performance
279 Web-Age Information Management
184 Wetland Techniques
185 Wetland Techniques
190 Wetlands Encyclopedia. Volume I. Wetlands Structure and Function
195 Wetlands Encyclopedia. Volume II. Wetlands Management
203 Wetlands Encyclopedia. Volume III. Methodology
199 Wetlands Encyclopedia. Volume IV. World Wetlands
190 Wetlands Encyclopedia. Volumes I-IV
28 Whole-Body FDG PET Imaging in Oncology
143 William and Caroline Herschel
261 Windows 8 Data Development Recipes
279 Wired/Wireless Internet Communication
130 Wireless Access in Vehicular Environments Technology
280 Wireless Mobile Communication and Healthcare
82 Wireless Multimedia Sensor Networks on Reconfigurable Hardware
84 Wireless Network Security
126 Wireless Power Transfer for Medical Microsystems
<table>
<thead>
<tr>
<th>Title Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X</strong></td>
</tr>
<tr>
<td>80 XML and Web Technologies for Data Sciences with R</td>
</tr>
<tr>
<td><strong>Y</strong></td>
</tr>
<tr>
<td>186 Yarrowia lipolytica</td>
</tr>
<tr>
<td>141 Young-Type Interferences with Electrons</td>
</tr>
<tr>
<td>234 Youth Literacies in New Times</td>
</tr>
</tbody>
</table>
Clinical Applications of SPECT-CT

SPECT/CT cameras have considerably improved diagnostic accuracy in recent years based in large part on the better localization and definition of scintigraphic findings. This book covers the full spectrum of clinical applications of SPECT/CT in diagnosis and therapy planning of benign and malignant diseases. Opening chapters discuss the technology and physics of SPECT/CT and its use for dosimetry. The role of SPECT/CT in the imaging of a range of pathologic conditions is then addressed in detail.

Features
- Covers the full spectrum of clinical applications of SPECT/CT in diagnosis of benign and malignant diseases
- Includes chapters on the use of SPECT/CT for dosimetry and for therapy planning
- Completely up to date
- Many helpful illustrations

Contents
Technology and Physics of SPECT/CT: - Use of SPECT/CT for dosimetry.- SPECT/CT for parathyroid and thyroid imaging.- SPECT/CT for thyroid cancer imaging.- 123Iod-MIBG SPECT/CT for tumor imaging.- SPECT/CT for neuroendocrine tumors.- Bone SPECT/CT in oncology.- Bone SPECT/CT in orthopaedics.- SPECT/CT for cardiac scintigraphy.- SPECT/CT in sentinel node scintigraphy.- Lung SPECT/CT: - Therapy planning in selective internal radiation therapy of liver tumors with SPECT/CT.- Bremsstrahlung SPECT/CT.- Miscellaneous (Brain SPECT/CT, inflammation, radiation planning, GI-Tract).

Fields of interest
Nuclear Medicine; Imaging / Radiology; Oncology

Target groups
Professional/practitioner

Product category
Professional book

Atlas of Gynecologic Oncology Imaging

Atlas of Gynecologic Oncology Imaging will present a comprehensive visual review of pathologic disease variations of gynecologic cancers through extensive full-color illustrations and radiologic images. The focus of the book will be on algorithmic strategies for identifying malignant pathologies of the cervix, vagina, vulva, uterus, and ovaries through a visual representation of the variety of appearances that each cancer takes, within both benign and malignant manifestations. With contributions from radiologists on staff at Memorial Sloan-Kettering Hospital, who will draw from Sloan-Kettering’s extensive collection of diagnostic images across all imaging modalities, this book will be valuable to practicing radiologists, radiation oncologists, and gynecologists involved in the diagnosis and treatment of gynecologic cancer.

Features
- Draws from an extensive collection of diagnostic images across all imaging modalities
- Comprehensive visual review of pathologic disease variations of gynecologic cancers
- Presents algorithmic strategies for identifying malignant pathologies

Contents

Fields of interest
Imaging / Radiology; Diagnostic Radiology; Oncology

Target groups
Professional/practitioner

Product category
Atlas

Anesthesia of the Upper Limb

A State of the Art Guide

Loco-regional anesthesia offers evident advantages in almost all branches of surgery since it couples perfect anesthesia with prolonged postoperative analgesia.

Features
- More than 140 full color images, including anatomic drawings
- Detailed analysis of brachial plexus block techniques
- Up-to-date information on ultrasound techniques

Contents

Field of interest
Anesthesiology

Target groups
Professional/practitioner

Product category
Contributed volume

Due September 2013

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ISBN 978-3-642-35282-9

Due August 2013

- * € (D) 149,79 | € (A) 153,99 | sFr 186,50
- approx. € 139,99 | £126.50

Due July 2013

- * € (D) 149,79 | € (A) 153,99 | sFr 186,50
- € 139,99 | £126.00
Ovarian Stimulation Protocols

Ovarian Stimulation Protocols is a concise handbook that aims to deliver everything the reader needs to know for performing a risk-free ovarian stimulation for assisted reproductive technique (ART) and get a favorable outcome. Review of crucial issues such as the significance of monitoring, advantages and disadvantages of ovarian stimulation, and the use of various drug regimens and stimulation protocols for various patient subsets, will help clinicians in selecting the better or more appropriate protocols.

Contents

- Regulation of follicle development in natural and PCO cycles
- Monitoring ovarian stimulation: current perspectives
- The role of LH and hCG in the contemporary ovarian stimulation protocols
- Reombinants versus biosimilars in ovarian stimulation
- Agonists versus antagonists in COH
- Long acting gonadotropins and route of administration
- Advantages and disadvantage of COH, comparing with minimal stimulation
- Ovarian stimulation for PCO patients and management of OHSS
- Ovarian stimulation for poor responders
- Depot GnRH agonists in COH for ART
- Luteal phase support in COH.

Fields of interest
Reproductive Medicine; Gynecology; Obstetrics/Perinatology

Target groups
Professional/practitioner

Product category
Professional book

Due August 2013

2014. Approx. 175 p. 40 illus., 20 in color. Hardcover
► approx. *€ (D) 116.63 | € (A) 119.90 | sFr 145.50
► approx. € 109.00 | £98.50
ISBN 978-81-322-1120-4

Essentials In Elbow Surgery

A Comprehensive Approach to Common Elbow Disorders

The idea of this book is very simple. Nowadays, there are many good, very comprehensive, “thick” books available on Elbow Surgery. Although they are useful to obtain discrete information about specific topics, they are too large to be a user-friendly for a general orthopedic surgeon facing common elbow problems. The increasing interest among young surgeons on elbow problems is remarkable. It has been our experience throughout the years, teaching our residents and visitors, that there is a real demand for a less extensive book, easy to read, and with practical information about the most commonly encountered problems of the elbow.

Contents

- Only book available on elbow surgery covering exclusively the most common elbow problems, oriented to general orthopedic surgeons and trainees
- Very didactic, homogeneous structure for ease of reference
- Simplified surgical techniques to streamline treatment pathways
- Excellent image resource with video supplement that display step-by-step approach to surgical procedures

Fields of interest
Orthopedics; Surgical Orthopedics

Target groups
Professional/practitioner

Product category
Contributed volume

Due June 2013

2013. Approx. 500 p. 70 illus. in color. Hardcover
► approx. *€ (D) 171.15 | € (A) 175.95 | sFr 197.54
► approx. € 159.95 | £145.00

Due October 2013

2014. Approx. 300 p. 150 illus., 50 in color. Hardcover
► approx. *€ (D) 149.75 | € (A) 153.94 | sFr 186.50
► approx. € 139.95 | £126.00
Handbook for Attention Deficit Hyperactivity Disorder

This book is a direct response to a severe treatment gap in recognising, treating and managing attention deficit hyperactivity disorder (ADHD) in adults. Affecting 3–4% of the global population, ADHD has long been considered a pediatric psychiatric condition and continues to be overlooked in adults, who often go on to endure a lifetime of clinically significant impairments that affect work performance, social behavior, and personal relationships.

Features
- A succinct, timely guide to recognizing, treating, and managing attention deficit hyperactivity disorder (ADHD) in adults
- The pocketbook size makes this book an ideal go-to resource for psychiatrists and GPs
- Contains a comprehensive appendix containing all major psychiatric scales for diagnosing ADHD, including the structured Diagnostic Interview for Adult ADHD (DIVA) and Adult ADHD Self-Report Scale

Contents
Introduction to attention deficit hyperactivity disorder.
- Definition of attention deficit hyperactivity disorder in adults.
- The scientific basis of attention deficit hyperactivity disorder in adults.
- Diagnostic assessment of attention deficit hyperactivity disorder in adults.
- Neuropsychological assessment.
- Comorbid symptoms, syndromes, and disorders.
- Pharmacological treatments.
- Psychological treatments.
- Attention deficit hyperactivity disorder during pregnancy.
- Attention deficit hyperactivity disorder and the criminal justice system.
- Service provision for adults with attention deficit hyperactivity disorder.

Fields of interest
Psychiatry; Psychopharmacology; Behavioral Therapy

Target groups
Professional/practitioner

Product category
Handbook

Thoracoscopy for Pulmonologists
A Didactic Approach

There is an increasing need for medical thoracoscopy performed by pulmonologists, which may be video assisted and has the advantage of being very cost-effective. This book is a comprehensive and up-to-date guide to thoracoscopy for pulmonologists that documents the considerable progress in endoscopic telescopes and instrumentation. Clear practical guidance is provided on technique, and diagnostic, therapeutic, and interventional applications of thoracoscopy are all carefully examined with the aid of high-quality illustrations. Although medical thoracoscopy is much less invasive than thoracotomy, complications can occur in a small number of cases; these are discussed and advice on prevention is provided.

Features
- A comprehensive and up-to-date guide to thoracoscopy for pulmonologists
- Provides clear practical advice on technique, and carefully examines diagnostic, therapeutic, and interventional applications of thoracoscopy with the aid of high-quality illustrations
- Identifies potential complications and explains how to avoid them
- Examines the future of thoracoscopy

Contents
Part I The Pleura and Thoracoscopy Technique.
- Part II Thoracoscopy for the Beginners.
- Part III Interventional Thoracoscopy.
- Part IV Advanced Thoracoscopy.
- Part V Complications of Thoracoscopy and Management.
- Part VI Future in the Field of Thoracoscopy.

Fields of interest
Surgery; Thoracic Surgery; Surgical Oncology

Target groups
Professional/practitioner

Product category
Contributed volume

Oms Approaches in Breast Cancer
Towards Next-Generation Diagnosis, Prognosis, and Therapy

The book will have most upto-date and complete information on omics of breast cancer. Chapters focused on early diagnosis, prognosis, and targeted therapy.

Features
- Gynecologic considerations in women with breast cancer.
- Omics technology applied in breast cancer research.
- Breast cancer genomics.
- Pharmacogenomics—pharmacoproteomics: clinical implications for personalized medicine in breast cancer.
- DNA methylation and breast cancer: role of nutrition in methylation of breast cancer.
- Nutrigenomics of breast cancer.
- Breast cancer proteomics.
- Breast cancer mirNA—lipidomics in breast cancer.
- Imaging technologies and applications in early diagnosis and prognosis for breast cancer.
- Early detection biomarkers in breast carcinogenesis.
- Molecular diagnosis of metastasizing breast cancer based upon liquid biopsy.
- The role of circulating tumor cells to monitor the antineoplastic treatment of metastatic breast cancer.
- Circulating breast cancer stem cells: potential biomarkers for breast cancer diagnosis and prognosis evaluation.
- Breast cancer therapy: classical therapy, drug targets and targeted therapy.
- Challenges in interpreting the role of transforming growth factor β (TGF-β) and forhead box p3 (Foxp3) in breast cancer microenvironment

Fields of interest
Oncology; Gynecology; Human Genetics

Target groups
Professional/practitioner

Product category
Professional book

Due August 2013
2014. XVII, 216 p. 15 illus., 8 in color. Softcover
- approx. * € (D) 42.75 | € (A) 43.95 | sFr 53.50
- approx. € 39.95 | £35.99
ISBN 978-1-908517-50-0

Due October 2013
2014. Approx. 250 p. 212 illus. in color. Hardcover
- approx. * € (D) 149.79 | € (A) 153.99 | sFr 186.50
- approx. € 139.99 | £126.00
ISBN 978-3-642-38350-2

Due September 2013
2014. Approx. 400 p. 170 illus., 30 in color. Hardcover
- approx. * € (D) 159.43 | € (A) 163.90 | sFr 198.50
- approx. € 149.00 | £134.50
ISBN 978-81-322-0842-6
Surgical Orthopaedics and Traumatology

This important reference textbook covers the surgical management of all major orthopaedic and traumatological conditions.

Features

► Guides the reader through the total management of the patient, including surgical techniques
► Written by recognized international authorities
► Didactic style appropriate for those preparing for examinations
► Abundant illustrations highlighting the essentials of each clinical scenario

Contents


Fields of interest

Surgical Orthopedics; Traumatic Surgery

Due April 2014

Print

► approx. *€ (D) 426,93 | € (A) 438,90 | sFr 531,50
► approx. € 399,00 | £359.50
ISBN 978-3-642-34745-0

eReference

2014.
► approx. **€ (D) 474,81 | € (A) 478,80 | sFr 558,50
► approx. € 399,00 | £359.50
ISBN 978-3-642-34746-7

Print + eReference

► approx. *€ (D) 426,93 | € (A) 438,90 | sFr 564,50
► approx. € 499,00 | £449.50
ISBN 978-3-642-34747-4

A paraître September 2013

► approx. *€ (D) 65,92 | € (A) 67,77 | sFr 82,50
► approx. € 61,61 | £55.99

S. Boeth, Ottawa Hospital, ON, Canada; G. Savoldelli, Université de Genève, Switzerland; J.-C. Granry, CHU d’Angers, France (Eds)

La simulation en santé : de la théorie à la pratique

Cet ouvrage s’adresse à tous ceux qui s’intéressent à la simulation dans le monde de la santé, que ce soit pour l’enseignement ou pour la recherche.

Features

► Le premier ouvrage sur les techniques de simulation en santé
► Ouvrage centré sur l’application pratique des théories en simulation
► Une partie entière est consacrée au “debriefing”
► S’adresse à l’ensemble des professionnels de santé

Contents


Fields of interest

Medicine/Public Health, general; Medical Education; Anesthesiology

Target groups

Professional/practitioner

Product category

Handbook

Due July 2013

Print

2013. Approx. 100 p. 10 illus. in color. Softcover
► approx. *€ (D) 42,75 | € (A) 43,95 | sFr 53,50
► approx. € 39,95 | £35.99
ISBN 978-1-4471-4753-4

S. Booth, J. Burkin, C. Moffat, Cambridge University Hospital, Cambridge, United Kingdom

Breathlessness Management in Clinical Practice

Breathlessness is one of the most difficult conditions that palliative care (and other clinicians who care for patients with advanced disease) have to treat. With the improvements in pain control, it is possibly now the most difficult symptom for clinicians to manage: many feel frustrated at not being able to give their patients better care. Many patients and families are enduring terrible suffering. There has been little progress in improving the symptom, in spite of an increase in the amount of research and interest in it over the last twenty years.

Features

► This book is written to be used by clinicians in any specialty, not just palliative care specialists
► Palliative care in non-malignant disease is rarely taught, this is the first practically orientated book in this area
► Multi-professional authorship: breathlessness needs a multi-professional team, most of the few competing texts are written by doctors for doctors

Contents


Fields of interest

Pneumology/Respiratory System; Oncology; Cardiology

Target groups

Professional/practitioner

Product category

Professional book
Advanced Male Urethral and Genital Reconstructive Surgery

Contents

Field of interest
Urology/Andrology

Target groups
Professional/practitioner

Product category
Contributed volume

Embolization

Features
► Provides classification of the different embolization materials ► Didactic presentation, with key images for the diagnosis, tricky technical details, and principal results ► Compares embolization to other therapeutic options

Contents

Fields of interest
Cardiology

Target groups
Professional/practitioner

Product category
Professional book

Due August 2013

2nd ed. 2013. XXIV, 780 p. 606 illus., 438 in color. (Current Clinical Urology) Hardcover
► * € (D) 213,99 | € (A) 219,99 | sFr 266,50
► € 199,99 | £180.00

Due July 2013

2013. XII, 302 p. 125 illus., 8 in color. Hardcover
► approx. * € (D) 67,41 | € (A) 69,30 | sFr 90,50
► approx. € 63,00 | £51.99
ISBN 978-1-4471-5181-4

Due June 2013

2013. XX, 280 p. 50 illus. in color. Hardcover
► approx. * € (D) 149,75 | € (A) 153,94 | sFr 186,50
► approx. € 139,95 | £126.00

Diagnostic Techniques in Urology

Urological disease affects huge numbers of patients at some point in their lives. Diagnostic techniques are critical to ensure the correct diagnosis made in a timely manner. A huge number of new technologies have been introduced in recent years to aid in this diagnostic pathway in the form of urine tests, blood tests and imaging modalities. Both urologists and other clinicians interested in urology have struggled to keep up with the rapid evolution of these techniques. This book would contain up to date and state of the art contributions from major names in the field. This book describes the diagnostic pathways for the key aspects of urological disease. Readers will be able to equate symptoms and signs with the relevant investigations. The book focuses on the diagnostic pathways involved, bringing together international leaders in the field who describe the current status of urological investigation. Each sign and symptom of urological disease that a patient may present with will be covered and a diagnostic algorithm produced in each disease area.

Features
► Easy to read format with emphasis on rapid assimilation of key information ► High quality colour illustrations: Assists the reader in understanding diagnostic techniques ► Electronic version: to appeal to those using electronic libraries, I Pads and other tablets ► Summary tabs of key points concluding each chapter: enabling the reader to get a clear “take-home” message ► Flow chart diagram within each chapter: illustrating the optimal diagnostic process

Field of interest
Urology/Andrology

Target groups
Professional/practitioner

Product category
Contributed volume
Changes in the Brain
Impact on Daily Life

Features
- Book is unique in discussing brain changes in many different illness groups, whereas other books on brain changes focus on one specific patient group (e.g., sports injury, stroke, Alzheimer’s disease).
- Inclusion of excerpts from actual patients will provide important insights for professionals working with such patients, and will help professionals normalize their patients’ experiences.

Contents

Fields of interest
Neurology; Neuropsychology; Health Administration

Target groups
Professional/practitioner

Product category
Monograph

Handbook of Treatment-resistant Schizophrenia

Handbook of Treatment-resistant Schizophrenia is a concise review of treatment-resistant schizophrenia’s definition, measurement tools, adherence issues, substance abuse, optimal dosing, clinician-patient relationships, and current management approaches. The book was originally commissioned with the intention of creating a comprehensive text focusing on treatment-resistant schizophrenia and its management. The book explores many aspects of the background and practice-and research-based evidence for treating this complex subset of schizophrenia, including psychopharmacological, somatic, and nonpharmacological treatment approaches.

Features
- Comprehensive synopsis of pharmacological, somatic, and nonpharmacological therapies, assessment tools, and treatment methods based on clinical trials.
- Easily accessible text and tables reviews the major clinical trials.
- Focus on patient support, which prepares clinicians to tailor their treatment strategies for each individual patient, which in turns helps build a stronger therapeutic alliance.

Contents

Fields of interest
Medicine/Public Health, general; Psychology, general; Psychiatry

Target groups
Professional/practitioner

Product category
Handbook

Anus
Surgical Treatment and Pathology

There is an increase in specialisation within general surgery and now even within its sub specialities. Colorectal surgery is probably the largest of the subspecialties of general surgery, and one of the areas where trainees and consultant general / colorectal surgeons are least confident is in their understanding of the anatomy, physiological pathology and management of the anal canal and pelvis. Currently available there are books on the market centred around the general management of colorectal disease, but the time is now right for a definitive text on the anal canal and pelvis specifically.

Fields of interest
Proctology; Colorectal Surgery; Interventional Radiology

Target groups
Professional/practitioner

Product category
Professional book

Due June 2013

2013. Approx. 200 p. Hardcover
| approx. *€ (D) 74,15 | € (A) 76,23 | sFr 115,00
| approx. € 69,30 | £63.99 |

Springer Healthcare

Due June 2013

2013. Approx. 350 p. 130 illus., 70 in color. Hardcover
| approx. *€ (D) 74,89 | € (A) 76,99 | sFr 93,50
| approx. € 69,99 | £62.99 |
ISBN 978-1-84882-090-6
The Atlas of Ocular and Orbital Trauma

This user friendly atlas facilitates emergency room staff and all providers of ocular health in the rapid diagnosis of ocular or orbital trauma based on its location and type. A simple, easy to read flow sheet guides clinicians in their diagnostic and therapeutic decisions for each type of trauma. Unique from other titles on the topic, the Atlas of Ocular and Orbital Trauma is targeted and easy to use, allowing the reader to quickly pick up the book, locate the appropriate section, and view high-quality photographs along with an algorithm explaining how to rapidly examine the patient and go through a differential diagnosis to arrive at the appropriate diagnosis and treatment plan. This rapid approach empowers emergency department staff and all healthcare providers with absolute confidence in making clinical decisions for their patients. Another distinguishing feature of the Atlas of Ocular and Orbital Trauma is that it includes a DVD with instructional video clips by experts in their respective fields, demonstrating how to examine different eye traumas. This 90-minute series of instructional video vignettes of real patient scenarios, filmed at several leading academic health centers, will improve clinical skills through patient scenarios, filmed at several leading academic health centers, will improve clinical skills through

Contents
Eyelids and the lacrimal system.- Cornea and anterior segment trauma.- Intraocular trauma.- Posterior segment trauma.- Orbital Trauma and neuro-ophthalmic complications.- Simple steps in avoiding complications.- Clinical Pearls.- Appendix.- Subject Index.

Fields of interest
Emergency Medicine; Ophthalmology; Neurology

Target groups
Professional/practitioner

Product category
Contributed volume

M. Coriasco, Università degli Studi di Torino, Italy; O. Rampado, Azienda Ospedaliera San Giovanni Battista di Torino, Italy; N. Balossino, S. Rabellino, Università degli Studi di Torino, Italy (Rédauteurs)

L’immagine digitale inagnostica per immagini

Tecniche e applicazioni

Il volume illustra i fondamenti necessari per acquisire, elaborare e valutare le immagini radiologiche con un approccio interdisciplinare, che coniuga contributi di fisica, informatica biomedica e radiologia. Dopo un’introduzione al trattamento digitale di segnali e alla psicofisiologia della visione, vengono descritti i parametri caratteristici e gli indicatori di qualità delle immagini digitali, passando poi alle principali tecniche di elaborazione delle immagini, sia nel dominio spaziale sia in quello delle frequenze.

Features
► Esercizi guidati passo passo aiutano la comprensione ► L’illustrazione delle tecniche di elaborazione è facilmente comprensibile in quanto immediatamente verificabile con il software fornito in dotazione ► Le illustrazioni sono il diretto risultato delle tecniche di elaborazione spiegate, e forniscono una immediata percezione sui loro effetti quando applicate alle immagini

Contents
1 Rappresentazione digitale di segnali.- 2 Luce, immagini e visione.- 3 Introduzione all’immagine digitale.- 4 Elaborazione di immagini.- 5 Elaborazioni intrinseche alle metodiche.- 6 La memorizzazione delle immagini digitali.

Fields of interest
Imaging / Radiology; Computer Imaging, Vision, Pattern Recognition and Graphics

Product category
Libro di testo introduttivo

MDCT and MRI of the Heart

The aim of the handbook is to provide a practical guide for residents and general radiologists, organized alphabetically, primarily according to disease or condition. The handbook will be designed as a short booklet with some illustrations and schemes and will cover topics on cardiac MDCT and MRI. Entries typically include a short description of pathological and clinical characteristics, guidance on selection of the most appropriate imaging technique, a schematic review of potential diagnostic clues, and useful tips and tricks.

Features
► Useful in daily practice for planning exams and radiologic reporting ► Quick answer to frequent questions occurring during daily radiological practice ► Practical and brief notes organized in the form of an A-Z glossary Easy and fast consultation

Contents
See attached file

Fields of interest
Diagnostic Radiology; Imaging / Radiology; Cardiology

Product category
Professional/practitioner
**Exercise and Physical Functioning in Osteoarthritis**

**Medical, Neuromuscular and Behavioral Perspectives**

Osteoarthritis (OA) is among the top 10 of most disabling diseases in the Western world. It is the major cause of pain and disability among the elderly. This book provides a contextual review of recent research on neuromuscular factors and behavioral risk factors for functional decline in OA, with a special emphasis on explanatory mechanisms. In addition, the book discusses innovative approaches to exercise and physical activity in OA, derived from research on behavioral and neuromuscular risk factors for functional decline in OA.

**Features**
- Reviews recent research on neuromuscular factors and behavioral risk factors for functional decline in OA
- Gives special emphasis to explanatory mechanisms
- Discusses innovative approaches to exercise and physical activity in OA

**Contents**
1. Introduction
2. Epidemiology, pathogenesis, and clinical aspects
3. Therapeutic options
4. Risk factors for functional decline
5. Neuromuscular mechanisms explaining functional decline
6. Behavioral mechanisms explaining functional decline
7. Regular exercise therapy
8. Exercise aiming at neuromuscular mechanisms
9. Exercise aiming at behavioral mechanisms
10. Comorbidity, overweight, and exercise
11. Concluding remarks

**Fields of interest**
Geriatrics/Gerontology; Health Psychology; Rehabilitation

**Target groups**
Research

**Product category**
Brief

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**Video - assisted Thoracoscopic Lobectomy**

The Operation Primer provides excellent photographic step-by-step guidance to the surgical procedure. It has been produced to describe the operation in the simplest manner possible without over-simplifying. The core of the Operation Primer is the section on Nodal Points, where the key surgical steps are described in detail. This surgical guidebook provides essential reference material to surgeons wishing to update their knowledge in this specific area.

**Features**
- Numerous illustrations
- Written by well-known experts
- Comprehensive in scope

**Fields of interest**
Thoracic Surgery; Surgery

**Target groups**
Professional/practitioner

**Product category**
Monograph

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**Success in Academic Surgery: Health Services Research**

Surgical education is a rapidly expanding area of surgical research and career interest, and as the Association for Academic Surgery (AAS) Fall Courses (www.aasurg.org) and International courses offer more and more specialty tracking there is a greater need for an accompanying textbook to supplement the material presented in the courses. Success in Academic Surgery: Health Services Research is a unique and portable handbook that focuses on clinical trials.

**Features**
- Success in Academic Surgery: Health Services Research is a handy, portable text which offers practical guidance on developing a career within surgical education
- Written by expert authors from around the world who are members of the Association for Academic Surgery
- Contains full color illustrations

**Contents**
- HSR and the future of academic surgery
- What is health services research
- Comparative effectiveness research
- Assessing patient-centered outcomes
- Methods for enhancing causal inference in observational studies
- Data synthesis studies: decision analysis, cost-effectiveness analysis
- Meta-analysis
- Understanding variation in surgery
- Disparities in the use and outcomes of surgery
- Qualitative research in surgery
- Patient safety in surgery
- Implementation science and quality improvement
- Evaluating healthcare policy in surgery

**Fields of interest**
Medicine/Public Health, general; Surgery; Medical Education

**Target groups**
Professional/practitioner

**Product category**
Professional book
J. M. Ferro, University of Lisbon, Portugal (Ed)

Neuropsychiatric Symptoms of Cerebrovascular Diseases

Neuropsychiatric Symptoms of Cerebrovascular Diseases is an up-to-date, comprehensive review of the neuropsychiatry of stroke, by active authorities in the field, with an emphasis on diagnostic and management issues. Neuropsychiatric Symptoms of Cerebrovascular Diseases includes critical appraisal of the methodological aspects and limitations of the current research on the neuropsychiatry of stroke and on unanswered questions/controversies.

Features
- Neuropsychiatric complications in cerebrovascular disease have become an increasing focus of interest as an indicator of outcome
- Comprehensive overview by experts in the field internationally
- Provides an overview of new drugs available that may be useful in the management of stroke patients

Contents

Fields of interest
Neurology; Psychiatry; Angiology

Target groups
Professional/practitioner

Product category
Contributed volume

Due July 2013
2013. XVI, 324 p. 24 illus., 7 in color. (Neuropsychiatric Symptoms of Neurological Disease) Hardcover
- € (D) 149,79 | € (A) 153,99 | sFr 186,50
- € 139,99 | £126.00
ISBN 978-1-4471-2427-6

B. Furst, Albany Medical College, NY, USA

The Heart and Circulation
An Integrative Model

This book traces the development of the basic concepts in cardiovascular physiology in the light of the accumulated experimental and clinical evidence and, rather than making the findings fit the standard pressure-propulsion model, let the phenomena 'speak for themselves'.

Features
- Presents a coherent model addressing the controversies and future developments in basic science circulatory research and clinical cardiology
- Defines the inconsistencies of the commonly accepted pressure-propulsion model of circulation
- Provides evidence for a new circulation model with the potential to change the way in which we think about circulation radically

Contents

Field of interest
Cardiology

Target groups
Professional/practitioner

Product category
Monograph

Due September 2013
2014. XX, 198 p. 83 illus., 55 in color. Hardcover
- approx. € (D) 148,73 | € (A) 152,90 | sFr 185,50
- approx. € 139,00 | £125.50
A. Gaddi, F. Capello, M. Manca, University of Maastricht, Netherlands (Eds)

**eHealth, Care and Quality of Life**

**Contents**
1 Preface - Forewords.- 2 Introduction (The debate over eHealth).- 3 Definition/s of eHealth.- 3.1 What is it. Institutional definitions, and the idea.- 3.2 A need- or a technology- driven innovation.- 3.3 Evolving concepts of Health, Healthcare and eHealth.- 4 An introduction to the technological basis of eHealth.- 4.1 The importance of network architecture design.- 4.2 eHealth governance in realworld and the federated platform.- 4.3 Best practices in eHealth, today for tomorrow.- 5 eHealth and me (empowering practitioners to a better and more personal care).- 5.1 eCulture: Barriers and facilitators to technological adoption.- 5.2 The relationship of care. Evolution or disruption by technological advancement.- 5.3 eEthics: a moral “virtual” space in eHealth.- 5.4 A new economy of information and the doctor/patient roles.- 5.5 Health: good or goods.- 6 Legally eHealth.- 6.1 Privacy and eHealth, an opportunity rather than a challenge.- 6.2 Responsibility in a smart environment.- 6.3 The cross-border talk of the laws ruling the relationship of care.- 7 eHealth-y community.- 7.1 eHealth as empowering Health.- 7.2 Patients as partners.- 7.3 Doctors: from god to guide.- 8 e(conomy)Health.- 8.1 The truth about medical spending and eHealth.- 8.2 Accountability and eHealth.- 8.3 Societal sustainability of a new healthcare model.- 9 No (e)Health without (e)Research.- 9.1 Revolutionizing public health.- 9.2 Fantastic voyage: in silico empowering from bedside to bench and back.- 9.3 The power of one.- 10 eHealth policy.- 10.1 Accountability and eHealth in postoperative radiotherapy. [...]

**Fields of interest**
Medicine/Public Health, general; Health Informatics; Communications Engineering, Networks

**Target groups**
Professional/practitioner

**Product category**
Professional book

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A. Gaya, A. Mahadevan, Beth Israel Deaconess Medical Center, Boston, MA, USA (Eds)

**Stereotactic Body Radiotherapy**

**A Practical Guide**

This is a single, comprehensive handbook for clinical oncology trainees and consultants, covering the basic aspects of stereotactic radiotherapy systems and treatment.

**Features**
- Collects all fundamental information on this burgeoning field into a single readable volume
- Case studies are used to illustrate teaching points in each chapter
- International team of expert contributors

**Fields of interest**
Radiotherapy; Oncology; Imaging / Radiology

**Target groups**
Professional/practitioner

**Product category**
Professional book

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H. Geinitz, Technische Universität München, Germany; M. Roach III, UCSF Helen Diller Family Comprehensive Cancer Center, San Francisco, CA, USA; N. van As, The Institute of Cancer Research, Sutton, UK (Eds)

**Radiotherapy in Prostate Cancer**

**Innovative Techniques and Current Controversies**

**Contents**

**Fields of interest**
Radiotherapy; Oncology; Imaging / Radiology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume

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Atlas of Laparoscopic and Robotic Urology

This atlas includes 500-700 "step-by-step" highest quality color photographs of all current laparoscopic and robotic urological procedures, complemented by technical details and caveats. Each procedure is also presented in video format in an accompanying DVD containing edited videos of each laparoscopic procedure described in the book. The atlas covers considerable recent advances in laparoscopic and robotic urology. Each technical step is covered by multiple sequential color photographs which are accompanied by a detailed figure legends describing nuances, subtleties, and pearls from the author's extensive personal experience in over 3000 laparoscopic/robotic cases.

Features
- Contains sequential photographs of each operative step
- Explanatory schematic line diagrams are juxtaposed amongst the intraoperative photographs for an enhanced understanding
- Contains detailed figure legends describing the thought process involved in each surgical manoeuvre, akin to listening to a running commentary of each technical step in the operating room
- Contains DVD with live edited videos of each procedure demonstrated in the atlas

Contents
- Preface
- Patient Positioning & Operative Room Setup
- Instruments
- Adrenalectomy
- Kidney
- Ablative
- Nephron-Sparing Surgery
- Upper Urinary Tract
- Renovascular Surgery
- Retropertioneal Lymph Node Dissection
- Pelvic Lymph Node Dissection
- Bladder
- Prostate
- Pot-Pourri
- Futures
- Laparoscopic Beauties

Fields of interest
- Urology/Andrology
- Surgery
- Oncology

Target groups
- Professional/practitioner

Product category
- Atlas

B. Gleich
Principles and Applications of Magnetic Particle Imaging

Bernhard Gleich introduces Magnetic Particle Imaging (MPI) including all aspects that are necessary for a complete understanding. MPI is a new imaging modality developed by Bernhard Gleich and Jürgen Weizenecker at Philippus research, Hamburg. The method is capable of imaging the distribution of superparamagnetic iron oxide particles (SPIOs) with high sensitivity, high spatial resolution, and high imaging speed. The author summarizes the results of a number of original papers and countless innovations he has elaborated in the young discipline of magnetic particle imaging.

Features
- Publication in the field of technical sciences

Contents
- Medical imaging methods
- Magnetic Particle Imaging
- Magnetic nanoparticles

Fields of interest
- Health Informatics
- Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups
- Research

Product category
- Monograph

Due June 2013

I. S. Gill, Glickman Urological Institute, Cleveland, OH, USA

Atlas of Laparoscopic and Robotic Urology

Due June 2013

M. Goisis, Centro Medico Chirurgico Sant’Ambrogio, Milan, Italy (Ed)

Injections in Aesthetic Medicine

Atlas of Full-face and Full-body Treatment

The use of injectables, known as dermal fillers, is becoming ever more popular in aesthetic medicine. Full-face and full-body treatments using such fillers are increasingly substituting for various surgical techniques; not only do they provide immediate results at a lower cost, but they also avoid the use of general anesthesia and shorten the recovery period. In addition, dermal fillers can be successfully used for body remodeling, for example in patients with bow legs and those requiring breast remodeling. This book outlines the fundamental principles of the use of different fillers and injection techniques in the treatment of facial and body areas. An impressive collection of sequential color photographs illustrate the procedures step by step and demonstrate the results.

Features
- Step-by-step description of full-face treatment and body remodeling with fillers
- Detailed guidance on injection procedures
- Numerous sequential color photographs

Contents
- Fillers
- Aesthetic analysis of the face: the maxillofacial deformity
- Standard Evaluation of the patient: the Merz Scale
- Temporal fossa
- Frontal area
- Malar area
- Tear Trough
- Nasolabial Folds
- Nose
- Marionette Lines
- Chin
- Neck
- Arms
- Hands
- Breasts
- Calves
- Scars
- Full-face and Full-body Treatment
- Complications
- Customer Relationship Management in Aesthetic Medicine
- Complementary treatments
- Products

Fields of interest
- Medicine/Public Health
- Plastic Surgery
- Dermatology

Target groups
- Professional/practitioner

Product category
- Professional book

Due September 2013

M. Goisis, Centro Medico Chirurgico Sant’Ambrogio, Milan, Italy (Ed)

Injections in Aesthetic Medicine

Atlas of Full-face and Full-body Treatment

2013. Approx. 320 p. 700 illus. in color. With online files/update. Hardcover
- * (D) € 160.45 | (A) € 164.95 | sFr 215.00
- approx. € 149,95 | £ 172.50

Due June 2013

M. Goisis, Centro Medico Chirurgico Sant’Ambrogio, Milan, Italy (Ed)

Injections in Aesthetic Medicine

Atlas of Full-face and Full-body Treatment

2014. XII, 224 p. 874 illus. in color. Hardcover
- * (D) € 149,79 | (A) € 153,99 | sFr 186.50
- € 139.99 | £126.00
ISBN 978-88-470-5360-1
Imaging in Clinical Oncology

This encompassing book is designed to contribute to a teamwork approach by promoting understanding between radiologists and clinical oncologists. All of the currently available imaging modalities of relevance in clinical oncology are covered, and the presentation of a broad spectrum of oncologic diseases (of most organ systems) on these modalities is discussed and illustrated. The role of multiparametric and multimodality imaging approaches providing both morphologic and functional information is considered in detail, and careful attention is paid to the latest developments in higher field (3T) MR imaging and advanced MR techniques such as diffusion-weighted imaging, diffusion tensor imaging and spectroscopy.

Features
- Discusses and illustrates the presentation of a broad spectrum of oncologic diseases on currently available imaging modalities
- Considers the role of multiparametric and multimodality imaging approaches in detail
- Will assist in refining treatment on the basis of specific imaging features
- Emphasis on teamwork between radiologists and clinical oncologists

Contents

Fields of interest
Imaging / Radiology; Oncology

Target groups
Professional/practitioner

Product category
Contributed volume

Due July 2013

2013. XI, 726 p. 329 illus., 198 in color. Hardcover
- * (D) 181,89 | (A) 166,99 | sFr 226,50
- € 169,99 | £153.00
ISBN 978-88-470-5384-7

Otolaryngology Essentials for Primary Care

A Guide to the Head and Neck for the Physician and Physician Assistant

Features
- Contains information about many diseases and conditions
- Color illustrations throughout
- Case-studies and review questions help aid in comprehension

Contents

Fields of interest
Primary Care Medicine; Otorhinolaryngology; General Practice / Family Medicine

Target groups
Professional/practitioner

Product category
Professional book

Due June 2013

2013. Approx. 100 p. 7 illus. in color. Softcover
- * (D) 48,15 | (A) 49,50 | sFr 60,00
- € 45,00 | £40.99
ISBN 978-1-4614-4029-1
The MassGeneral Hospital for Children Handbook of Pediatric Global Health

The MassGeneral Hospital for Children Handbook of Pediatric Global Health is a concise resource for the ever-increasing number of health professionals involved in global health, many of whom spend a few weeks to months or even years providing medical care in resource-poor countries. This Handbook provides practical, evidence-based, hands-on guidance for managing and preventing childhood illnesses when resources are limited in low- and middle-income countries. It also offers a setting-specific understanding and management approaches to the major causes of childhood mortality, including pneumonia, diarrhea, birth asphyxia, complications of preterm birth, and neonatal sepsis. The Handbook provides an overview of childhood mortality, health systems, and the various stakeholders that play a role in the global health arena, and also contains chapters focusing on adolescents who are increasingly recognized as a unique population in whom interventions can go a long way in both consolidating the gains made in childhood and preventing adult disease.

Features
- Comprehensive reference for physicians and physicians in training
- Includes many uniques issues of providing optimal pediatric care
- Written by my renowned experts in the field

Fields of interest
Pediatrics; Primary Care Medicine; Internal Medicine

Target groups
Professional/practitioner

Product category
Contributed volume

Pediatric and Adolescent Sports Traumatology

This book focuses on the evaluation and treatment of a wide range of sports injuries in relation to the Tanner stage of sexual development in young athletes. A series of detailed chapters address the injuries likely to be encountered in different parts of the body, including the spine, shoulder, elbow, wrist and hand, hip, knee, ankle, and feet. Among the topics that receive particular attention are epiphyseal-physeal injuries, capsular ligament tears and the impact of their treatment on joint and bone development, and stress syndromes of the musculoskeletal system. Helpful algorithms covering the diagnosis and treatment of ligament tears are included, and advice is provided on when to return an athlete to training. The final chapter is devoted to orthopedic diseases that have to be considered in the differential diagnosis of sports injuries in adolescents. The contributors to this volume are all recognized leaders in their subspecialty who explain their own treatment preferences.

Features
- Detailed guide to the evaluation and treatment of sports injuries in relation to the Tanner stage of sexual development in young athletes
- Includes helpful algorithms on the diagnosis and treatment of ligament tears
- Written by recognized leaders in the field who explain their own treatment preferences

Fields of interest
Sports Medicine; Primary Care Medicine

Target groups
Professional/practitioner

Product category
Monograph

Genitourinary Imaging - A Case Based Approach

Genitourinary Imaging - A Case Based Approach is a user friendly, portable guide that offers a comprehensive coverage of the subspecialty with an emphasis on all modalities. As subspecialty practice has become the norm in radiology, it becomes increasingly important to keep abreast of the latest information within the specialty that one is practising. The case based nature of this book, with modality independent content, allows the reader to assimilate practice specific information with ease. Full color images with tabular salient points, imaging algorithms and evidence based criterion support the text. Key points provide succinct explanations of the disease and an appropriate differential diagnosis, as well as providing a brief description of therapy and prognosis.

Genitourinary Imaging - A Case Based Approach is aimed at residents and training and practicing genitourinary radiologists.

Features
- Includes state of the art high quality images that span all modalities currently used
- Describes emerging novel imaging tools
- Images are complemented with easy to read tables, schematic diagrams and salient points where needed

Contents
- Kidneys and Adrenals.
- Retroperitoneum.
- Ureters and Bladder.
- Female Pelvis.
- Male Pelvis.

Fields of interest
- Imaging / Radiology
- Urology / Andrology
- Gynecology

Target groups
Professional/practitioner

Product category
Monograph

Due August 2013

2014. Approx. 515 p. 98 illus., 91 in color. Softcover
- approx.*€ (D) 48,14 | € (A) 49,49 | sFr 58,50
- approx.*€ 44,99 | £39,99
ISBN 978-1-4614-7917-8

Due September 2013

2014. XX, 330 p. 155 illus., 105 in color. Hardcover
- approx.*€ (D) 171,15 | € (A) 175,94 | sFr 213,00
- approx.*€ 159,95 | £144,00
ISBN 978-88-470-5411-0

Due August 2013

2013. XX, 180 p. 150 illus. in color. Hardcover
- approx.*€ (D) 149,75 | € (A) 153,94 | sFr 186,50
- approx.*€ 139,95 | £126,00
ISBN 978-1-4471-4771-8
Irritable Bowel Syndrome
A Clinical Handbook

Irritable Bowel Syndrome (IBS) has recently been identified as a serious physiological syndrome involving a disorder of GI motility, requiring an understanding of the enteric nervous system and neurotransmitters. This book presents an invaluable practical reference to internists and specialists concerning our current understanding of this complex disorder. As a readable reference for the science of this disorder, it also serves as a guide for the practitioner, providing practical advice to give their patients.

Field of interest
Gastroenterology

Target groups
Professional/practitioner

Product category
Contributed volume

Controversies in Obesity

This book explores the pathophysiology, clinical assessment and management of the obese patient in the context of serious chronic disease, as well as the political and environmental aspects, including prevention. The book’s approach of arriving at an exploration of these issues through the vehicle of assessing the controversies is unique and interesting, attempting to debunk the myths and explore the genuine science whilst demonstrating areas where healthy debate is rife.

Features
► Provides a balanced, evidence-based look at the various issues and questions surrounding the obesity epidemic ► Presents opposing arguments in the same chapter ► Addresses the controversies and misperceptions around obesity, whilst exploring the genuine science

Fields of interest
Medicine/Public Health, general; Internal Medicine; Diabetes

Target groups
Professional/practitioner

Product category
Contributed volume

Pediatric Cardiovascular Computed Tomography Angiography

To ensure that CT angiography (CTA) is appropriately utilized in pediatric patients and exams are performed with appropriate technique to generate ultra-low radiation dose exposure, it is crucial that the imager has strong working knowledge of CT physics and medical science, CTA technical principles and CTA clinical applications, balanced with sound understanding of pediatric cardiovascular anatomy, pathology and pathophysiology. This book will present readers with a single reference to obtain this foundation and reinforce previously obtained skills and knowledge. It will offer a practical review of CT physics and imaging science and also offer guidance on patient preparation, CT acquisition, radiation parameters, contrast use, data transmission and storage, visualization techniques, and interpretation for the wide spectrum of pediatric cardiovascular diseases which may be imaged with CTA. Chapters will offer tips and tricks to optimize technique and interpretation for CTA.

Features
► Chapters written by world recognized leaders in pediatric CTA and pediatric CT physics ► High quality CT illustrations for normal anatomy and abnormal pathology ► In depth chapter discussions on CT physics, CTA technique, and CTA protocols, using practical tables ► In depth chapter discussions and illustrations of clinical applications of CT Angiography for pediatric cardiovascular disease

Fields of interest
Cardiology; Imaging / Radiology; Pediatrics

Target groups
Professional/practitioner

Product category
Contributed volume

Due August 2013
2014. Approx. 300 p. (Clinical Gastroenterology)
Hardcover
► approx. * € (D) 80,20 | € (A) 82,45 | sFr 107,50
► approx. € 74,95 | €69.99
ISBN 978-1-58829-268-1

Due July 2013
2013. Approx. 200 p. Softcover
► approx. * € (D) 32,05 | € (A) 32,94 | sFr 40,00
► approx. € 29,95 | €26.99

Due September 2013
2014. XX, 300 p. 230 illus., 180 in color. With online files/update. Hardcover
► approx. * € (D) 171,15 | € (A) 175,94 | sFr 213,00
► approx. € 159,95 | £144.00
ISBN 978-1-4471-4221-8
Hughes Syndrome: Highways and Byways

Hughes Syndrome: Highways and Byways is a handy and easy-to-read guide to the main features of Hughes syndrome. There has been worldwide interest in this 'new' syndrome (first described in 1983). A clotting tendency which can potentially affect any organ in the body, it is: * responsible for 1 in 5 recurrent miscarriages (now successfully treated with aspirin and heparin) * responsible for 1 in 5 young (under 45) strokes * a major cause of early heart attacks * responsible for 1 in 5 deep vein thromboses * an important cause of migraine. Hughes Syndrome: Highways and Byways is a valuable resource for professionals with an interest in the subject, as well as general practitioners and patients.

Contents

Field of interest
Rheumatology

Target groups
Professional/practitioner

Product category
Monograph

Cancer Staging Diagnosis with PET/CT

Cancer Staging Diagnosis with PET/CT is a concise guide to the clinical use of PET/CT imaging in cancer staging diagnosis. PET/CT is currently the prevailing modality for visualizing the distribution of radionuclide tracers in patients to diagnose malignant tumors. This unique book organizes common malignant tumors by histologic subtype, with clinical case examples of each accompanied by high-resolution figures and information on image interpretation and clinical discussion points. Chapters are organized into major sections of anatomic regions based on the TNM classification of malignant tumors, including brain, head & neck, chest, gastrointestinal, genitourinary, breast, gynecological, bone/soft tissues, pediatrics, and hematology.

Contents

Field of interest
Rheumatology

Target groups
Professional/practitioner

Product category
Monograph

Intraoperative Imaging and Image-Guided Therapy

Intraoperative Imaging and Image-Guided Therapy is a concise guide to the clinical use of PET/CT imaging in cancer staging diagnosis. PET/CT is currently the prevailing modality for visualizing the distribution of radionuclide tracers in patients to diagnose malignant tumors. This unique book organizes common malignant tumors by histologic subtype, with clinical case examples of each accompanied by high-resolution figures and information on image interpretation and clinical discussion points. Chapters are organized into major sections of anatomic regions based on the TNM classification of malignant tumors, including brain, head & neck, chest, gastrointestinal, genitourinary, breast, gynecological, bone/soft tissues, pediatrics, and hematology.

Contents

Field of interest
Rheumatology

Target groups
Professional/practitioner

Product category
Monograph
Kadushin's Behavioral Neuroscience Dictionary

Kadushin's Behavioral Neuroscience Dictionary
Frederick S. Kadushin
Massachusetts Neurobehavioral Institute

Due June 2013

Features
- Definitions are descriptive, intended to aid in the understanding of the research and practice literature
- Contains more than 12,000 terms from all areas that clinically interface with the neurosciences, such as neurology, neuropsychology, neuropsychiatry, clinical psychology, and rehabilitation areas (speech pathology, occupational therapy, and physical therapy)

Fields of interest
- Neurology; Neuropsychology; Cognitive Psychology

Target groups
- Professional/practitioner

Product category
- Dictionary

Kadushin's Behavioral Neuroscience Dictionary is the field's most complete descriptive lexicon to date, with over 12,000 terms spanning neuroscience, neurology, neuropsychology, neuropsychiatry, psychiatry, and the rehabilitation specialties—over 300 phobias are described, more than 100 diagnostic tests, and more than 500 drugs. By placing all entries in their clinical context, the author shows readers how the words are used by practitioners; except for some older terms included for historical purposes, this is the living language of neuroscience. Kadushin's offers keys to fluency, leading to better retention of study and research materials, clearer communication with colleagues and clients, greater transparency in report writing and record keeping. Topics covered in its entries include: Neurologic, psychiatric, and behavioral disorders, diseases, signs, and symptoms. Neuroanatomical structures. Diagnostic, assessment, and other clinical procedures. Neurologic and psychiatric medications. Therapies, treatment modalities, and rehabilitation methods.

Lip Cancer

This textbook is intended as a comprehensive reference that will provide easy-to-follow and well-organized guidance on the management of lip cancer, from diagnosis to treatment and reconstruction. After discussion of anatomy and premalignant conditions, detailed attention is paid to squamous cell carcinoma of the lip. Surgical management is explained, and the roles of radiation therapy and chemotherapy, discussed. Reconstruction techniques following ablative surgery are then described in depth, with reference to defect size and complexity.

Features
- Comprehensive, easy-to-follow reference
- Offers clear guidance on surgery and other treatments
- Describes reconstruction techniques in detail
- Discusses complications of treatment and reconstruction and their management

Contents

Fields of interest
- Oral and Maxillofacial Surgery; Oncology

Neurology at the Bedside

This book teaches readers the clinical skills residents in neurology have to acquire in the course of their training, and approaches neurology like a doctor approaches a patient: first there is a chapter on how to perform an efficient neurological history according to neuroanatomical key features, then a chapter on the bedside examination, followed by chapters on differential diagnosis, diagnostic procedures and lastly, the treatment. Neurology at the Bedside aims to provide readers with a personal clinical mentor. It takes them by the hand and guides them through the whole patient encounter from the history to the treatment, at each step pointing out what is essential and what is not.

Features
- Reflects the course of the neurological consultation: history, bedside examination, differential diagnosis, investigations, treatment
- Relevant neuroanatomy from a strictly clinical point of view
- Practical tips and clinical pearls
- Comprehensive discussion of neurological differential diagnoses, which are illustrated in flow charts
- Comprehensive lists of treatment options
- Practical tips and clinical pearls, including more than 50 unique case histories covering the entire spectrum of the field

Contents
What to expect from this book (and what not to). - Clinical history and neuroanatomy "Where is the lesion?:" - Neurological bedside examination "Can I confirm my anatomical hypothesis?:" - Differential diagnosis "What is the lesion?:" - Ancillary investigations. - Treatment of neurological disorders. - Appendix.

Field of interest
- Neurology

Target groups
- Professional/practitioner

Product category
- Professional book

Neurology at the Bedside aims to provide readers with a personal clinical mentor. It takes them by the hand and guides them through the whole patient encounter from the history to the treatment, at each step pointing out what is essential and what is not.
**The Posterior Intrahepatic Approach in Liver Surgery**

The objective of The Posterior Intrahepatic Approach in Liver Surgery is to describe techniques, as the more routine application today of split liver, living donor transplantation has continued to teach us more about the anatomy of the liver and its applications. Furthermore, laparoscopic surgery in general has grown space and it is important to show the application of the posterior approach in laparoscopic liver surgery as well.

**Features**
- Describes techniques
- Laparoscopic liver surgery
- Living donor transplantation

**Contents**

**Field of interest**
Medicine/Public Health, general

**Target groups**
Research

**Product category**
Contributed volume

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**Textbook of Neurointensive Care**

**Features**
- Covers all monitoring, imaging, and surgical modalities
- Provides evidence-based data and includes algorithms to facilitate decision making and key points in each chapter
- Examines the neurological problems most frequently encountered in intensive care

**Contents**

**Fields of interest**
Intensive / Critical Care Medicine; Imaging / Radiology; Neuroradiology

**Target groups**
Professional/practitioner

**Product category**
Graduate/Advanced undergraduate textbook
Autoimmune (IgG4-related) Pancreatitis and Cholangitis

Autoimmune (IgG4-related) Pancreatitis and Cholangitis reviews the breadth of clinical, imaging, histological, laboratory, and imaging features associated with IgG4-associated systemic disease, especially AIP and IAC. Written by experts in their fields, each chapter includes an overview of existing data as well as the most up-to-date scientific information and emerging data. The book also addresses areas of uncertainty and controversy, briefly highlighting clinical and research needs relative to the respective topic.

Features
- Written by experts in their fields
- Optimizes diagnostic accuracy
- Serves as a useful resource for physicians

Contents

Fields of interest
Gastroenterology; Hepatology; Rheumatology

Target groups
Professional/practitioner

Product category
Contributed volume

Available
2013. XVI, 286 p. 121 illus., 72 in color. Hardcover
- * € (D) 160,49 | € (A) 164,99 | sFr 200,00
- € 149,99 | £135.00
ISBN 978-1-4419-6429-8

Disaster Medicine
A Case Based Approach

Features
- A case based approach supplies context and narrative which makes the information accessible and interesting
- Cases progress in the sequence

Contents

Fields of interest
Emergency Medicine; Traumatic Surgery

Target groups
Professional/practitioner

Product category
Contributed volume

Available
2013. XVII, 390 p. 68 illus., 63 in color. Hardcover
- * € (D) 32,09 | € (A) 32,99 | sFr 40,00
- € 29,99 | £19.99
ISBN 978-1-4471-5228-6

Mental Health and Pain
Somatic and Psychiatric Components of Pain in Mental Health

The link between mental health and pain is often neglected and has only recently emerged a subject of interest. Nevertheless, these two aspects are very important in the day-to-day practice of physicians. This book will serve as an innovative tool presenting psychiatric disorders such as major depression, schizophrenia, addiction, autism etc... Hence it is dedicated to general practitioners, psychiatrists, pain physicians, palliative healing caregivers, nurses, kinesitherapists, physiotherapists, ergotherapists, psychomotoricians, researchers and medical students.

Features
- First book dedicated to that topic
- Contributions of the best international experts in the field

Contents

Fields of interest
Medicine/Public Health, general; Pain Medicine; Psychiatry

Target groups
Professional/practitioner

Product category
Contributed volume

Available
2014. Approx. 300 p. 5 illus. Hardcover
- approx. * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- approx. € 139,95 | £126.00
A Case Approach to Perioperative Drug-Drug Interactions

Contents

Fields of interest
Anesthesiology; Intensive / Critical Care Medicine; Pharmacy

Target groups
Professional/practitioner

Product category
Professional book

Historical Diagnosis of Nevi and Melanoma

Contents

Fields of interest
Dermatology; Pathology; Oncology

Target groups
Professional/practitioner

Product category
Monograph

T. Matsui, Fukuoka University Chikushi Hospital, Japan; T. Matsumoto, Kyushu University, Japan; K. Aoyagi, Fukuoka University Faculty of Medicine, Japan (Eds)

Endoscopy in the Diagnosis of Small Intestine Diseases

Features
► Focuses on accurate diagnosis and on procedures for differentiating conditions on the basis of endoscopic findings. ► Showing capsule endoscopy and double-balloon endoscopy techniques. ► Showing variations of endoscopic pictures of small intestinal lesions

Contents

Fields of interest
Gastroenterology; Internal Medicine; Oncology

Target groups
Professional/practitioner

Product category
Monograph
Skin Manifestations in Rheumatic Disease

Contents

Social Media in Clinical Practice

The number of patients using social media and the number of applications and solutions used by medical professionals online have been sky-rocketing in the past few years, therefore the rational behind creating a well-designed, clear and tight handbook of practical examples and case studies with simple pieces of suggestions about different social media platforms is evident.

Features
► Every relevant social media topic is reviewed in relation to the practice of medicine ► The format brings freshness and practical pieces of advice to the readers  ► Uses real stories and examples to highlight key concepts in the use of social media

Contents

Fields of interest
Medicine/Public Health, general; Health Informatics; Health Promotion and Disease Prevention

Target groups
Professional/practitioner

Product category
Professional book
E. Mody (Ed)

Musculoskeletal Health in Women

Recent research indicates that gender differences in anatomy and physiology, endocrinology, hand eye co-ordination and motor development have an effect on the kinds of injuries incurred as a result of sporting activities. Since men and women have different responses to exercise; strength and conditioning programs should be modified for these differences. Musculoskeletal Health in Women was born out of a need to provide fitness advice tailored to women. For example, research has focused on correcting neuromuscular imbalances in women to prevent injuries. Increased abduction moment at the knee and balance problems have been found to be predictors of ACL injury. Muscle strengthening with special emphasis on the terminal knee extensors and hip abductors can improve these neuromuscular imbalances. Additionally, taping and bracing at the ankle may be helpful, particularly in women prone to certain injuries. Any discussion of women’s sports injuries is only complete if it includes the Female Athlete Triad: energy availability (which is affected by eating disorders), osteoporosis, and menstrual function.

Features
- A chart of common musculoskeletal complaints, with potential causes and treatments assists the reader in quickly and easily finding the potential cause of their pain
- A summary of all the recent studies done on women’s musculoskeletal injuries ensures the reader that advice is based on hard data
- Nutritional advice gives the reader information on what to eat to ensure bone health, muscle health, and an anti-inflammatory diet

Fields of interest
Sports Medicine; Orthopedics

Target groups
Professional/practitioner

Product category
Contributed volume

R. J. Moore, Department of Health and Human Services, Rockville, MD, USA (Ed)

Handbook of Pain and Palliative Care

Biobehavioral Approaches for the Life Course

Contents
Handbook of Pediatric Cardiovascular Drugs

A Second Edition of this handbook of drugs used in pediatric cardiac care will satisfy the need for a quick up-to-date reference source of common drug therapy. There are no major texts available in the field of pediatric cardiology that exclusively provide therapeutic drug information. Several sources are available that present drug information for cardiology, but these place no emphasis on pediatric care and are written for general cardiac specialists.

Features
► Updated pediatric cardiovascular drug handbook
► First pediatric cardiovascular drug handbook
► Book designed for ease of reference

Fields of interest
Cardiology; Pediatrics; Emergency Medicine

Target groups
Professional/practitioner

Product category
Handbook

Interventional Neuroradiology

Contents

Fields of interest
Interventional Radiology; Neuroradiology; Imaging / Radiology

Target groups
Professional/practitioner

Product category
Professional book

Due August 2013

2nd ed. 2014. 350 p. 100 illus., 50 in color. Softcover
► approx. * € (D) 64,15 | € (A) 65,95 | sFr 80,00
► approx. € 59,95 | £53.99
ISBN 978-1-4471-2463-4

Atlas of Endoscopy with Narrow Band Imaging

(Tentative) Narrow band imaging (NBI) brought a revolutionary improvement in diagnostic endoscopy enabling objective diagnosis and precise detection of lesion. It enhanced diagnosability of endoscopy and brought benefit to examinees who take endoscopic examination. On the other hand, the standardized classification has not been established and there are many clinicians and researchers who do not know how to utilize this technique or how to read the image. This book was proposed to solve this problem, providing clear, simple, and easy to understand descriptions with numerous endoscopic photos. Therefore this book will be a good reference for both the experts in this field and just beginners.

Features
► First standardized classification of each diagnosis using new technique.Narrow band imaging (NBI) ► Providing clear, simple, and easy to understand descriptions with numerous endoscopic images ► A special chapter on history and basic principles of NBI

Contents

Fields of interest
Gastroenterology; Pathology

Target groups
Professional/practitioner

Product category
Atlas

Due September 2013

2014. XX, 280 p. 500 illus. in color. Hardcover
► approx. * € (D) 149,75 | € (A) 153,94 | sFr 186,50
► approx. € 139,95 | £126.00
ISBN 978-4-431-54242-1
Passing the General Surgery Oral Board Exam

Edited by Dr. Marc Neff, Passing the General Surgery Oral Board Exam, Second Edition helps candidates prepare for the General Surgery Oral Board Exam in a different way than other review books. In addition to covering concepts frequently addressed on the test, the review also alerts you to "common curveballs" and "strikeouts"--the unexpected problems or seemingly benign actions (or inactions) that could result in a missed diagnosis or misdiagnosis, and thus result in failure to pass the exam. Fully updated and expanded to reflect the many changes in standards of care, this unique study guide is the first to expose the potential traps and pitfalls of the exam by providing examples of how the questions may be asked and what not to say in response. Designed to be used in conjunction with medical textbooks and other study guides, Passing the General Surgery Oral Board Exam, Second Edition prepares candidates to think on their feet and answer exam questions confidently and accurately.

Features

- Revised and updated new edition
- Provides tips on identifying the wrong answers
- Presents a realistic approach to preparing for the exam

Contents

Organizational Theme.- Breast.- Colon and Small Bowel.- Abdominal Endocrine.- Head and Neck Endocrine.- Esophagus.- Genitourinary.- Hepatobiliary.- Pancreas.- Pediatric.- Perioperative Care.- Skin and Soft Tissue.- Stomach and Duodenum.- Thoracic.- Trauma and Critical Care.- Vascular.- Conclusions: Last Curveballs Considerations.

Fields of interest

Surgery; General Surgery

Target groups

Professional/practitioner

Product category

Handbook

Due July 2013

Y. Nomura

Morphological Aspects of Inner Ear Disease

Sudden deafness and Meniere's Disease are common inner ear diseases diagnosed around the globe. However, their causes and etiologies are still unknown due to several reasons. One key factor is simply that the inner ear is small and located in the hard temporal bone; the resolution of CT and MRI images is insufficient in analyzing the pathophysiology of the inner ears under such circumstances. As these diseases are not fatal, the opportunities of obtaining temporal bones for histopathological examinations are rather rare. This book tries to improve the situation by approaching the inner ear diseases, especially the perilymphatic fistula, from multifaceted perspectives. It provides morphological information of the inner ear accompanying the chapters, i.e., explanations of inner ear fluids and blood vessels that help readers get familiar with complicated inner ear structures. It contains chapters describing specific diseases such as sudden deafness, Meniere's Disease and viral diseases to understand them in depth.

Features

- Provides an approach to revealing the beautiful and miraculous inner ear structure by providing descriptive texts and many associated photographs
- Explains applied surgical treatments such as laser techniques to help readers better understand inner ear disease treatments

Contents


Fields of interest

Otorhinolaryngology; Anatomy; Head and Neck Surgery

Target groups

Professional/practitioner

Product category

Monograph

Due July 2013

R. A. Norman

Atlas of Geriatric Dermatology

The book is not intended to include all the possible conditions that can manifest in the geriatric patient, nor does it address every possible differential diagnosis or treatment available for the various conditions. Included here are only the most commonly found conditions among the geriatric population and some of the appropriate treatments. A more comprehensive and detailed list of geriatric conditions can be found in the references listed.

Features

- Large number of stunning illustrations with descriptions and treatment options
- Easy to use key clinical resource
- Structured to assist trainee and experience dermatologist alike

Contents

Introduction and definitions.- Overview.- Inflammatory conditions.- Infections.- Skin signs in systemic disease.- Regional dermatoses.- Benign tumors.- Premalignant and malignant tumors.

Fields of interest

Dermatology; Geriatrics/Gerontology

Target groups

Professional/practitioner

Product category

Atlas

Due July 2013

2nd ed. 2013. XV, 495 p. Softcover

- * € (D) 74,89 | € (A) 76,99 | sFr 93,50
- € 69,99 | £62.99
ISBN 978-1-4614-7662-7

2013. Approx. 250 p. 150 illus. in color. Hardcover

- * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- € 139,95 | £126.00
ISBN 978-4-431-54203-2

2013. XIV, 342 p. 651 illus., 649 in color. Hardcover

- * € (D) 149,79 | € (A) 153,99 | sFr 186,50
- € 139,99 | £126.00

Due July 2013

2nd ed. 2013. XV, 495 p. Softcover

- * € (D) 74,89 | € (A) 76,99 | sFr 93,50
- € 69,99 | £62.99
ISBN 978-1-4614-7662-7

2013. Approx. 250 p. 150 illus. in color. Hardcover

- * € (D) 149,75 | € (A) 153,94 | sFr 186,50
- € 139,95 | £126.00
ISBN 978-4-431-54203-2

2013. XIV, 342 p. 651 illus., 649 in color. Hardcover

- * € (D) 149,79 | € (A) 153,99 | sFr 186,50
- € 139,99 | £126.00
Due October 2013

2014. 400 p. (Contemporary Hematology) Hardcover
➤ approx. *€ (D) 117.65 | € (A) 120.95 | sFr 158.00
➤ approx. € 109.95 | £101.00
ISBN 978-1-58829-932-1

Due August 2013

2014. XII, 247 p. 78 illus., 50 in color. (European Manual of Medicine) Softcover
➤ *€ (D) 85.59 | € (A) 87.99 | sFr 106.50
➤ € 79.99 | £72.00
ISBN 978-3-540-88123-0

O. A. O’Connor, Columbia University, New York, NY, USA (Ed)

Novel Targeted Drugs for the Treatment of Lymphoma
The Biological Basis for Innovative Drug Discovery and Development

Over the past decade, there has been an explosion in the number of new drugs being developed for the treatment of cancer. This has become particularly true in the case of lymphoma. However, what frequently remains unclear to many is that this increase in new agents, and the often novel targets they affect, is a direct product of our never ending quest to understand the fundamentals of cancer cell biology. Targeting these unique pathogenetic mechanisms is the most attractive strategy for altering the natural history of any malignancy, and the pace at which we are clarifying this biology is truly daunting.

Field of interest
Oncology

Target groups
Professional/practitioner

Product category
Contributed volume

H. J. Oestern, General Hospital Celle, Germany; O. Trentz, Klinik für Unfallchirurgie, Zurich, Switzerland; S. Uranues, University of Graz, Austria (Eds)

General Trauma Care and Related Aspects
Trauma Surgery II

There currently is a clear tendency to an increasing number of accidental injuries in elderly people, in sport injuries and car crashes also in countries which recently joined the European Union and candidates to join the European Union. Patients expect very good functional results even after serious injuries. But in contrast to this development, Trauma Surgery as an independent field, is not yet established in all European countries. Therefore, it seems mandatory to compile a book that covers the state-of-the-art in Trauma Surgery. The book also serves to harmonise the practice of Trauma Surgery within the European Union, and to prepare for the exam of the U.E.M.S.

Features
➤ Clearly structured and to-the-point  ➤ Sets a European standard in the field  ➤ Indispensable for all physicians dealing with trauma patients and in preparing for the European Board exam

Contents

Fields of interest
Traumatic Surgery; Surgery; Surgical Orthopedics

Target groups
Professional/practitioner

Product category
Monograph

P. Papadakos, M. Gestring, University of Rochester, NY, USA (Eds)

Encyclopedia of Trauma Care

Contents
S. J. Parekattil, Winter Haven Hospital, FL, USA; A. Agarwal, Cleveland Clinic, OH, USA (Eds)

**Male Infertility for the Clinician**

A Practical Guide

This concise, truncated version of Parekattil and Agarwal’s Male Infertility: Contemporary Clinical Approaches, Andrology, ART & Antioxidants is the first resource dedicated solely to clinical issues of infertility.

**Features**
- The first quick reference on the subject of infertility and antioxidants
- Concise and portable
- Up-to-date information

**Contents**


**Fields of interest**
Reproductive Medicine; Urology/Andrology; Medicine/Public Health, general

**Target groups**
Professional/practitioner

**Product category**
Professional book

**Success in Academic Surgery: Clinical Trials**

Surgical education is a rapidly expanding area of surgical research and career interest, and as the Association for Academic Surgery (AAS) Fall Courses (www.aasurg.org) and International courses offer more and more specialty tracking there is a greater need for an accompanying textbook to supplement the material presented in the courses.

**Features**
- Success in Academic Surgery: Clinical Trials is a handy, portable text which offers practical guidance on developing a career within surgical education
- Written by expert authors from around the world who are members of the Association for Academic Surgery
- Success in Academic Surgery: Clinical Trials offers advice on all aspects of clinical trials, from trial design and building a research team, to statistics and getting your trial published

**Contents**

History of clinical trials - Ethics - Generating a testable hypothesis and underlying principles of clinical trials - Trial design: overview of study designs - Defining the study cohort: inclusion and exclusion criteria - Building your clinical research team - Clinical trials: ensuring quality and standardization - Device versus drug clinical trials: similarities and important differences - Statistics - setting the stage - Statistics - handling the data - Data safety monitoring board: interim analyses, stopping rules - Planning for data monitoring and audits - Clinical trials: the budget - Regulatory issues - Publishing your clinical trial.

**Fields of interest**
Medicine/Public Health, general; Surgery; Medical Education

**Target groups**
Professional/practitioner

**Product category**
Professional book

**Clinical Ophthalmic Oncology**

Eyelid and Conjunctival Tumors

Written by internationally renowned experts, Clinical Ophthalmic Oncology provides practical guidance and advice on the diagnosis and management of the complete range of ocular cancers. The book supplies all of the state-of-the-art knowledge required in order to identify these cancers early and to treat them as effectively as possible.

**Features**
- Practical guidance on the diagnosis and management of the complete range of ocular cancers
- Numerous full-color photographs and illustrations that will facilitate diagnosis Detailed coverage of all management options
- Written by internationally renowned experts

**Contents**

Eyelid tumors: Examination Techniques - Classification and Differential Diagnosis - Benign Eyelid Tumors - Basal Cell Carcinoma - Squamous Cell Carcinoma - Sebaceous Gland Carcinoma - Eyelid Melanoma - Eyelid Adnexal Tumors - Eyelid Stromal Tumors - Surgical Techniques - Sentinel Lymph Node Assessment and Biopsy - Systemic Associations - Conjunctival and Corneal Tumors: Examination Techniques - Classification and Differential Diagnosis - Benign - Squamous Neoplasia - Primary Acquired Melanosis - Melanoma - Stromal Tumors - Caruncle Tumors - Surgical Techniques - Systemic Associations.

**Fields of interest**
Ophthalmology; Oncology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume
**Manual of Pediatric Nephrology**

This manual will meet the everyday needs of the wide range of medical professionals who play a role in the treatment of children referred to hospital because of renal disease. It is an easy-to-use, portable guide that will assist pediatricians, residents, and trainees in making prompt first-level management decisions. It will also prove invaluable for the adult nephrologists who care for children in many developing countries, and will serve as a teaching guide for experts when training non-subspecialists. Individual sections are devoted to the evaluation of renal disease; fluid, electrolyte, and acid-base disorders; glomerular diseases; tubular disorders; congenital, inherited, and urological disorders; consequences of renal disease; and miscellaneous topics. The text is in a bulleted format with tables and algorithms wherever possible, making it straightforward and easy to read. An appendix includes further important information such as normal values, drug dosages, and drug nephrotoxicity.

**Features**
- A comprehensive, easy-to-use, portable manual that will assist pediatricians, residents, and trainees in making prompt and appropriate first-level management decisions in children with renal disease
- A useful teaching guide for experts when training non-subspecialists
- Easy-to-read text in bullet format, with helpful tables and algorithms
- Suitable for practitioners in both developed and developing countries

**Fields of interest**
- Nephrology; Pediatrics

**Target groups**
- Professional/practitioner

**Product category**
- Contributed volume

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**Fundamentals of Evidence Based Medicine**

This is a basic book on evidence-based medicine (EBM). It starts with an introduction to the topic. It outlines the relationship between EBM and research and quality of care. Then it goes on to cover the most commonly used modules of EBM, i.e. therapy, diagnosis, prognosis and meta-analysis. Each module starts with an introduction to fundamental concepts, and description of the related research process, and then follows the critical appraisal of related type of research article. At the end, it covers the different systems of grading of level of evidence and strength of recommendations.

**Features**
- Systematically addresses all concepts of concepts
- How to critically evaluate best evidence, diagnostic tests, systemic reviews, and meta-analysis
- Written for practitioners in an easy-to-understand format

**Contents**
- Chapter 1. Introduction to evidence-based medicine.
- Chapter 2. Finding the current best evidence.
- Chapter 3. Therapy: fundamental concepts.
- Chapter 4. Therapy: critical appraisal - part 1 (validity).
- Chapter 5. Therapy: critical appraisal - part 2 (interpreting results).
- Chapter 6. Diagnostic test: fundamental concepts.
- Chapter 7. Diagnostic test: Critical appraisal.
- Chapter 8. What is the information? (How to evaluate the results if a diagnostic test paper).
- Chapter 9. Systematic review and meta-analysis: fundamental concepts.
- Chapter 11. Prognosis.
- Chapter 12. Examples of critical appraisal.

**Fields of interest**
- Medicine/Public Health, general; Internal Medicine; Nursing Management/Nursing Research

**Target groups**
- Professional/practitioner

**Product category**
- Professional book

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**Success in Academic Surgery: Developing a Career in Surgical Education**

**Features**
- Success in Academic Surgery: Developing a Career in Surgical Education is a handy, portable text which offers practical guidance on developing a career within surgical education
- Written by expert authors from around the world who are members of the Association for Academic Surgery

**Contents**
1. An Overview of Opportunities in Surgical Education.
2. Opportunities in Medical Student Education.
3. Opportunities in Resident Education.
4. Opportunities in Simulation Centers.
5. Getting Involved at a National Level.
6. Getting Promoted as a Surgical Educator.
7. Leadership Courses.
8. The Business and Finance of Surgical Education.
9. Mentors and Mentoring.
10. Training Opportunities in Medical and Surgical Education.
12. Overview of Medical Education Research.
14. Research Funding.
15. Getting Your Work Published.

**Fields of interest**
- Medicine/Public Health, general; Surgery; Medical Education

**Target groups**
- Professional/practitioner

**Product category**
- Professional book
Diet and Nutrition in Critical Care

Contents

Target groups Professional/practitioner

Product category Handbook

Due June 2014

Print
2014. Approx. 4500 p. 400 illus., 100 in color. ► approx. * € (D) 1069,81 | € (A) 1078,80 | sFr 1243,50 ► approx. € 899,00 | £800.50 ISBN 978-1-4614-7837-9

eReference
2014. ► approx. ** € (D) 1069,81 | € (A) 1078,80 | sFr 1243,50 ► approx. € 899,00 | £800.50 ISBN 978-1-4614-7836-2

T. Rambaldi (Ed)
Whole-Body FDG PET Imaging in Oncology

Clinical Reports and Teaching Points
This manual presents a large collection of clinical cases in oncology with accompanying whole-body FDG PET-CT scans. The aim is to promote an integrated approach to the use of PET-CT, and detailed attention is therefore paid to the clinical history and diagnostic question. A central aspect of every clinical case described in this manual is the guidance on the clinical report, which is the official tool for communicating with both the referring physician and the person undergoing the diagnostic test; for this reason it needs to be clear, understandable, and written in shared language. The advice regarding report preparation is strongly supported by informative PET, CT, and PET-CT fused images of each disease. The book is broadly structured according to anatomic region, and a wide range of common diseases likely to be imaged using PET-CT is covered.

Features
► Large collection of clinical cases in oncology with accompanying whole-body FDG PET-CT scans ► Promotes an integrated approach to the use of PET-CT, with detailed attention to clinical history and the diagnostic question ► Offers extensive guidance on clinical report preparation ► Covers a wide range of diseases and disease locations

Contents

Fields of interest Imaging / Radiology; Nuclear Medicine; Diagnostic Radiology

Target groups Professional/practitioner

Product category Professional book

Due September 2013


Due July 2013


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K. Ramer, Marianka, Slovakia; E. Mantel, University of Pennsylvania, Hammonton, NJ, USA; J. S. Reddin, Hospital of the University of Pennsylvania, Philadelphia, PA, USA; G. Cheng, Philadelphia VA Medical Center, PA, USA; A. Alavi, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

Nuclear Medicine Technology

Review Questions for the Board Examinations
This book prepares students and technologists for registry examinations in nuclear medicine technology by providing practice questions and answers with detailed explanations, as well as a mock registry exam. The questions are designed to test the basic knowledge required of nuclear medicine technologists, as well as the practical application of that knowledge.

Features
► The only comprehensive exam preparation guide on the market ► Includes a mock registry exam ► Provides expanded coverage of positron emission tomography and other new procedures and practices

Contents

Target groups Professional/practitioner

Product category Professional book
Neurological Emergencies in Clinical Practice

Neurological Emergencies in Clinical Practice discusses neurological emergencies in a stepwise fashion including stabilizing the patient, identifying the cause, and treating the underlying cause. It is useful in several settings including the emergency room, hospital in-patient service as well as the intensive care unit. Neurological Emergencies in Clinical Practice has a wide appeal and relevance to disciplines including neurology, emergency medicine, critical care medicine, internal medicine and family medicine.

Contents


Features

Helps the reader develop a systematic approach towards neurological emergencies.

Pertinent radiological images e.g. CT scans, MRIs are featured.

Topics arranged alphabetically.

Six practical and high yield appendices are provided for quick reference.

Fields of interest

Neurology; Emergency Medicine; Intensive / Critical Care Medicine

Target groups

Professional/practitioner

Product category

Professional book

Management of Neuroendocrine Tumors of the Pancreas and Digestive Tract

From Surgery to Targeted Therapies: A Multidisciplinary Approach

Neuroendocrine tumors (NETs) rank among the most prevalent malignancies of the digestive tract. The indolence of digestive NETs often leads to their only being discovered at advanced stages, resulting in multiple liver metastases. Although surgical resections may successfully treat localized diseases, advanced stages require complex multimodal care. Centers of excellence in the management of NET employ a variety of approaches, from liver directed therapies and symptomatic approaches to using systemic chemotherapy and targeted agents to slow tumor progression, achieving sustainable survival while preserving quality of life. This book has been written by international experts in the field, providing an overview of treatments currently used for patients with digestive NETs.

Features

The latest advances in the management of neuroendocrine tumors.

Multimodal approaches used for the treatment of neuroendocrine tumors of the gut.

Top international experts in the field.

Published under the auspices of the European neuroendocrine tumor society (ENT S) / EETS.

Due to the rarity of the disease, the book will remain up-to-date for years to come.

Contents

Fields of interest

Oncology; Surgical Oncology; Gastroenterology

Target groups

Professional/practitioner

Product category

Professional book

Imaging of Foreign Bodies in Organs

Contents

Foreign body ingestion: a common problem in the Emergency Department.

Role of plain abdominal film in the diagnosis of foreign body ingestion.

Ingestion of foreign body: usefulness of Multidetector row Computed Tomography in the diagnosis of unusual cases and of complications.

Drug smuggling by body packing: what the emergency radiologists needs to know.

Foreign body ingestion: role of the gastroenterologist.

Ingestion of foreign body: when the surgical treatment is mandatory ?.

Value of chest plain film in the diagnosis of foreign body aspiration.

Utility of Multidetector row Computed Tomography and virtual bronchoscopy in children and in adults with suspected foreign body aspiration.

Management of foreign body located in the airway.

Rectal foreign body: role of imaging.

Management of rectal foreign bodies.

Intravesical foreign bodies.

Foreign bodies and devices in the female pelvis.

Retained intra-abdominal surgical sponges: role of imaging.

Missed endovascular devices and catheters: role of Interventional Radiology.

Ultrasound-guided soft-tissue foreign body extraction.

Gunshot injuries: ballistics elements and legal issues.

Gunshot injuries: are conventional radiographs still the standard in localization of projectiles ?.

Role of Multidetector row Computed Tomography in the detection of maxillofacial foreign bodies.

Foreign bodies ingestion, insertion and colorectal foreign bodies: legal issues.

Fields of interest

Imaging / Radiology; Diagnostic Radiology; Emergency Medicine

Target groups

Professional/practitioner

Product category

Contributed volume
Health Impact Assessment in the United States

Health Impact Assessment (HIA) is a method for predicting the potential (sometimes unintended) effects of a policy or program on the health of a population. HIA evolved from the awareness that many policies which have no explicit health goals nonetheless impact the health of the community. For example, research has demonstrated a linkage between the characteristics of the built environment and health. The built environment (land use patterns, transportation systems, urban design) represents the collective outcome of public and private projects, policies, and other activities and it affects where and how people live, travel, work, shop, and interact with each other. It influences everything from traffic to agriculture, job opportunities to crime rates, air quality to cultural norms, and their daily impact on human health. Communities contend with many different types of health threats, such as emerging epidemics of obesity, diabetes, and other chronic diseases; infectious diseases; environmental pollution; and mental illness. The purpose of HIA is to translate the potential (sometimes unintended) consequences of changes in communities into relevant information for decision-makers, and to promote a collaborative and cross-sectoral approach to health promotion and disease prevention.

Features
- Focuses on HIA as a tool for policy in the US
- Brings together the theory, evidence, training resources for incorporating health into routine public practices
- Provides guidelines for methods and best practices in HIA

Field of interest
Medicine/Public Health, general

Target groups
Research

Product category
Monograph

Due August 2013

- * € (D) 139,09 | € (A) 142,99 | sFr 177,00
- € 129,99 | £ 119.99

Due September 2013

2014. Approx. 150 p. 20 illus., 5 in color. Hardcover
- * € (D) 52,43 | € (A) 53,90 | sFr 65,50
- € 49,00 | £ 44.99
ISBN 978-88-470-2678-0

Due July 2013

- * € (D) 262,15 | € (A) 269,50 | sFr 351,50
- € 245,00 | £ 223.00
The Glaucomas

Volume II - Open Angle Glaucoma and Angle Closure Glaucoma

This second volume in a short series on the glaucomas is devoted to the two main types of the disease, open angle glaucoma and angle closure glaucoma. The contents are based on observations and experience gained during the management of more than 40,000 hospital and 7,000 private patients, with follow-up of 10 to 50 years. The book is comprehensive in scope. All aspects of diagnosis are carefully examined, surgical indications and techniques are explained, and the role of medical treatment is evaluated. Importantly, chapters are included on topics that are frequently overlooked in other books but are important to early diagnosis, such as diurnal pressure curve, HRT, and non-conventional perimetry.

Features
► Provides detailed practical advice that helps the reader to learn quickly
► Includes a wealth of knowledge generally ignored in current books on glaucoma, aiding early diagnosis and treatment
► Almost 1000 illustrations, the majority in color
► Accompanying DVD of surgical techniques

Contents

Field of interest
Ophthalmology

Target groups
Professional/practitioner

Product category
Monograph

Sudden Infant Death Syndrome
From Pathophysiological Prospects

Sudden infant death syndrome (SIDS) is characterised by the sudden death of an infant that is not predicted by prior medical history and it is still responsible for a large percentage of infant mortalities. The exact causes have long remained unknown, though some risk factors such as including exposure to tobacco smoke, no breast feeding, and prone sleeping position, have been identified. However an analysis linking neurophysiological and neuropathological aspects in a prospective study of SIDS suggests that one of the causes of SIDS is arousal deficiency.

Features
► Includes both physiological aspects and pathological aspects of Sudden Infant Death Syndrome (SIDS)
► Based on a prospective study of SIDS, evaluates arousal deficiency as a causal factor
► Provides updated and comprehensive information on SIDS research and related science

Contents
1. Sudden infant death syndrome and the pedunculopontine tegmental nucleus
2. Developmental alteration of hypocretins (orexins) in the brainstem in the sudden infant death syndrome
3. Sleep deprivation in infants, children and adolescents
4. Sleep disturbance in children resulting from noises exposure
5. Sudden infant death syndrome from the perspective of arousal deficiency
6. Cerebral blood oxygenation changes over the occipital and frontal cortexes during sucking in infants: an optical topographic study
7. Mismatch negativity in healthy neonates and premature babies

Fields of interest
Pediatrics; Neurology; Forensic Medicine

Target groups
Research

Product category
Contributed volume
**Laparoscopy in Children**

When Laparoscopy in Children was first published in 2003, it quickly became popular with pediatric surgeons worldwide owing to its clear schematic drawings and concise text. This new edition has been revised and enlarged to cover the new procedures and other advances that have emerged in the intervening period, during which the number of operations has almost doubled. Now, the vast majority of indications for laparoscopy in children are presented and discussed. Each operation is systematically described and illustrated step by step, providing the reader with the technical guidelines required to perform laparoscopy safely even in small children. Laparoscopy in Children will be an invaluable guide for all surgeons who perform, or plan to perform, such operations.

**Features**
- Clear, simple drawings and concise text
- Step-by-step instructions on each technique
- Explains how procedures in children differ from those in adults
- Revised and enlarged edition, reflecting newer procedures

**Contents**

**Fields of interest**
- Pediatric Surgery; Surgery

**Product category**
- Monograph

**Due June 2013**

2nd ed. 2013. XI, 133 p. 176 illus., 175 in color. Hardcover
* * (D) 96,29 | (A) 98,99 | sFr 120,00
* * 89,99 | 81,00
ISBN 978-3-642-37637-5

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**The Behavioral Consequences of Stroke**

A comprehensive, state-of-the-art contribution to a field that is rapidly developing, The Behavioral Consequences of Stroke provides a broad overview of the cognitive and neurobehavioral effects of stroke.

**Features**
- Comprehensive title in a rapidly evolving field of research
- Written by an international panel of authorities in the field
- Sheds new light on aspects of critical care stroke treatment, imaging and diagnosis, in-patient treatment, and full range of post-care issues

**Contents**

**Fields of interest**
- Neurology; Surgery; Intensive / Critical Care Medicine

**Product category**
- Contributed volume

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**Due July 2013**

2013. XX, 380 p. 50 illus., 34 in color. Hardcover
* * (D) 160,49 | (A) 164,99 | sFr 200,00
* * 149,99 | 135,00

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**Les soins de support en cancérologie**

De l’organisation aux symptômes, pour améliorer la prise en charge

Les soins de support se sont développés depuis le début des années 2000 en France, en premier lieu grâce à des formations assurées sur l’ensemble du territoire national mais également international. Les soins de support sont définis par « l’ensemble des soins et soiûnts nécessaires à la personne malade tout au long de la maladie conjointement aux traitements spécifiques lorsqu’il y en a ». Deux aspects fondamentaux des soins de support seront abordés dans cet ouvrage : d’une part l’organisation, ou comment mettre en place les soins de support dans les établissements en lien avec la ville et d’autre part les symptômes, ou comment aider les patients et améliorer leur prise en charge au quotidien. Cet ouvrage de référence est le premier à paraître sur cette thématique novatrice.

**Features**
- Premier ouvrage sur cette discipline – les soins oncologiques de support en langue française
- Thème novateur et porteur dans le milieu oncologique
- Concurrence tous les soignants prenant en charge des patients atteints de cancer (médecins et chirurgiens de spécialité, infirmières, paramédicaux, autres)
- Ouvrage d’experts nationaux et internationaux
- Ouvrage de référence sur les soins de support
- Thématiques d’aide à la pratique clinique quotidienne

**Fields of interest**
- Medicine/Public Health, general; Oncology; Pain Medicine

**Product category**
- Contributed volume

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**A paraître June 2014**

2014. Ca. 600 p. 120 ill., 20 en couleurs. Broché
* * (D) 111,56 | (A) 114,69 | sFr 139,00
* * 104,27 | 94,00
An Introduction to Health Policy
A Primer for Physicians and Medical Students

P. Sharma, S. Bhatia, K. L. Goh (Eds)

The rise of acid reflux in Asia

GERD is the most common gastrointestinal disease in the world affecting over 10-20% of the adult population. GERD is often perceived as a Western disease and very little literature available about this disease in the Asian population. With growing obesity and westernization in Asia, the prevalence of GERD is rapidly increasing. With growing morbidity and health care cost there is a significant need for understanding the disease from the Asian perspective. This book will fill the gap in the knowledge on GERD among Asians and will highlight the difference in terms of epidemiology, diagnosis and management of GERD from the Western perspective.

Features
- Provides Asian perspective on GERD
- Covers epidemiological aspects in Asia, and newer approaches in the diagnosis and management of GERD patients

Contents
- Defining GERD in Asia: different from the West?
- Reasons for the rise of GERD in Asia: Obesity, H pylori and others
- Pathophysiology and acid production in Asians: different from the West?
- Diagnosis of GERD: clinical, pH, impedance: what is the best approach?
- Role of endoscopy and advanced imaging in diagnosing GERD
- Medical therapy for GERD in Asia
- Barrett’s esophagus in the Asian population
- Extra-esophageal GERD: myth or reality?
- Terminology and cultural issues impacting GERD in Asia (symptom perception, treatment, alternative medicine etc)
- Future of GERD research in Asia

Fields of interest
- Gastroenterology; Internal Medicine; Surgery

Due June 2013

Y. Shav-Tal, Bar-Ilan University, Ramat Gan, Israel

Imaging Gene Expression

Methods and Protocols

Contents
- High-Throughput Fluorescence-Based Screen to Identify Factors Involved in Nuclear Receptor Recruitment to Response Elements
- Live-Cell Imaging Combined with Immunofluorescence, RNA, or DNA FISH to Study the Nuclear Dynamics and Expression of the X-Inactivation Center
- Single Molecule Resolution Fluorescent In Situ Hybridization (smFISH) in the Yeast S. cerevisiae
- Measuring Transcription Dynamics in Living Cells
- Using Fluctuation Analysis Nuclear Poly(A) RNA Movement Within and Among Speckle Nuclear Bodies and the Surrounding Nucleoplasm
- Nuclear Trafficking and Export of Single, Native mRNPs in Chironomus tentans Salivary Gland Cells
- Single mRNPs Tracking in Living Mammalian Cells
- Imaging Nascent RNA Dynamics in Dictyostelium
- Monitoring Dynamic Binding of Chromatin Proteins In Vivo by Single Molecule Tracking

Fields of interest
- Imaging / Radiology; Gene Expression

Due July 2013

2013. XVI, 450 p. 54 illus., 36 in color. With online files/update. (Methods in Molecular Biology, Volume 1042) Hardcover

- * € (D) 117.69 | € (A) 120.99 | sFr 146.50
- * € 109.99 | €99.00


Humana Press
Cleft Lip and Palate Primary Repair

Cleft Lip and Palate Primary Repair introduces the main approaches to cleft lip and palate repaired, including the principles of design, skills and case analysis. Presenting a collection of advanced theories and techniques in this field, richly illustrated and with video clips of the respective operations, it is intended for plastic surgeons, oral surgeons and paediatrics surgeons, as well as for medical students. Shi Bing is a Professor and surgeon at Department of cleft lip and palate repair in West China Hospital of Stomatology, Sichuan University, China. Brian Clive Sommerlad is a Consultant Plastic Surgeon at the North Thames Cleft Center, Great Ormond Street Hospital for Children, UK.

Contents

Fields of interest
Plastic Surgery; Oral and Maxillofacial Surgery; Pediatric Surgery

Target groups
Research

Product category
Monograph

Due June 2013

Jointly published with Zhejiang University Press

Distribution rights in China: Zhejiang University Press

2013. Approx. 300 p. 250 illus., 150 in color. With DVD. Hardcover

- € (D) 159,00 | € (A) 163,46 | sFr 213,50
- € 148,60 | £117.50

ISBN 978-3-642-38381-6

Advanced Cosmetic Otoplasty
Art, Science, and New Clinical Techniques

M. A. Shiffman, Tustin, CA, USA (Ed)

Contents
**Periprosthetic Joint Infection of the Hip and Knee**

**Features**
- A practical reference for the diagnosis and treatment of total joint infections following hip and knee arthroplasty
- Provides background on epidemiology, risk factors, and prevention strategies
- Includes antibiotic treatment strategies, delivery methods and medical optimization techniques for patient care and follow-up

**Contents**

**Fields of interest**
Surgical Orthopedics; Sports Medicine; Rheumatology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume

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**Abdominal Wall Hernia**

**Advances in Laparoscopy**

Advances in Laparoscopy of the Abdominal Wall Hernia is fully illustrated, comprehensive guide which describes in detail the most up-to-date techniques used in the laparoscopic repair of hernias. Written by world renowned authors, this manual reviews laparoscopic techniques used in the repair of inguinal hernias and ventral incisional hernias. Among the topics explored within this updated, engaging and informative text are: • Techniques such as Extraperitoneal (TEP) and transabdominal (TAPP) hernia repair • Fundamentals of ventral hernia repair • A detailed overview of mesh fixation in laparoscopic surgery • Methods to deal with rarer hernias and those of atypical location Advances in Laparoscopy of the Abdominal Wall Hernia is a valuable reference tool that would be of great benefit to surgeons and medical practitioners working in this field.

**Features**
- Advances in Laparoscopy of the Abdominal Wall Hernia makes use of full-color figures and schematic diagrams to assist the surgeon in comprehending the most up-to-date techniques used in hernia repair
- This book gives a detailed account of how the material and instruments are used in laparoscopy
- Details of mesh characteristics are provided so surgeons can choose which mesh is most appropriate to use and follow new fixation methods: traumatic and non-traumatic

**Fields of interest**
Gastroenterology; Surgery; Minimally Invasive Surgery

**Target groups**
Professional/practitioner

**Product category**
Monograph

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**Emergency Musculoskeletal Imaging in Children**

Emergency Musculoskeletal Imaging in Children is a practical, concise, and easy-to-read guide to the radiologic workup of acute musculoskeletal injuries and conditions in children. The book is conveniently organized by anatomic site and covers all acute injuries and conditions of the upper and lower extremities encountered in the emergency room, outpatient clinic, and office. Close attention is also given to normal findings and anatomic variants that can mimic pathology. More than 600 MR, CT, ultrasound, and radiographic images complement the text.

**Features**
- Lead author is world-renowned expert in pediatric radiology and trauma imaging
- Provides important considerations of what to look for when imaging children in an emergency setting
- Comprehensive images organized by anatomic region
- Includes normal findings that cause problems

**Contents**
General Considerations.- Infection/Inflammation and Infarction.- Tumors, Cysts and Tumor Mimickers.- Types of Fractures in Children.- Shoulder and Upper Arm Injuries of the Shoulder and Upper Humerus.- Elbow and Forearm.- Wrist and Hand.- Pelvis and Sacrum.- Hip and Femur/Femoral Shaft.- Knee and Leg.- Ankle and Foot.- Battered Child Syndrome/Non-Accidental Trauma.

**Fields of interest**
Imaging / Radiology; Diagnostic Radiology; Pediatrics

**Target groups**
Professional/practitioner

**Product category**
Professional book
Prevenire gli eventi avversi nella pratica clinica

**Contents**

1 Introduzione. - 2 La gestione del rischio clinico. - 3 Il ruolo dei pazienti per la sicurezza delle cure. - 4 La valutazione del rischio e l’analisi degli eventi avversi. - 5 Gli indicatori per la qualità e sicurezza delle cure. - 6 Le pratiche per la qualità e la sicurezza delle cure. - 7 La sicurezza del paziente nell’uso dei dispositivi biomedicali. - 8 Area critica. - 9 Chirurgia. - 10 Emergenza urgenza. - 11 Area materno-infantile. - 12 Medicina interna. - 13 Oncologia. - 14 Donazione e trapianto d’organo. - 15 Ortopedia. - 16 Salute mentale e dipendenze. - 17 La gestione dei sinistri, l’esperienza Toscana.

**Fields of interest**

Health Promotion and Disease Prevention; Industrial Organisation and Economic Psychology; Social Work

**Target groups**

Professional/practitioner

**Product category**

Manuale
**Textbook of Cardiovascular Intervention**

**Contents**

**Fields of interest**
Cardiology; Interventional Radiology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume

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**Office Urology**

**The Clinician’s Guide**

**Features**
- Handy reference book with clinical chapters dealing with practical issues  
- Covers diagnostic procedures and treatments that are specifically done in the office  
- Contributions by very well known authors

**Contents**
The Urologic Office.- Patient Evaluation.- Infections and Inflammation of the Genitourinary Tract.- The Renal Mass.- Bladder Tumors.- Prostate-Benign.- Penile Disorders Voiding Dysfunction.- Other Problems

**Field of interest**
Urology/Andrology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume

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**Acute and Critical Care Formulas and Laboratory Values**

This pocket guide is a single-volume source of the most common and important formulas and laboratory values used in the daily practice of acute care and critical care medicine.

**Features**
- Pocket-sized for quick reference  
- Handy outline format puts key information “at your fingertips”  
- Includes graphics, tables, algorithms, and scoring systems useful for interpreting critical care data  
- Chapters separated by organ system  
- Practical appendixes of “Abbreviations” and “Key Telephone Numbers”  
- A special “Notes” section for recording frequently used formulas

**Contents**

**Fields of interest**
Intensive / Critical Care Medicine; Anesthesiology; Cardiology

**Target groups**
Professional/practitioner

**Product category**
Handbook
New Series
Modern Otology and Neurotology
Series editor: K. Kaga

This series plays a role as a clinical reference in the rapidly evolving subspecialty of modern otology and neurotology. Written by prominent academic authorities, this series integrates contents from all fields of medicine and covers every aspect of the field, including surgical issues in pediatric audiology, neurotology and neurology, genetic testing, onco- logical study in auditory and vestibular organs, geriatric audiology and neurotology, and new clinical application of bone conduction hearing etc. Historical developments and unsolved problems of each field will also be described in detail to help readers’ understanding. The editors and contributors hope that this book series will contribute to medical residents and experts of otolaryngology and related clinical medicines in the evaluation of patients with otological and neurotological disorders.

S.-i. Usami
Molecular Diagnosis of Deafness

Genetic disorders are a common cause of congenital/early-onset sensorineural hearing loss. The identification of genes that are responsible for hearing loss is a breakthrough approach and has advanced our knowledge of the biology of hearing. Despite advances in the discovery of deafness genes, clinical application still presents problems because of the genetic heterogeneity of deafness.

Features
► Describes the details of each gene responsible for hearing loss and also its clinical application
► Provides information on genetic testing that leads to successful treatment, prevents hearing loss, and supports better genetic counseling
► Includes an auditory performance review after cochlear implantation

Contents
- Chapter 1: Molecular Diagnosis of Deafness: Impact of Gene Identification
- Chapter 2: Genetic Epidemiology of Deafness Genes and Clinical Application: Comparison with the mutation spectrum and screening strategy
- Chapter 3: Clinical Application: 3.1. Non-syndromic Hearing Loss: 3.1.1 GJB2 3.1.2 SLC26A4 3.1.2 Mitochondria 3.1.3 Mitochondria 3.4 CDH13 3.5 TECTA 3.6 KCNQ4 3.7. Syndromic Hearing Loss: 3.2.1 BOR Syndrome (EYA1) 3.2.2 Usher Syndrome (MYO7A, CDH23, PCDH15, USH2A, etc) 3.2.3 Pendred Syndrome (SLC26A4) 3.2.4 SYM1, SYNS1 (NOG) - Chapter 4: Genetic Testing and Cochlear Implantation
- Chapter 5: Genetic Counseling
- Chapter 6: Future Direction

Fields of interest
Neurology; Otorhinolaryngology; Molecular Medicine

Target groups
Professional/practitioner

Product category
Monograph

Due June 2013
2013. Approx. 150 p. 50 illus., 10 in color. (Modern Otology and Neurotology, Volume 2) Hardcover
► approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. * £ 110,50 | £ 114,95 | £ 133,50
ISBN 978-4-31-54173-8

S. Venkataramanujam, A. Brzezinski, S. Oter, S. D. Shillcutt (Eds)
Melatonin and melatonergic drugs in clinical practice

Contents
- Chapter 1. Melatonin: Its Physiology and Pharmacology
- Chapter 2. Past, Present and Future of Melatonin’s Clinical Uses
- Chapter 3. Melatonin’s Role in Mitochondrial Homeostasis: Health and Disease
- Chapter 4. Melatonin Receptors and Their Role in Human Diseases
- Chapter 5. Melatonin as an Antioxidant: Mechanisms and Applications
- Chapter 6. Melatonin and Immune Function
- Chapter 7. Microbial Actions of Melatonin and its Clinical Use
- Chapter 8. Melatonin’s Role in Antinociceptive Mechanisms: Therapeutic Applications
- Chapter 9. Melatonin Antagonism as a Way for Therapeutic Application in Malaria
- Chapter 10. Melatonin in Human Reproductive Mechanisms
- Chapter 11. Melatonin’s Use in Oncology
- Chapter 12. Melatonin Use in Insomnia
- Chapter 13. Melatonin in Mood Disorders
- Chapter 14. Melatonin Drugs in Sleep Disorders
- Chapter 15. Use of Agomelatine in Depressive Disorders
- Chapter 16. Agomelatine in Major Depressive Disorder: Efficacy, Safety and Tolerability
- Chapter 17. Melatonergic Antidepressant: Its Use in Depressive Disorders
- Chapter 18. Melatonin Treatment for Children and Adults with ADHD and Sleep Disorders
- Chapter 19. Melatonin for Use in Children with Sleep Onset Insomnia
- Chapter 20. Melatonin in Parkinson’s Disease: Therapeutic Role
- Chapter 21. Role of Melatonin in Mood Disorders and Antidepressant Effects of Melatonin
- Chapter 22. Melatonin in Ocular Diseases
- Chapter 23. Melatonin in Jet Lag
- Chapter 24. Melatonin in Circadian Rhythm Sleep Disorders: Recent Developments

Fields of interest
Internal Medicine; Endocrinology; Psychiatry

Target groups
Professional/practitioner

Product category
Monograph

Due June 2013
2013. Approx. 400 p. 55 illus., 5 in color. Hardcover
► approx. * € (D) 160,45 | € (A) 164,94 | sFr 200,00
► approx. * £ 180.00 | £ 184.95 | £ 200,00

S. Venkataramanujam, A. Brzezinski, S. Oter, S. D. Shillcutt (Eds)
Melatonin and melatonergic drugs in clinical practice

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Fields of interest
Internal Medicine; Endocrinology; Psychiatry

Target groups
Professional/practitioner

Product category
Monograph

Due June 2013
2013. Approx. 400 p. 55 illus., 5 in color. Hardcover
► approx. * € (D) 160,45 | € (A) 164,94 | sFr 200,00
► approx. * £ 180.00 | £ 184.95 | £ 200,00
Minimally Invasive Spinal Deformity Surgery

An Evolution of Modern Techniques

Contents

Deformity Surgery Principles: The epidemiology of adult spinal deformity & the aging population.
J. T. Willerson (Ed)

Coronary Artery Disease

Cardiovascular Medicine: Coronary Artery Disease will offer today’s most up-to-date, user-friendly guidance on the evaluation, diagnosis, and medical and surgical treatment of this most important aspect of cardiovascular disease and will be on the wish list for every trainee and practicing cardiologist, cardia surgeon, vascular surgeon, diabetologist, cardiologist and any physician who manages cardiac patients. The book is dedicated to providing comprehensive coverage of every aspect of coronary arterial medicine from cardiac signs and symptoms through imaging and the genetic basis for coronary disease to surgery, interventions, treatment and also to preventive cardiology. The Editor – and a group of contributing world authorities – offer their decades of scientific and clinical experience. A major selling point is the consistent chapter organization, clear design, and engaging text that includes user-friendly features such as tables, lists and treatment boxes. The reader will have all the guidance to diagnose and manage a full range of conditions in a series of textbook resources, while also having access to additional video material from the integral website.

Features
► Practical and Board-driven content ► Covers all aspects of the topic with depth and relevance ► Concentrates on disease-based coverage: diagnosis, treatment, surgery, intervention ► Consistent chapter organization, clear design, and engaging text ► Includes user-friendly features such as tables, lists and treatment boxes ► Guidance on diagnosis and management of a full range of conditions ► Access to additional video material

Fields of interest
Cardiology; Internal Medicine; Cardiac Surgery

Target groups
Professional/practitioner

Product category
Contributed volume

P. C. Wong, Children’s Hospital Los Angeles, Los Angeles, CA, USA; W. C. Miller-Hance, Texas Children’s Hospital, Houston, TX, USA (Eds)

Transesophageal Echocardiography for Congenital Heart Disease

Contents

Fields of interest
Cardiology; Imaging / Radiology; Diagnostic Radiology

Target groups
Professional/practitioner

Product category
Professional book

S. Wu, Y. Fan, Y. Tian, China Medical University, Shenyang, China (Eds)


This atlas presents an extensive collection of single-incision laparoscopic operations in general surgery performed from 2008 to 2013 in Shengjing Hospital of China Medical University. 2000 operations are reported in it. All the figures in it were collected using real time recordings of the operations which will be particularly interesting to the readers. In each specific surgery, authors provide its key surgical steps, complications and management and contraindication.

Features
► Replete with images and concisely written, brief paragraphs to enhance ease of reading ► Presents a hand-on guide to single-incision laparoscopic operations ► Provides a visual reference for surgeons working with single-incision laparoscopic operations in general surgery

Contents

Fields of interest
Surgery; Minimally Invasive Surgery; Internal Medicine

Target groups
Professional/practitioner

Product category
Professional book
C. R. Young, D. N. McMurray, D. v. Soolingen (Eds)

**Encyclopedia of Tuberculosis**

Tuberculosis remains one of the most devastating infectious diseases resulting in excess of one million deaths annually. Additionally, up to two billion people are carriers of TB. Because of emerging antibiotic resistance, high incidence in the third world, and co-infection with human immunodeficiency virus, tuberculosis is once again off increasing importance globally. Consequently it is timely for a new comprehensive reference work to be published on all aspects of TB. The best format for such a reference book would be an Encyclopedia.

**Fields of interest**
Infectious Diseases; Immunology; Microbiology

**Target groups**
Research

**Product category**
Encyclopedia

Due July 2014

Print


- € (D) 533.93 | € (A) 548.90 | sFr 715.50
- € 499.00 | £449.00

ISBN 978-1-4419-0885-8

2014.

- **€ (D) 593.81 | € (A) 598.80 | sFr 752.00**
- € 499.00 | £449.00


Due August 2013

Only available in print

2013. Approx. 360 p. 150 illus. in color. Hardcover

- € (D) 149.79 | € (A) 153.99 | sFr 186.50
- € 139.99 | £126.00

ISBN 978-3-642-38624-4

A. Zini, McGill University, Montreal, QC, Canada; A. Agarwal, Cleveland Clinic, OH, USA (Eds)

**Sperm Chromatin for the Clinician**

*A Practical Guide*

**Features**

- Concise guide with clinical applications
- Portable and low-cost
- Contains all the up-to-date information about the topic

**Contents**

**Fields of interest**
Reproductive Medicine; Urology/Andrology; Medicine/Public Health, general

**Target groups**
Professional/practitioner

**Product category**
Professional book

Due July 2013

Contains selected chapters from Sperm Chromatin

Only available in print

2013. DXX, 15 p. 13 illus., 12 in color. Softcover

- € (D) 53.49 | € (A) 54.99 | sFr 69.50
- € 49.99 | £46.99

**Autoimmune Disease**

Pathogenesis, Genetics, Immunotherapy, Prophylaxis and Principles for Organ Transplantation

This book describes how the Jerne-Burnet Forbidden Clone Theory and the Adams-Knight H Gene Theory, solved the pathogenesis and genetics of the autoimmune diseases showing how specific immunotherapy and prophylaxis can be developed. Furthermore, Ehringer’s discovery of two microbial triggers of autoimmune diseases is described and the conclusion drawn that all autoimmune diseases have microbial triggers, so will be preventable by the finding of the triggers and vaccination against them.

**Features**
- Explains that all autoimmune diseases have microbial triggers
- Provides strong evidence that schizophrenia is an autoimmune disease
- Demonstrates that prophylaxis of the autoimmune diseases will be possible by finding and vaccinating against their microbial triggers

**Contents**
- Discovery.
- Pathogenesis.
- Genetics.
- Microbial Triggers.
- Immunotherapy.
- Prophylaxis.
- Transplantation.

**Fields of interest**
- Biomedicine general
- Medicine/Public Health, general

**Product category**
- Brief

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**Cancer Targeted Drug Delivery**

An Elusive Dream

**Contents**
- A Time Travel Journey Through Cancer Therapies.
- Nanotechnology for Cancer Treatment: Possibilities & Limitations.
- Vascular Targeting Approaches to Treat Cancer.
- Tumor Immunotherapy by Utilizing a Double-Edged Sword.
- Chemokines.
- Cancer Biology: Some Causes for a Variety of Different Diseases.
- Cancer Stomal Targeting (CAST) Therapy and Tailored Antibody Drug Conjugate Therapy Depending on Nature of Tumor Stroma.
- Cancer Cell Respiration: Hypoxia and pH in Solid Tumors.
- Tumor Vasculature, EPR Effect, and Anticancer Nanomedicine: Connecting the Dots.
- Pressure Gradients in Solid Tumors.
- The ADAMs: New Therapeutic Targets for Cancer?
- Role of the Extracellular Matrix – Enzyme Activities and Metastasis.
- The Role of Non-Cancerous Cells in Cancer: Pancreatic Ductal Adenocarcinoma as Model to Understand the Impact of Tumor Microenvironment on Epithelial Carcinogenesis.
- Heterogeneity of Cancers and its Implication for Targeted Drug Delivery.
- A Study of Cancer Heterogeneity: From Genetic Instability to Epigenetic Diversity in Colorectal Cancer.
- Nanotherapeutics in Multidrug Resistance.
- Stem Cells and Cancer.
- Mechanisms of Metastasis.
- Cancer-Specific Ligand/Receptor Interactions.
- Targeting Drugs to Cancer: A Tough Journey to the Tumor Cell.
- Long Circulation and Tumor Accumulation.
- Convective and Diffusive Transport in Drug Delivery.
- Intravital Real-Time Confocal Laser Scanning Microscopy for the in Situ Evaluation of Nanocarriers.

**Fields of interest**
- Pharmaceutical Sciences/Technology
- Pharmacology/Toxicology

**Product category**
- Contributed volume

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**Genetic Damage in Human Spermatozoa**

There are several types of damage that can be found in the male gamete. Genetic damage in spermatozoa can originate during spermatogenesis, or it can originate during transit in both male and female genital tracts. Damage can also be due to ageing, environmental or iatrogenic conditions, as well as to the protocols to cryopreserve and to select spermatozoa in assisted reproduction techniques. The purpose of this book is to provide a comprehensive resource for all possible DNA damages in sperm, the relation to fertility and infertility, and possible transgenerational heritable effects.

**Features**
- This book will cover all possible DNA damage in sperm
- The book will also discuss its relation to fertility and transgenerational heritable effects
- Chapter structure will include mechanisms of damage, consequences in reproduction, possibility to eliminate damage, and possible transgenerational heritable effects

**Contents**
- Structure of chromatin in spermatozoa.
- Genomic changes in spermatozoa of aging male.
- Chromosomal aberrations and aneuploidies.
- The sperm epigenome: implications for the embryo.
- Paternal reprogramming of genome: transgenerational effects.
- Alterations in prolamination.
- Sperm DNA fragmentation and base oxidation.
- Iatrogenic Genetic damage.
- Sperm selection: effect on sperm DNA quality.
- Effect of antioxidant treatments on sperm genetic damage.

**Fields of interest**
- Human Genetics
- Endocrinology
- Reproductive Medicine

**Product category**
- Contributed volume
**New Series**

**Resistance to Targeted Anti-Cancer Therapeutics**

Series editor: B. Bonavida

For several decades, treatment of cancer consisted of chemotherapeutic drugs, radiation, and hormonal therapies. Those were not tumor specific and exhibited severe toxicities in many cases. But during the last several years, targeted cancer therapies have been developed. Targeted cancer therapies are drugs or other agents (e.g. antibodies) that block the growth and spread of cancer by interfering with specific gene products that regulate tumor cell growth and progression. Targeted cancer therapies are also sometimes called "molecularly targeted drugs." We have witnessed in the last decade a significant explosion in the development of targeted cancer therapies developed against various specific cancers. These include drugs/antibodies that interfere with cell growth signaling or tumor blood vessel development, promote the cell death of cancer cells, stimulate the immune system to destroy specific cancer cells and to deliver toxic drugs to cancer cells. One of the major problems that arise following treatment with both conventional therapies and targeted cancer therapies is the development of resistance, preexisting in a subset of cancer cells or cancer stem cells and/or induced by the treatments. Tumor cell resistance to therapies remains a major problem and several strategies are being considered to reverse the resistance to various manipulations. Resistance to Targeted Anti-Cancer Therapeutics will focus on the basic and translational research behind the molecular mechanisms of resistance found in many kinds anti-cancer therapeutics.

**B. Bonavida**, University of California, Los Angeles, CA, USA (Ed)

**Resistance to Immunotherapeutic Antibodies in Cancer**

**Strategies to Overcome Resistance**

The traditional approaches to treat various cancers include chemotherapy, radiation and/or hormonal therapy. While these therapies continue to be effective in large part, they are not selective and highly toxic.

**Features**

- Summarizes common and unique features of mAbs against various cancers
- Explores the latest developments on the molecular, biochemical and genetic mechanisms of resistance by various mAbs
- Covers the potential use of the combination treatment of mAbs with other drugs/mAbs to reverse resistance

**Contents**

Preface.- Introduction and generation of chimeric and humanized mAbs.- mAbs targeted against cancer cells and antibodies targeted against the tumor microenvironment.- Antibodies directed against different major cancers: Effects when used alone or in combination with drugs.- Mechanisms of antibodies-mediated responses, in vitro and in vivo.- Molecular Pathways.- Molecular Signatures.- Identification of resistance targets for intervention.- Various chemicals that can sensitize resistant tumor cells.- Other mAbs.- Proteasome inhibitors.- Divalent mAbs.- Antibodies coupled to chemical inhibitors.- Antibodies coupled to cytokines.- Nanoparticles with mAbs.- Index.

**Fields of interest**

Cancer Research; Molecular Medicine; Immunology

**Target groups**

Research

**Product category**

Contributed volume
**Cholesterol and Presynaptic Glutamate Transport in the Brain**

Glutamate is the primary excitatory neurotransmitter in the CNS and disturbances in glutamate transport contribute to a number of neurological and neurodegenerative disorders. Appropriate levels of cholesterol are very important for the proper functioning of glutamate transport while unbalanced levels of cholesterol have been implicated in the pathogenesis of disorders such as stroke, ischemia, traumatic brain injury, and neurotoxicity. In the proposed book, the author presents data from the literature and from her own lab to address the extent to and way in which membrane cholesterol modulates presynaptic glutamate transport and whether lowering the level of cholesterol available can offer some neuroprotective benefits.

**Features**
- Reviews the literature on the role of cholesterol in brain function
- Examines the neuroprotective aspects of lower cholesterol
- Medical doctors will be especially interested in the data on statins

**Contents**

**Fields of interest**
Neurosciences; Neurochemistry

**Target groups**
Research

**Product category**
Monograph

**NMR for Chemists and Biologists**

This book intends to be an easy and concise introduction to the field of nuclear magnetic resonance or NMR, which has revolutionized life sciences in the last twenty years. A significant part of the progress observed in scientific areas like Chemistry, Biology or Medicine can be ascribed to the development experienced by NMR in recent times. Many of the books currently available on NMR deal with the theoretical basis and some of its main applications, but they generally demand a strong background in Physics and Mathematics for a full understanding. This book is aimed to a wide scientific audience, trying to introduce NMR by making all possible effort to remove, without losing any formality and rigor, most of the theoretical jargon that is present in other NMR books. Furthermore, illustrations are provided that show all the basic concepts using a naive vector formalism, or using a simplified approach to the particular NMR-technique described.

**Features**
- Introduces NMR in a friendly way for the non-specialist
- Provides the basic foundations of NMR in a non-mathematical form
- Provides a succinct view of the most recent and important biological applications of NMR
- Explains in a clear way the n-dimensional NMR techniques

**Contents**
The basis of Nuclear Magnetic Resonance Spectroscopy.- Spectroscopic parameters in Nuclear Magnetic Resonance.- Basic NMR experiments.- Biomolecular NMR.

**Fields of interest**
Biomedicine general; Spectroscopy/Spectrometry; Biotechnology

**Target groups**
Research

**Product category**
Brief

**Essential Elements for a GMP Analytical Chemistry Department**

Essential Elements for a GMP Analytical Chemistry Department is a systematic approach to understanding the essential elements required for a successful GMP Analytical Department to function as an efficient and effective organization. It describes in detail a department structure which allows for the necessary processes to become available to all its personnel in a way where there is a free flow of information and interaction.

**Features**
- Describes a systematic approach to establishing an effective GMP analytical department
- Discusses the development and management of project teams
- Describes an outsourcing process to ensure all activities are properly addressed and none are overlooked

**Contents**

**Field of interest**
Pharmaceutical Sciences/Technology

**Target groups**
Research

**Product category**
Monograph
Pharmaceutical Biotechnology
Fundamentals and Applications

Contents

Fields of interest
Pharmaceutical Sciences/Technology; Biomedicine general

Target groups
Professional/practitioner

Product category
Contributed volume

The Inflammasome
Methods and Protocols

Inflammasomes have a seemingly simple architecture.

Features
- Presents current up-to-date methodologies
- Provides step-by-step detail essential for reproducible results
- Contains key notes and implementation advice from the experts

Contents
Assessing β-amyloid-induced NLRP3 Inflammasome Activation in Primary Microglia. - Activating the NLRP3 Inflammasome using the Amyloidogenic Peptide IAPP. - Assessment and Quantification of Crystal-induced Lysosomal Damage. - Assessment of Inflammasome Activation in Primary Human Immune Cells. - NLRP3 Inflammasome Activation and Cytotoxicity Induced by particulate Adjuvants. - Measuring Inflammasome Activation in Response to Bacterial Infection. - Detection of Pyroptosis by Measuring Released Lactate Dehydrogenase Activity. - ASC Speck Formation as a Read-out for Inflammasome Activation. - Immunoblotting for Active Caspase-1. - Inflammasome Activation and Inhibition in Primary Murine Bone Marrow-Derived Cells, and Assays for IL-1α, IL-1β and Caspase-1. - Reconstituting the NLRP1 Inflammasome in vitro. - Assessing ATP Binding and Hydrolysis by NLR Proteins. - Blue Native Polyacrylamide Gel Electrophoresis to Monitor Inflammasome Assembly and Composition. - Analysis of Microbiota Alterations in Inflammasome-deficient Mice. - Quantification of Adipose Tissue Leukocytosis in Obesity. - In vivo Evaluation of Neutrophil Recruitment in Response to Sterile Particulates.

Fields of interest
Immunology; Cytokines and Growth Factors

Target groups
Professional/practitioner

Product category
Contributed volume

Peroxisomes and their Key Role in Cellular Signaling and Metabolism

Contents
Peroxisome interactions and cross-talk with other subcellular compartments in animal cells. - Peroxisomes in human health and disease: metabolic pathways, metabolite transport, interplay with other organelles and signal transduction. - Aging, age-related diseases and peroxisomes. - Peroxisomes and the antiviral responses of mammalian cells. - Peroxisome proliferator-activated receptor-α signaling in hepatocarcinogenesis. - Involvement of human peroxisomes in biosynthesis and signaling of steroid and peptide hormones. - Peroxisome Ca2+ homeostasis in animal and plant cells. - The versatility of peroxisome function in filamentous fungi. - Essential roles of peroxisomally produced and metabolized biomolecules in regulating yeast longevity. - Metabolite transporters of the plant peroxisomal membrane - known and unknown. - Peroxisomes and photomorphogenesis. - Biosynthesis of vitamin K1 (phyloquinone) by plant peroxisomes and its integration into signaling molecule synthesis pathways. - Role of peroxisomes as a source of reactive oxygen species (ROS) signaling molecules. - Peroxisomes as a source of auxin signaling molecules. - Peroxisomes as cell generators of reactive nitrogen species (RNS) signal molecules. - Role of plant peroxisomes in the production of jasmonic acid-based signals. - Role of plant peroxisomes in protection against herbivores. - Function of Peroxisomes in Plant Pathogen Interactions.

Fields of interest
Biomedicine general; Cell Biology; Cell Physiology

Target groups
Research

Product category
Contributed volume
Antibody-Drug Conjugates

Contents

Fields of interest
Pharmacology/Toxicology; Oncology

Target groups
Professional/practitioner

Product category
Contributed volume

Due July 2013
2013. XV, 255 p. 95 illus., 41 in color. (Methods in Molecular Biology, Volume 1045) Hardcover
⇒ € (D) 149,79 | £133,99 | sFr 186,50
⇒ € 139,99 | £126.00
ISBN 978-1-4614-7930-7

Systems Analysis of Chromatin-Related Protein Complexes in Cancer

Contents

Fields of interest
Cancer Research; Systems Biology; Human Genetics

Target groups
Research

Product category
Contributed volume

Due August 2013
2014. X, 200 p. 50 illus., 25 in color. Hardcover
⇒ € (D) 149,79 | £133,99 | sFr 186,50
⇒ € 139,99 | £126.00
ISBN 978-1-4614-7930-7

Biomedicine

A. Dhawan, M. Bajpayee, Ahmedabad University, Gujarat, India (Eds)

Genotoxicity Assessment

Methods and Protocols

Contents
Advances in HIV-1 Assembly and Release

Over the past decade, enormous progress has been made in understanding the late events in the HIV replication cycle. This has been made possible by major advances in cell biology, virology, and structural biology. The field continues to move forward rapidly, with important new discoveries being reported on a regular basis. The impact of this progress across a broad spectrum of biomedical research has been substantial. The increase in basic knowledge in the areas of HIV assembly, release, and maturation has been accompanied by new possibilities for therapeutic intervention. The work includes topics relating to basic molecular biology, cell biology, and structural biology of HIV assembly, coupled with more applied ideas of how this basic information can inform the field of antiretroviral research.

Features
- Focuses on the spectrum of adaptive innovations generated by Lateral Gene Transfer in evolution
- Looks at the genomic, metabolic and ecological levels
- Examines the integration of new genes into existing networks

Contents
- Structural Biology of HIV Assembly: Cellular Trafficking Mechanisms in the Assembly and Release of HIV
- Packaging of the HIV-1 RNA Genome: Synthesis of Functional and Variable HIV-1 Envelope Glycoproteins
- HIV-1 Budding: HIV-1 Maturation: Cell-to-Cell Transmission of HIV: Virus Assembly as a Target for Antiretroviral Therapy

Fields of interest
- Virology; Immunology; Medical Microbiology

Target groups
- Research

Product category
- Contributed volume

Due July 2013

2013. VIII, 163 p. 36 illus., 31 in color. Hardcover
- € (D) 160,49 | € (A) 164,99 | sFr 200,00
- € 149,99 | £135.00
ISBN 978-1-4614-7728-0

Pharmacotherapy of Pulmonary Hypertension

Preface.- Part I. Pulmonary hypertension: conceptual bases of the disease. Pulmonary hypertension: definition, classification, and epidemiology
- Pulmonary hypertension: pathophysiology and signalling pathways. Pulmonary hypertension: pathology
- Pulmonary hypertension: biomarkers

Fields of interest
- Pharmacology; Toxicology; Pharmaceutical Sciences/Technology; Internal Medicine

Target groups
- Research

Product category
- Handbook

Due October 2013

2014. Approx. 450 p. (Handbook of Experimental Pharmacology, Volume 218) Hardcover
- approx. € (D) 330.63 | € (A) 339.90 | sFr 411,50
- approx. € 309,00 | £278.50
ISBN 978-3-642-38663-3

Lateral Gene Transfer in Evolution

U. Gophna, Tel Aviv University, Israel (Ed)

Features
- Focuses on the spectrum of adaptive innovations generated by Lateral Gene Transfer in evolution
- Looks at the genomic, metabolic and ecological levels
- Examines the integration of new genes into existing networks

Contents

Fields of interest
- Human Genetics; Microbial Genetics and Genomics; Evolutionary Biology

Target groups
- Research

Product category
- Contributed volume

Due July 2013

2013. I, 443 p. 48 illus., 31 in color. Hardcover
- € (D) 149,79 | € (A) 153,99 | sFr 186,50
- € 139,99 | £126.00

H. M. Humbert, Hôpital Antoine Béclère, Paris, France; O. V. Evgenov, Harvard Medical School, Boston MA, USA; J.-P. Stasch, Bayer HealthCare, Wuppertal, Germany (Eds)
Evolution of Visual and Non-visual Pigments

Research on the evolution of visual and non-visual pigments is both exciting and timely. There is an explosion of interest in visual pigments across both invertebrates and vertebrates and the discovery of non-visual pigments involved in irradiance detection and phototainment as opposed to image formation is undergoing a revolution. How do these two pigment systems operate to provide both vision and circadian regulation in animals from different light environments? Non-visual pigments have now been discovered in non-photoreceptor cells in the retina, the pineal/parapineal complex, deep-brain receptors, the skin, the iris and even the liver.

Fields of interest
Neurosciences; Ophthalmology; Cell Biology

Target groups
Research

Product category
Contributed volume
Adipose Tissue and Cancer

Recent studies have shown that cells from adipose tissue are capable of trafficking to tumors, thus enabling paracrine action of adipokines from within the tumor microenvironment. Increased tumor vascularization, immune system suppression and direct effects on malignant cell survival and proliferation have been investigated as mechanisms regulated by adipokines. The goal of this book is to discuss data pointing to the role of adipose tissue in cancer and to dissect individual mechanisms through which adipose tissue excess or restriction could influence cancer progression.

Features
- Explores relationship between obesity and cancer
- Examines direct effect of adipose tissue on cancer
- Discusses role of endocrine signaling by adipose tissue-derived molecules in cancer promotion

Contents

Fields of interest
Cancer Research; Lipidology; Cell Biology

Target groups
Research

Product category
Contributed volume

Nucleic Acid Detection
Methods and Protocols

Contents
New Series
Perspectives in Physiology

This fascinating series seeks to place medical science inside a greater historical framework, describing the main pathways of development and highlighting the contributions of prominent investigators.

L. D. Longo, Loma Linda University School of Medicine, CA, USA

The Rise of Fetal and Neonatal Physiology
Basic Science to Clinical Care

Contents

Fields of interest
Human Physiology; History of Medicine; Reproductive Medicine

Target groups
Research

Product category
Monograph

S. Makovets, University of Edinburgh, UK (Ed)

DNA Electrophoresis
Methods and Protocols

Contents
Ovarian Cancer Methods and Protocols

Contents
**Epigenetic Mechanisms in Cellular Reprogramming**

This volume provides an overview on current topics and concepts concerning the mechanisms and consequences of epigenetic reprogramming.

**Features**
- Contains translational medicine aspects such as B cell programming and reprogramming in cancer
- Includes extensive glossary
- Understanding stem cell formation is key to develop novel drugs

**Contents**
Preface Part I Germ cell and early embryo (epigenetic) programs: Histone variants early reprogramming Control of germ line development and reprogramming DNA-methylation dynamics in early mouse embryos The oocyte determinants of early reprogramming The sperm epigenome and early development CpG island methylation in oocytes and early embryos Stella and zygotic reprogramming Part II Direct reprogramming of somatic cells and iPS reprogramming Small RNAs and reprogramming Epigenomes of iPS cells Pathways for direct reprogramming Part III Epigenetic control of ES cells Role of pluripotency factors in X-chromosome silencing Modulation of epigenetic cell states in ES cells TDG and control of epigenetic identity in ESCs The role of novel DNA-modifications in stem cells Epigenomics of stem cell programmes Part IV Epigenetic control of somatic stem cell identity Epigenetic maintenance of pluripotency by polycomb group proteins Function of Mi-NuRD in B cell programming Epigenetic reprogramming in cancer Glossary Index

**Fields of interest**
Human Genetics; Cell Biology; Systems Biology

**Target groups**
Research

**Product category**
Contributed volume

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**Phosphatase Modulators**

**Features**
- Serves as a "how to" manual for the initiation of drug discovery efforts
- Provides step-by-step detail essential for reproducible results
- Contains key tips and implementation advice from the experts

**Contents**

**Fields of interest**
Pharmacology/Toxicology; Medicinal Chemistry; Pharmacy

**Target groups**
Research

**Product category**
Contributed volume
Stearoyl-CoA Desaturase Genes in Lipid Metabolism

Obesity and diabetes develop as a complex result of genetic, metabolic and environmental factors and are characterized by increased lipogenesis and lipid accumulation in many tissues. Stearoyl-CoA desaturase (SCD) genes are a critical regulator of lipogenesis and catalyze the synthesis of mono-unsaturated fatty acids (MUFA), mainly oleoyl-(18:1n9) and palmitoleoyl-CoA (16:1n7). These MUFAs are the major fatty acid substrates for the synthesis of triglycerides, cholesterol esters, wax esters and membrane phospholipids.

Features
► First book to focus on SCD Genes in Lipid Metabolism ► This book includes chapters by leading researchers on SCD Genes in the brain, heart, muscle, liver, metabolism, Colitis, and more ► Gives an overview of the growth of research on the role of the Stearoyl-CoA desaturase (SCD) genes in metabolism in different species

Contents
SCD genes of fatty acid synthesis.- SCD genes in heart metabolism.- SCD genes in liver metabolism.- SCD genes in hardian and perpetual glands.- SCD genes In lipogenesis.- SCD genes lipoproteins.- SCD genes in WAT.- SCD genes in muscle.- SCD genes in the brain.- SCD genes in inflammation.- SCD genes in ER Stress.- SCD genes in skin.- SCD genes in insulin signaling.- SCD genes in thermogenesis.- SCD genes in diabetes.- SCD genes atherosclerosis.- SCD genes in Adipocyte differentiation.- SCD genes and epigenetics.- SCD genes in fatty liver disease.- SCD genes in Colitis.- SCD genes in leptin signaling.

Fields of interest
Human Genetics; Endocrinology; Lipidology

Target groups
Research

Product category
Contributed volume

Viral Entry into Host Cells

For a virus to invade a host cell it needs to penetrate the physical barrier imposed by the plasma membrane. Viruses have evolved specialized surface proteins to meet this challenge. These proteins facilitate delivery of the viral genetic information into the host cell by either fusing the viral envelope with a host cell membrane or by forming membrane pores. Membrane fusion and pore formation critically depend on the engagement of host cell receptors and receptor choice is a key determinant of viral tropism. The multi-faceted interplay between viral and cellular factors during virus entry is a fascinating field of study, which can provide important insight into viral pathogenesis and define new targets for intervention. This book provides a comprehensive overview of this exciting field of research.

Features
► Provides a comprehensive overview of interplay between viral and cellular factors during virus entry ► Reviews key processes underlying host cell entry of viruses ► Discusses cellular entry of reoviruses

Contents

Fields of interest
Biomedicine general; Cell Biology

Target groups
Research

Product category
Contributed volume
Giardia as a Foodborne Pathogen

Although widely recognized as an important waterborne pathogen, Giardia duodenalis can also be transmitted by contamination of food. The same properties of this protozoan parasite that mean that water is an excellent transmission vehicle are also important for foodborne transmission. These include the low infective dose, the high number of cysts that are excreted, and the robustness of these transmission stages. However, many more outbreaks of waterborne giardiasis have been reported than foodborne outbreaks. This is probably partly due to epidemiological tracing being much more difficult for foodborne outbreaks than waterborne outbreaks, and the number of persons exposed to infection often being fewer. Nevertheless, the potential importance of foodborne transmission is gradually being recognized, and a wide range of different foodstuffs have been associated with those outbreaks that have been recorded.

Contents

Introduction to the parasite: biology (including species and genotypes), lifecycle, pathology, treatment. - Transmission routes and factors that lend themselves to foodborne transmission. - Documented foodborne outbreaks. - Approaches to detecting Giardia cysts in different food matrices. - Occurrence of Giardia cysts in different food matrices: results of surveys. - Inactivation or decontamination procedures. - Risk assessment and regulations. - Future challenges. - References.

Fields of interest

Parasitology; Food Science

Target groups

Research

Product category

Brief

Smoking and Lung Inflammation

Basic, Pre-Clinical and Clinical Research Advances

Smoking and Lung Inflammation is the first book directly related to chronic lung inflammation of its kind in several respects. First, the it focuses on both basic and clinical research on COPD, and the inflammatory mechanisms that function in these diseases.

Features

► Focus on both basic and clinical research. ► Unique, with respect to scope of the discussion of the unusual characteristics of the immune response in patients. ► Will include knowledge being gained from translational research.

Contents


Fields of interest

Immunology; Pneumology/Respiratory System; Pathology

Target groups

Graduate

Product category

Contributed volume

Glioma Cell Biology

Gliomas are fatal diseases, but also represent good models for tumor research with the aim to eventually discover new and appropriate therapeutics against this disease. Glioma experimental research models are of help to investigate tumorgenesis (tumor stem cell theory versus “classical” opinions), tumor angiogenesis (since they are highly vascularized) and tumor invasion (since they grow without limits). In addition, they have a very special microenvironment (the brain) and limited tumor stroma cells (mainly microglia and endothelial cells).

Features

► Covers genetic, epigenetic, cell- and molecular biology of glioma cells. ► Depicts the cell-cell interaction of glioma cells with their environment. ► Presents experimental research models for glioma research.

Contents


Fields of interest

Neurosciences; Oncology; Molecular Medicine

Target groups

Research

Product category

Contributed volume
K. Selvarajoo, Keio University, Yamagata, Japan

**Immuno Systems Biology**

A macroscopic approach for immune cell signaling

Immuno Systems Biology aims to study the immune system in the more integrated manner on how cells and molecules participate at different system levels to the immune function. Through this book Kumar Selvarajoo introduces to physicists, chemists, computer scientists, biologists and immunologists the idea of an integrated approach to the understanding of mammalian immune system.

**Features**
- Immuno systems biology specifically aims to study the host immune system in a more integrated manner
- Focuses on the dynamical analyses of mammalian innate immune response to bacterial and viral perturbations using computational models based on simple physical rules
- Deals with interpreting population level immune cell signaling response in wildtype and mutant cells

**Contents**

**Fields of interest**
Biomedicine general; Systems Biology; Bioinformatics

**Target groups**
Research

**Product category**
Monograph

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M. A. Tabrizi, AnaptysBio, Inc., San Diego, CA, USA; I. Figueroa, Merck & CO Inc., Palo Alto, CA, USA

**Surrogate Approaches in Development of Antibody-Based Therapeutics**

A Quantitative Evaluation

**Feature**
- Examines many important considerations necessary for the design of most effective as well as science-based translational strategies necessary for the successful development of antibody-based therapeutics when surrogate approaches are employed

**Fields of interest**
Pharmacology/Toxicology; Biochemistry, general; Pharmacy

**Target groups**
Research

**Product category**
Monograph

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G. Tridente, University of Verona, Italy

**Adverse Events of Biomedicines**

This monograph collects and evaluates data on adverse events (AEs) due to biomedicines, a new class of drugs in use for human therapy. It is a practical guideline to a new area demanding the attention of clinicians, immunologists, oncologists, allergologists, public health professionals, and drug companies. Definition, classification, and major features of each drug are related to typologies of AEs observed during pre- and post-licensing trials and studies, as well as to spontaneous reporting.

**Features**
- Synthetic and unique publication on adverse events of a new and fast-growing class of medicines
- Multidisciplinary interest (biomedical, public health, biologics producers for human therapy)
- Downloadable database enclosed for rapid multi-entry search and consultation

**Contents**

**Fields of interest**
Biomedicine general; Medicine/Public Health, general; Pharmacy

**Target groups**
Professional/practitioner

**Product category**
Monograph
Endocannabinoid Regulation of Monoamines in Psychiatric and Neurological Disorders

Features
- Content written by the leading experts in the field
- Presents potential therapeutic applications
- Most up-to-date information available

Contents
Endocannabinoids and monoamines: modulating the modulators. - Endocannabinoid-mediated synaptic plasticity. - Current cannabinoid receptor nomenclature and pharmacological principles. - Cue-elicited craving for cannabis activates the reward neurocircuitry associated with the neuro-pathology of addiction. - Cannabinoid modulation of dopaminergic circuits in neurodegenerative and neuropsychiatric disorders. - Pathophysiology of mood disorders and mechanisms of action of antidepressants and mood stabilizers. - Anatomical, biochemical and behavioral evidence for cannabionoid modulation of noradrenergic circuits: role of norepinephrine in cannabinoid-induced aversion. - Gender Disparity of Depression: The Role of Endocannabinoids and Noradrenergic Function. - Endocannabinoids, Monoamines and Stress. - Chronic effects of cannabinoid drugs on brain disorders. - Endocannabinoid Signaling and the Regulation of the Serotonin System. - Modulation of serotonin firing activity through CB1 agonists and FAAH inhibitors. - Involvement of serotonergic system in cannabinoid analgesia. - Cannabinoids, monoamines, COMT and schizophrenia: pathobiological mechanisms in psychosis.

Fields of interest
Neurosciences; Neurology; Psychiatry

Target groups
Research

Product category
Contributed volume

Multiple Sclerosis Immunology

Contents

Fields of interest
Immunology; Gene Function; Molecular Medicine

Target groups
Research

Product category
Contributed volume

Due July 2013
2013. VI, 537 p. 26 illus., 7 in color. Hardcover
- * (D) 160,49 | (A) 164,99 | sFr 200,00
- € 149,99 | £ 135.00

Due September 2013
2014. II, 387 p. 47 illus., 37 in color. Hardcover
- approx. * (D) 165,84 | (A) 170,49 | sFr 206,50
- approx. € 154,99 | £ 139.50

Due July 2013
2013. X, 398 p. 73 illus., 59 in color. Hardcover
- * (D) 160,49 | (A) 164,99 | sFr 200,00
- € 149,99 | £ 135.00
H. Águeda Marujo, L. M. Neto, Technical University of Lisbon, Portugal (Eds)

**Positive Nations and Communities**

Collective, Qualitative and Cultural-Sensitive Processes in Positive Psychology

**Contents**
Psycho-social Career Meta-capacities

Dynamics of contemporary career development

**Contents**

**Fields of interest**
Industrial, Organisational and Economic Psychology; Human Resource Management; Organizational Studies, Economic Sociology

**Target groups**
Research

**Product category**
Contributed volume

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La persona competente

Perché e come prendersi cura delle relazioni

Oggi la coniugalità è liquida e la genitorialità densa. Liquido significa fragile, cangiante, autopoiético, precario, emozionale, non disciplinato. Denso sta invece per arduo, duro, estremo, inflessibile, rigido, esigente. Applicati rispettivamente alla coniugalità e alla genitorialità nel contesto sociale attuale, fanno capire debolezze e sortite di queste due relazioni fondamentali. Siamo però di fronte a una sfida e a una risorsa e non a una condanna. E’ necessario comprendere i meccanismi sottostanti i fenomeni per trovare il modo di gestirli. Perché un genitore maltratta il proprio figlio? Perché dueconiugi sempre in conflitto non si lasciano mai? Perché i dolori sono per alcune famiglie un tarlo che corrode la vita e per altre una forte motivazione di intimità? Cosa c’è di permanente nelle relazioni al di là dei cambiamenti culturali? Quali possibilità di ricupero sono possibili? Meglio l’educazione o la terapia?

**Features**
- Da rivedere: Testo di divulgazione scientifica
- Linguaggio semplice
- Facile utilizzo

**Fields of interest**
Psychology, general

**Target groups**
Popular/general

**Product category**
Monografa

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Simulations for Personnel Selection

This book provides a comprehensive and state-of-the-art overview of simulation development, technologies, and implementation, including real-world examples and results followed by a preview of what's on the horizon that will further revolutionize the industry.

**Features**
- Provides comprehensive coverage of the latest selection and most innovative simulation technologies currently in use for employee selection
- Provides "real world" examples of how simulations work in practice
- Contributors are recognized leaders in this area, Ben Hawkes, Eric Sydell, Deborah Rupp

**Contents**

**Fields of interest**
Industrial, Organisational and Economic Psychology; Psychology Research; Developmental Psychology

**Target groups**
Research

**Product category**
Contributed volume
New Series
Advances in Behavior Genetics
Series editor: Y.-K. Kim

The Springer series Advances in Behavior Genetics focuses on the interdisciplinary area combining
the behavioral sciences and genetics. The study
of behavior genetics has become increasingly
important as rapid advances in molecular genetic
techniques lead to quicker discovery of genes
involved in complex behavior disorders. It has
now become a vast common ground for scientists
from very diverse fields including psychology,
psychiatry, neurology, endocrinology, biochemistry,
neuroimaging, as well as genetics. The series
Advances in Behavior Genetics seeks to document
the changing landscape of the field as it continues
to progress from comparatively small studies to
collaborative efforts that target the inherited
components of complex diseases and behaviors
with thousands of participants. With reviews of
up-to-date literature of current topics and issues
in behavior genetics the series will direct future
research for students and researchers in behavior
genetics.

Behavior Genetics of Cognition
Across the Lifespan
Along with psychopathology, cognition has been
one of the primary phenotypic focal points of
the field of behavior genetics since its inception.
Francis Galton’s 1874 examination of eminent
families in Britain was among the earliest attempts
to investigate whether cognitive achievements run
in families. This volume presents current meth-
odologies for understanding cognitive abilities
that move beyond the outdated nature vs. nurture
paradigm.

Features
► Lifespan perspective that acknowledges the
accumulating impact of genetic and environmen-
tal influences
► Inclusion of research on both
normative and non-normative cognitive functioning
► Input from related fields of physiology and
animal behavior that elucidates current research
and points to possible future research directions

Contents
Part I: Childhood.- 1. Cognitive abilities in child-
hood and adolescence.- 2. Interactions between
socioeconomic status and components of variation
in cognitive ability.- 3. Genetic and environmental
influences on intellectual disability in childhood.-
Part II: Adulthood.- 4. Cognition in middle adult-
environment interplay in cognitive aging.- 7. De-
mentia: Genes, environments, interactions.- Part
III: Biology and Neurobiology.- 8. Brain imag-
ing and cognition.- 9. Animal models of general
cognitive ability for genetic research into cognitive
functioning.- Part IV: Conclusion.- 10. Future
directions.-

Fields of interest
Psychology Research; Human Genetics; Psychiatry

Target groups
Research

Product category
Contributed volume

Due July 2013
2014, I, 524 p. 22 illus. (Advances in Behavior
Genetics, Volume 1) Hardcover
► * € (D) 139,09 | € (A) 142,99 | sFr 173,50
► € 129,99 | £117.00
Skill and knowledge acquisition for complex technical tasks
A Human Factors Perspective on Learning Process and Training Design in High Reliability Organizations

This book provides the first comprehensive literature review on the acquisition and retention of complex skills in High Reliability Organizations. Based on this review, it introduces a theoretical model of how skill and knowledge acquisition for complex tasks is accomplished and shows how this model can be used to derive training methods and instructional techniques.

Features
▶ Introduces a new theoretical framework to understand the learning process of a complex task from a Human Factors perspective  
▶ Integrates theoretical approaches of individual skill acquisition and adult learning into a new comprehensive framework for real-world tasks in control rooms of High Reliability Organizations (HROs)
▶ Bridges the gap between traditional learning theory and the training development for workers dealing with highly complex technical systems

Contents
Chapter 1. Complex tasks: Description and occupations in which they can be found.- Chapter 2. Required knowledge and skills to perform occupations in which they can be found.- Chapter 3. Knowledge skills and their acquisition - Components of theoretical model. - Chapter 4. Supporting skill and knowledge acquisition in the High Reliability Organization. - References.

Fields of interest
Industrial, Organisational and Economic Psychology; Operations Research, Management Science; Lifelong Learning/Adult Education

Target groups
Research

Product category
Monograph

Due August 2013

2013. Approx. 200 p. Hardcover
▶ approx. * (D) 106,95 | * (A) 109,95 | sFr 133,50
▶ approx. € 99,95 | €90.00
ISBN 978-94-007-5048-7

S. J. Morewitz, California State University, East Bay, CA, USA; M. L. Goldstein, University of Illinois College of Medicine, Chicago, IL, USA (Eds)

Handbook of Forensic Sociology and Psychology

Contents

Fields of interest
Law and Psychology; Sociology, general; Criminology & Criminal Justice

Target groups
Research

Product category
Contributed volume

Due July 2013

2013. VIII, 540 p. 11 illus. Hardcover
▶ * (D) 181,89 | * (A) 186,99 | sFr 226,50
▶ € 169,99 | £153.00
ISBN 978-1-4614-7177-6
Valutazione e gestione della violenza

Manuale per operatori della salute mentale
La violenza è un aspetto endemico della nostra società ed epidemicolo della nostra epoca. Valutare e trattare pazienti che hanno ideazioni e comportamenti violenti può essere frustrante, ansioso e, addirittura, pericoloso, in quanto eventuali errori di giudizio possono provocare conseguenze disastrose. La valutazione e la gestione adeguata del problema è dunque cruciale per i professionisti della salute mentale che si trovano ad affrontarlo. La presente opera è strutturata per essere uno strumento di supporto e di formazione per queste figure professionali. I vari capitoli prendono in considerazione la diversità del setting clinico, i dati demografici relativi ai pazienti, la psicopatologia e le diverse modalità di trattamento, conferendo al volume la caratteristica di un testo di riferimento non solo per i clinici ma anche per i loro pazienti e per le comunità la cui sicurezza dipende dal giudizio di professionisti competenti.

Features
- Elenco di punti chiave alla fine di ogni capitolo che evidenzia i concetti e le conclusioni più rilevanti
- Prospettiva ricca e articolata sul comportamento dei pazienti e sul loro valutazione e gestione, grazie alla grande quantità dei casi clinici descritti
- Capitolo relativo alla valutazione di pazienti di differenti culture, aspetto che diventa sempre più essenziale data la diversificazione delle popolazioni

Fields of interest
Clinical Psychology; Behavioral Therapy; Psychiatry

Target groups
Professional/practitioner

Product category
Contributed volume

D. Spini, G. Elcheroth, University of Lausanne, Switzerland; D. Corkalo Biruski, University of Zagreb, Croatia (Eds)

War, Community, and Social Change

Collective Experiences in the Former Yugoslavia

Contents
Collective experiences in the former Yugoslavia: a societal psychology approach. - Collective experiences and collective memories: writing the history of crisis, wars, and the ‘balkanization’ of Yugoslavia. - Ethnic intolerance, a product rather than a cause of war: Revisiting the state of the art. - The demise of mixed marriage? A cross-generational outlook on ethnic boundaries between families. - The destruction of multiethnic locations: Markers of identity and the determinants of residential trajectories. - Compliance and resistance to the logic of ethnic conflict during the siege of Sarajevo. - Beyond ethnic intolerance: traces and benefits of ethnic diversity in post-war Bosnia-Herzegovina. - From collective victimhood to social reconstruction: Outlining a conceptual framework. - Declared enemies: Personal and social logics of collective guilt assignment. - When nobody stood up and everybody is guilty: a puzzle of individual responsibility and collective guilt. - Threatened powers: When blaming "the others" grows out of internal instability and protest. - Shattered beliefs: How to cope when the world is not a just place. - Beyond collective denial: Public reactions to human rights violations and the struggle over the moral continuity of communities. - War and community: What have we learned about their inter-relations?

Fields of interest
Cross Cultural Psychology; International Relations; Migration

Target groups
Research

Product category
Contributed volume

D. Corkalo Biruski, University of Zagreb

The Mafia in the Movies


R. I. Simon, K. Tardiff (Rédacteurs)

Valutazione e gestione della violenza

This book demonstrates how social distress or anxiety is reflected, modified, and evolves through the medium of the motion picture. Tracking cinema from its earliest forms, the authors show how film is a perfect medium for generating and projecting dreams, fantasies, and nightmares, on the individual as well as the societal level. Arising at the same time as Freud’s influential ideas, cinema has been intertwined with the wishes and fears of the greater culture and has served as a means of experiencing those feelings in a communal and taming environment.

Features
- Concise review of key ideas on the social meaning of cinema
- Unique historical narrations of film content
- Exploration of major mythic themes such as the lone hero
- apocalyptic visions, redemption, chaos, war

Contents

Fields of interest
History of Psychology; Cultural Studies; Psychology Research

Target groups
Research

Product category
Monograph
Psicopatologia web mediata

Dipendenza da internet e nuovi fenomeni dissociativi

L'opera intende trasmettere ai lettori l'esperienza clinica del nostro Ambulatorio sulla Dipendenza da Internet dove è emersa una netta separazione tra utenti adulti, dediti a siti per adulti e gioco d'azzardo on line e utenti giovani fruitori di social network e giochi di ruolo on line. I primi sono inquadrati nell'ambito della dipendenza patologica caratterizzata dal carattere compulsivo della condotta comportamentale che si muove, come di solito accade per le dipendenze patologiche, in un contesto autistico dove manca l'interazione con l'altro; i secondi invece manifestano, proprio perché adolescenti, la loro fame di relazioni che di fatto vengono moltiplicate da chat, social network e giochi di ruolo. Le relazioni web-mediata rappresentano già la maggior parte dei contatti fra i giovani e sono in realtà relazioni parziali, dove il corpo fisicamente inteso è escluso e l'emetività coartata. Questo da origine a fenomeni clinici nuovi, compresi quelli chiamati “Psicopatologia web mediata” che l'autore descrive e per i quali propone trattamenti specifici.

Features
► La proposta di una nuova definizione di Dipendenza da internet, compresa nello spettro delle patologie web-mediata  ► La descrizione del meccanismo dissociativo, alla base della dipendenza patologica, con funzioni diverse negli adulti rispetto ai giovani  ► La rappresentazione di un nuovo profilo cognitivo, frutto dell'interazione mente-computer

Fields of interest
Psychology, general

Target groups
Popular/general

Product category
Manuale
Mathematics

C. Abbas, Michigan State University, East Lansing, MI, USA

Introduction to Compactness Results in Symplectic Field Theory

The book grew out of lectures given by the author in 2005. Symplectic field theory is a new important subject which is currently being developed. The starting point of this theory are compactness results for holomorphic curves established in 2004. The book gives a systematic introduction providing a lot of background material much of which is scattered throughout the literature. The aim is to provide an entry point into symplectic field theory for non-specialists and for graduate students. In addition, the book provides extensions of certain compactness results which are believed to be true by the specialists but which have not yet been published in the literature in detail.

Features
- Systematic introduction into compactness results for holomorphic curves
- Entry point into symplectic field theory for non-specialists and students
- Extensions to some compactness results not yet published

Fields of interest
Differential Geometry; Manifolds and Cell Complexes (incl. Diff. Topology)

Target groups
Research

Product category
Monograph

K. Alladi, University of Florida, Gainesville, FL, USA; P. Paule, Johannes Kepler University Linz, Austria; J. Sellers, A. J. Yee, The Pennsylvania State University, University Park, PA, USA (Eds)

Combinatory Analysis
Dedicated to George Andrews

Contents

Fields of interest
Number Theory; Analysis; Algebra

Target groups
Research

Product category
Contributed volume

T. Aven, University of Oslo, Norway; U. Jensen, University of Hohenheim, Germany

Stochastic Models in Reliability

This book provides a comprehensive up-to-date presentation of some of the classical areas of reliability, based on a more advanced probabilistic framework using the modern theory of stochastic processes. This framework allows analysts to formulate general failure models, establish formulae for computing various performance measures, as well as determine how to identify optimal replacement policies in complex situations. In this second edition of the book, two major topics have been added to the original version: copula models which are used to study the effect of structural dependencies on the system reliability; and maintenance optimization which highlights delay time models under safety constraints. Terje Aven is Professor of Reliability and Risk Analysis at University of Stavanger, Norway. Uwe Jensen is working as a Professor at the Institute of Applied Mathematics and Statistics of the University of Hohenheim in Stuttgart, Germany. Review of first edition: "This is an excellent book on mathematical, statistical and stochastic models in reliability. The authors have done an excellent job of unifying some of the stochastic models in reliability.

Features
- Unifies some of the stochastic models in reliability
- Reference book for researchers in reliability mathematics
- A comprehensive up-to-date presentation of some of the classical areas of reliability

Fields of interest
Probability Theory and Stochastic Processes; Quality Control, Reliability, Safety and Risk; Operations Research, Management Science

Product category
Monograph

Due June 2013

Only available in print

Due August 2013

- € 94,99 | £85.50
D. Bakry, Université Paul Sabatier, Toulouse, France; I. Gentil, Université Claude Bernard Lyon 1, Villeurbanne, France; M. Ledoux, Université Paul Sabatier, Toulouse, France

**Analysis and Geometry of Markov Diffusion Operators**

The present volume is an extensive monograph on the analytic and geometric aspects of Markov diffusion operators.

**Features**

- First book to give systematic account of the rich interplay between analytic, probabilistic and geometric aspects of Markov diffusion operators
- Authors are leading players in the field
- Covers large body of results and techniques from the early developments to the current achievements

**Contents**


**Fields of interest**

Probability Theory and Stochastic Processes; Analysis; Differential Geometry

**Target groups**

Research

**Product category**

Monograph

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J. Baldeaux, E. Platen, University of Technology Sydney, Haymarket, NSW, Australia

**Functionalities of Multidimensional Diffusions with Applications to Finance**

**Features**

- Provides the reader in a systematic way with the ability to derive explicit formulas for functionals of multidimensional diffusions
- Special unique chapters on Lie symmetry group methods and matrix valued Wishart processes
- Provides the most recent introduction to the benchmark approach to finance pioneered by Platen and co-authors
- The reader finds readily applicable exact simulation methods for various multidimensional diffusion processes

**Contents**


**Fields of interest**

Quantitative Finance; Financial Economics; Applications of Mathematics

**Target groups**

Research

**Product category**

Monograph

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L. Barreira, Universidade Técnica de Lisboa, Portugal

**Dimension Theory of Hyperbolic Flows**

The dimension theory of dynamical systems has progressively developed, especially over the last two decades, into an independent and extremely active field of research. Its main aim is to study the complexity of sets and measures that are invariant under the dynamics. In particular, it is essential to characterizing chaotic strange attractors. To date, some parts of the theory have either only been outlined, because they can be reduced to the case of maps, or are too technical for a wider audience.

In this respect, the present monograph is intended to provide a comprehensive guide. Moreover, the text is self-contained and with the exception of some basic results in Chapters 3 and 4, all the results in the book include detailed proofs. The book is intended for researchers and graduate students specializing in dynamical systems who wish to have a sufficiently comprehensive view of the theory together with a working knowledge of its main techniques.

**Features**

- First comprehensive exposition of dimension theory of hyperbolic flows
- Includes an overview of dimension theory and multifractal analysis
- Includes a detailed discussion of major open problems in the area

**Contents**


**Fields of interest**

Dynamical Systems and Ergodic Theory; Analysis

**Target groups**

Research

**Product category**

Monograph
**An Operator Semigroup in Mathematical Genetics**

**Lyapunov Equation Model of Drift and Mutation: Population Dependence and Asymptotic Behavior**

Mutation and drift are two of the main genetic forces, which act on genes of individuals in populations. Their effects are influenced by population dynamics. This authored monograph presents a mathematical description of the time evolution of neutral genomic regions in terms of the differential Lyapunov equation. The qualitative behavior of its solutions, with respect to different mutation models and demographic patterns, can be characterized using operator semigroup theory. This book covers the application to two mutation models: single step mutation for microsatellite loci and single-base substitutions. The effects of demographic change to the asymptotic of the distribution are also covered. The target audience primarily covers researchers and experts in the field but the book may also be beneficial for graduate students.

**Features**
- Combines genetic models with advanced mathematics
- Contains examples based on human evolution data
- Written by leading experts in the field

**Fields of interest**
- Genetics and Population Dynamics; Operator Theory; Biomedical Engineering

**Target groups**
Research

**Product category**
Brief

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**An Introduction to the Kähler-Ricci Flow**

This volume collects lecture notes from courses offered at several conferences and workshops, and provides the first exposition in book form of the basic theory of the Kähler-Ricci flow and its current state-of-the-art. While several excellent books on Kähler-Einstein geometry are available, there have been no such works on the Kähler-Ricci flow. The book will serve as a valuable resource for graduate students and researchers in complex differential geometry, complex algebraic geometry and Riemannian geometry, and will hopefully foster further developments in this fascinating area of research. The Ricci flow was first introduced by R. Hamilton in the early 1980s, and is central in G. Perelman's celebrated proof of the Poincaré conjecture.

**Features**
- An educational and up-to-date reference work on non-linear parabolic partial differential equations
- The only book currently available on the Kähler-Ricci flow
- The first book to present a complete proof of Perelman's estimates for the Kähler-Ricci flow
- Illustrates the connection between the Kähler-Ricci flow and the Minimal Model Program

**Contents**
- The (real) theory of fully non linear parabolic equations.
- The KRF on positive Kodaira dimension Kähler manifolds.
- The normalized Kähler-Ricci flow on Fano manifolds.
- Bibliography.

**Fields of interest**
- Differential Geometry; Algebraic Topology; Several Complex Variables and Analytic Spaces

**Target groups**
Research

**Product category**
Monograph

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**Selected Papers**

**Volume 3**

In recognition of professor Shiing-shen Chern's long and distinguished service to mathematics and to the University of California, the geometers at Berkeley held an International Symposium in Global Analysis and Global Geometry in his honor at Berkeley in June 1979. The outgrowth of this Symposium was published in a series of three separate volumes, comprising approximately a third of Professor Chern's total output up to 1979. Later, a fourth volume was published, comprising papers written during the Eighties. This third volume comprises papers written from 1965 until 1979. In making the selections, Professor Chern has given preference to shorter and less accessible papers.

**Fields of interest**
- Differential Geometry; Algebraic Topology; Several Complex Variables and Analytic Spaces

**Target groups**
Research

**Product category**
Monograph

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Due October 2013

2014. 80 p. 20 illus. (SpringerBriefs in Applied Sciences and Technology / SpringerBriefs in Mathematical Methods) Softcover
- approx. *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
- approx. *€ 49,95 | €44.99
ISBN 978-3-662-43958-6

Due September 2013

2013. Approx. 350 p. (Lecture Notes in Mathematics, Volume 2086) Softcover
- approx. *€ (D) 74,85 | € (A) 76,95 | sFr 93,50
- approx. *€ 69,95 | €62.99
ISBN 978-3-319-00818-9

Due September 2013

Only available in print

1989. XIV, 504 p. 2 illus. Softcover
- approx. *€ (D) 33,39 | € (A) 34,89 | sFr 66,50
- approx. *€ 49,90 | £44.99
ISBN 978-1-4614-4396-4
New Series
Mathematics Textbooks for Science and Engineering
Series editor: C. K. Chui

Textbooks in the series ‘Mathematics Textbooks for Science and Engineering’ will be aimed at the broad mathematics, science and engineering undergraduate and graduate levels, covering all areas of applied and applicable mathematics, interpreted in the broadest sense.

Fields of interest
Algebraic Geometry; Geometry; Differential Geometry

Target groups
Research

Product category
Monograph

Due November 2013

Only available in print
1978. XXI, 476 p. 2 illus. Softcover
► approx. *€ (D) 53.45 | € (A) 54.95 | sFr 66.50
► approx. € 49.95 | £44.99

C. K. Chui, Stanford University, Menlo Park, CA, USA; Q. Jiang, University of Missouri, St. Louis, MO, USA

Applied Mathematics
Data Compression, Spectral Methods, Fourier Analysis, Wavelets, and Applications

This textbook, apart from introducing the basic aspects of applied mathematics, focuses on recent topics such as information data manipulation, information coding, data approximation, data dimensionality reduction, data compression, time-frequency and time scale bases, image manipulation, and image noise removal. The methods treated in more detail include spectral representation and “frequency” of the data, providing valuable information for, e.g. data compression and noise removal. Furthermore, a special emphasis is also put on the concept of “wavelets” in connection with the “multi-scale” structure of data-sets.

Features
► A comprehensive Applied Mathematics Textbook on the theory and methods with the central theme of information data processing, manipulation, and compression ► Self-contained with minimum prerequisites from elementary linear algebra and calculus ► A Textbook for teaching at both undergraduate and beginning graduate levels ► Self-study for researchers in all disciplines of science and engineering

Contents
Linear Spaces.- Linear Analysis.- Spectral Methods and Applications.- Frequency-Domain Methods.- Data Compression.- Fourier Series.- Fourier Time-Frequency Methods.- Wavelet Transform and Filter Banks.- Compactly Supported Wavelets.- Wavelet Analysis.

Fields of interest
Applications of Mathematics; Information and Communication, Circuits; Statistics, general

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

Due July 2013

2013. IX, 568 p. 63 illus., 36 in color. (Mathematics Textbooks for Science and Engineering, Volume 2) Hardcover
► *€ (D) 74.89 | € (A) 76.99 | sFr 93.50
► € 69.99 | £62.99
ISBN 978-94-6239-008-9
Integrale metodi in scienza e ingegneria

Progress in Numerical and Analytic Techniques

Contenuti

Fields of interest
Integrale Equations; Appl.Mathematics/Computational Methods of Engineering; Ordinary Differential Equations

Target groups
Research

Product category
Contributed volume

Probaabilità

Un’introduzione attraverso modelli e applicazioni

Il presente volume intende fornire un’introduzione alla probabilità e alle sue applicazioni, senza fare ricorso alla teoria della misura, per studenti dei corsi di laurea scientifici (in particolar modo di matematica, fisica e ingegneria). Viene dedicato ampio spazio alla probabilità discreta, vale a dire su spazi finiti o numerabili. In questo contesto sono sufficienti pochi strumenti analitici per presentare la teoria in modo completo e rigoroso. L’esposizione è arricchita dall’analisi dettagliata di diversi modelli, di facile formulazione e allo stesso tempo di grande rilevanza teorica e applicativa, alcuni tuttora oggetto di ricerca.

Features
- Il libro presenta sin dall’inizio esempi significativi, trattati con strumenti elementari ma non banali, legati a problematiche di ricerca corrente. - Ampia gamma di esercizi con soluzioni complete. - Si è posta particolare attenzione al rigore nella formulazione e nella dimostrazione dei risultati.

Contenuti

Fields of interest
Probability Theory and Stochastic Processes; Statistics, general

Target groups
Lower undergraduate

Product category
Libro di testo introduttivo

Due Augusto 2013

2013. Approx. 180 p. 9 illus. in color. (Lecture Notes in Mathematics, Volume 2085) Softcover
- * € (D) 37,44 | € (A) 38,49 | sFr 47,00
- € 34,99 | £31,99
ISBN 978-3-319-00827-1

The Dynamics of Nonlinear Reaction-Diffusion Equations with Small Lévy Noise

This work considers a small random perturbation of alpha-stable jump type nonlinear reaction-diffusion equations with Dirichlet boundary conditions over an interval. It has two stable points whose domains of attraction meet in a separating manifold with several saddle points. Extending a method developed by Imkeller and Pavlyukevich it proves that in contrast to a Gaussian perturbation, the expected exit and transition times between the domains of attraction depend polynomially on the noise intensity in the small intensity limit.

Features
- The comprehensive presentation serves as an excellent basis for a Master’s course on stochastic partial differential equations (SPDEs) with Lévy noise. - The showcase character of this study provides particular insight into the methods developed and stimulates future research. - An additional chapter connects the mathematical results to its climatological motivation.

Contents

Fields of interest
Probability Theory and Stochastic Processes; Dynamical Systems and Ergodic Theory; Partial Differential Equations

Target groups
Research

Product category
Monograph
New Series
Atlantis Series in Dynamical Systems

Series editors: H. Broer, B. Hasselblatt

The "Atlantis Studies in Dynamical Systems" publishes monographs in the area of dynamical systems, written by leading experts in the field and useful for both students and researchers. Books with a theoretical nature will be published alongside books emphasizing applications.

Contents

Introduction.- Manifolds of bounded geometry.- Persistence of noncompact NHIMs.- Extension of results.

Fields of interest
Dynamical Systems and Ergodic Theory; Mathematics, general

Target groups
Research

Product category
Monograph

Due July 2013

2013. IX, 145 p. 28 illus. (Atlantis Series in Dynamical Systems, Volume 2) Hardcover
► * € (D) 90,94 | € (A) 93,49 | sFr 113,50
► € 84,99 | £76.50

Normally Hyperbolic Invariant Manifolds
The Noncompact Case

This monograph treats normally hyperbolic invariant manifolds, with a focus on noncompactness. These objects generalize hyperbolic fixed points and are ubiquitous in dynamical systems. First, normally hyperbolic invariant manifolds and their relation to hyperbolic fixed points and center manifolds, as well as, overviews of history and methods of proofs are presented. Furthermore, issues (such as uniformity and bounded geometry) arising due to noncompactness are discussed in great detail with examples. The main new result shown is a proof of persistence for noncompact normally hyperbolic invariant manifolds in Riemannian manifolds of bounded geometry. This extends well-known results by Fenichel and Hirsch, Pugh and Shub, and is complementary to noncompactness results in Banach spaces by Bates, Lu and Zeng. Along the way, some new results in bounded geometry are obtained and a framework is developed to analyze ODEs in a differential geometric context.

Features
► A gentle introduction: examples, history, overview of methods ► Bridges nonlinear dynamics and differential geometry ► Includes various new results in bounded geometry ► Completely worked out persistence proof using the Perron method ► Multiple appendices with background material

Fields of interest
Dynamical Systems and Ergodic Theory; Mathematics, general

Target groups
Research

Product category
Monograph

Due July 2013

2013. XX, 510 p. 1 illus. (Contemporary Mathematicians) Hardcover
► * € (D) 117,69 | € (A) 120,99 | sFr 146,50
► € 109,99 | £109.99

Menahem Max Schiffer: Selected Papers Volume 2

Contents
P. G. Ferrario, Stuttgart, Germany

Local Variance Estimation for Uncensored and Censored Observations

Paola Gloria Ferrario develops and investigates several methods of nonparametric local variance estimation. The first two methods use regression estimations (plug-in), achieving least squares estimates as well as local averaging estimates (partitioning or kernel type). Furthermore, the author uses a partitioning method for the estimation of the local variance based on first and second nearest neighbors (instead of regression estimation). Approaching specific problems of application fields, all the results are extended and generalised to the case where only censored observations are available. Further, simulations have been executed comparing the performance of two different estimators (R-Code available!). As a possible application of the given theory the author proposes a survival analysis of patients who are treated for a specific illness.

Feature
► Publication in the field of technical sciences

Contents

Field of interest
Mathematics, general

Target groups
Research

Product category
Monograph

G. Giorgi, University of Pavia, Italy; T. H. Kjeldsen, Roskilde University, Denmark (Eds)

Traces and Emergence of Nonlinear Programming

The book contains reproductions of the most important papers that gave birth to the first developments in nonlinear programming. Of particular interest is W. Karush’s often quoted Master Thesis, which is published for the first time. The anthology includes an extensive preliminary chapter, where the editors trace out the history of mathematical programming, with special reference to linear and nonlinear programming.

Features
► The book offers for the first time a collection of the basic historical papers on nonlinear programming. ► The book includes a full version of the famous Master Thesis of William Karush (1939), where the main theorem of nonlinear programming appeared for the first time. ► The book provides a useful history of mathematical programming

Contents
Preface and Acknowledgements.- Introductory Chapter: A Historical View of Nonlinear Programming: Traces and Emergence.- 18 historical articles.

Fields of interest
Computational Science and Engineering; History of Mathematical Sciences

Target groups
Research

Product category
Collected works

M. Griebel (Ed)

Singular Phenomena and Scaling in Mathematical Models

The book integrates theoretical analysis, numerical simulation and modeling approaches for the treatment of singular phenomena. The projects covered focus on actual applied problems, and develop qualitatively new and mathematically challenging methods for various problems from the natural sciences. Ranging from stochastic and geometric analysis over nonlinear analysis and modelling to numerical analysis and scientific computation, the book is divided into the three sections: A) Scaling limits of diffusion processes and singular spaces, B) Multiple scales in mathematical models of materials science and biology and C) Numerics for multiscale models and singular phenomena. Each section addresses the key aspects of multiple scales and model hierarchies, singularities and degeneracies, and scaling laws and self-similarity.

Feature
►

Contents
Will be provided later on

Fields of interest
Computational Science and Engineering; Computational Mathematics and Numerical Analysis

Target groups
Research

Product category
Contributed volume
E. Grigorieva, Texas Woman's University, TX, USA

Methods of Solving Complex Geometry Problems

This book is a unique collection of challenging geometry problems and detailed solutions that will build students' confidence in mathematics. By proposing several methods to approach each problem and emphasizing geometry's connections with different fields of mathematics, Methods of Solving Complex Geometry Problems serves as a bridge to more advanced problem solving. Written by an accomplished female mathematician who struggled with geometry as a child, it does not intimidate, but instead fosters the reader's ability to solve math problems through the direct application of theorems. Containing over 160 complex problems with hints and detailed solutions, Methods of Solving Complex Geometry Problems can be used as a self-study guide for mathematics competitions and for improving problem-solving skills in courses on plane geometry or the history of mathematics.

Features
► Contains over 160 complex problems with answers, hints, and detailed solutions ► Serves as the bridge to more advanced texts in problem-solving ► Serves as a self-study or extra resource in the classroom

Contents

Fields of interest
Geometry; History of Mathematical Sciences

Target groups
Lower undergraduate

Product category
Undergraduate textbook

P. Grinfeld, Drexel University, Philadelphia, PA, USA

Introduction to Tensor Analysis and the Calculus of Moving Surfaces

Features
► Is a self-contained introduction to tensor calculus containing over 150 exercises ► Presents a clear geometric picture combined with an effective and elegant analytical technique ► Uses an informal approach, focuses on concrete objects, and appeals to the reader's intuition with regard to fundamental concepts such as the Euclidean space, surface, and length ► Covers the subject of tensor calculus in greater depth than existing published texts

Contents

Fields of interest
Differential Geometry; Calculus of Variations and Optimal Control; Optimization; Linear and Multilinear Algebra; Matrix Theory

Target groups
Upper undergraduate

Product category
Graduate/Advanced undergraduate textbook

T. Harima, Ehime University, Matsuyama, Japan; T. Maeno, Meijo University, Nagoya, Japan; H. Morita, Muroran Institute of Technology, Japan; Y. Numata, Shinshu University, Matsumoto, Japan; A. Wachi, Hokkaido University of Education, Kushiro, Japan; J. Watanabe, Tokai University, Hiratsuka, Japan

The Lefschetz Properties

This is a monograph which collects basic techniques, major results and interesting applications of Lefschetz properties of Artinian algebras. The origin of the Lefschetz properties of Artinian algebras is the Hard Lefschetz Theorem, which is a major result in algebraic geometry. However, for the last two decades, numerous applications of the Lefschetz properties to other areas of mathematics have been found, as a result of which the theory of the Lefschetz properties is now of great interest in its own right.

Features
► This is the first book on the theory of Lefschetz properties ► This is the first attempt to treat the theory of Lefschetz properties systematically ► This book shows a wide connection of the Lefschetz properties to other areas of mathematics ► So, Researchers from various area of mathematics should be interested in this book ► This book contains many open problems ► Some new results are contained (Some of them may appear as papers elsewhere. Some of them may not.)

Contents

Fields of interest
Algebra; Algebraic Geometry; Combinatorics

Target groups
Research

Product category
Monograph
The Hardy Space H1 with Non-doubling Measures and Their Applications

The present book offers an essential but accessible introduction to the discoveries first made in the 1990s that the doubling condition is superfluous for most results for function spaces and the boundedness of operators. It shows the methods behind these discoveries, their consequences and some of their applications.

Features
- The arguments for the main results are detailed and self-contained
- At least one typical and easily explicable example is given for each important notion further clarifying the relationship between the known and the present notions
- Detailed references for the content of each chapter are given. Also, well-known related results and some unsolved problems, which will be of interest to the reader, are presented, which might be interesting to the reader

Contents

Fields of interest
Fourier Analysis; Functional Analysis; Operator Theory

Target groups
Research

Product category
Monograph

Due August 2013

2013. Approx. 625 p. (Lecture Notes in Mathematics, Volume 2084) Softcover
- € (D) 96,29 | € (A) 98,99 | sFr 120,00
- € 89,95 | £81.00
ISBN 978-3-319-00824-0
Mathematics

S. G. Krantz, Washington University in St. Louis, MO, USA

**Geometric Analysis of the Bergman Kernel and Metric**

This text provides a masterful and systematic treatment of all the basic analytic and geometric aspects of Bergman's classic theory of the kernel and its invariance properties. These include calculation, invariance properties, boundary asymptotics, and asymptotic expansion of the Bergman kernel and metric. Moreover, it presents a unique compendium of results with applications to function theory, geometry, partial differential equations, and interpretations in the language of functional analysis, with emphasis on the several complex variables context. Several of these topics appear here for the first time in book form.

**Features**
- Several topics are presented for the first time in book form
- Textbook for graduate students that will also benefit seasoned researchers in mathematics
- Includes illustrative examples and carefully chosen exercises
- Discusses applications to function theory, geometry, partial differential equations, and interpretations in terms of functional analysis

**Contents**

**Fields of Interest**
Analysis; Partial Differential Equations; Functional Analysis

**Target groups**
Graduate

**Product category**
Graduate/Advanced undergraduate textbook

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**Mathematics**

A. Kyprianou, University of Bath, UK

**Fluctuations of Lévy Processes with Applications**

**Introductory Lectures**
Lévy processes are the natural continuous-time analogue of random walks and form a rich class of stochastic processes around which a robust mathematical theory exists. Their application appears in the theory of many areas of classical and modern stochastic processes including storage models, renewal processes, insurance risk models, optimal stopping problems, mathematical finance, continuous-state branching processes and positive self-similar Markov processes.

**Features**
- Addresses recent developments in the potential analysis of subordinators
- Includes an extensive overview of the classical and modern theory of positive self-similar Markov processes
- Each chapter has a comprehensive set of exercises

**Contents**

**Fields of Interest**
Probability Theory and Stochastic Processes; Quantitative Finance

**Target groups**
Graduate

**Product category**
Graduate/Advanced undergraduate textbook

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**Calculus With Applications**

This new edition of Lax, Burstein, and Lax's Calculus With Applications and Computing offers meaningful explanations of the important theorems of single variable calculus. Written with students in mathematics, the physical sciences, and engineering in mind, and revised with their help, it shows that the themes of calculation, approximation, and modeling are central to mathematics and the main ideas of single variable calculus. This edition brings the innovation of the first edition to a new generation of students. New sections in this book use simple, elementary examples to show that when applying calculus concepts to approximations of functions, uniform convergence is more natural and easier to use than point-wise convergence.

**Features**
- New edition extensively revised and updated, including many new problems
- Features early treatment of sequences and series relates calculus to calculation and approximation
- Offers explanations of all the important theorems to help students understand their meaning

**Contents**
1 Numbers and Limits. 2 Functions and Continuity. 3 The Derivative and Differentiation. 4 The Theory of Differentiable Functions. 5 Applications of the Derivative. 6 Integration. 7 The Integral as an Area. 8 Methods for Integration. 9 Approximation of Integrals. 10 Complex Numbers. 11 Differentiation. 12 Probability. Answers to Selected Problems. Index.

**Fields of Interest**
Analysis; Applications of Mathematics

**Target groups**
Lower undergraduate

**Product category**
Undergraduate textbook

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Due August 2013

2013. XVI, 342 p. 7 illus. (Graduate Texts in Mathematics, Volume 268) Hardcover
- approx. € (D) 64,19 | € (A) 65,99 | sFr 79,00
- approx. € 59,99 | £33,99

Due July 2013

2nd ed. 2013. Approx. 470 p. (Universitext) Softcover
- *€ (D) 64,19 | € (A) 65,99 | sFr 80,00
- € 59,99 | £39.99
ISBN 978-3-642-37631-3

Due August 2013

2nd ed. 2013. XII, 488 p. 150 illus. (Undergraduate Texts in Mathematics) Hardcover
- approx. *€ (D) 53,49 | € (A) 54,99 | sFr 69,00
- approx. € 49,99 | £46.99
ISBN 978-1-4614-7945-1
J. Llibre, Universitat Autònoma de Barcelona, Spain; A. E. Teruel, Universitat de les Illes Balears, Palma, Spain

**Introduction to the Qualitative Theory of Differential Systems**

**Planar, Symmetric and Continuous Piecewise Linear Systems**

The book deals with continuous piecewise linear differential systems in the plane with three pieces separated by a pair of parallel straight lines. Moreover, these differential systems are symmetric with respect to the origin of coordinates. This class of systems driven by concrete applications is of interest in engineering, in particular in control theory and the design of electric circuits.

**Features**
- Excellent for learning the use of basic results on qualitative theory of differential systems
- Illustrates how to use the Poincaré map for studying the periodic orbits of a differential system
- Shows the importance of compactification of the domain of definition of a differential system for the understanding of the global dynamics of the system
- Points out the importance of bifurcation diagrams for describing the different dynamics of differential systems depending on parameters

**Contents**
- Preface
- 1 Introduction and statement of the main results
- 2 Basic elements of the qualitative theory of ODEs
- 3 Fundamental systems
- 4 Return results
- 5 Phase portraits

**Fields of interest**
- Ordinary Differential Equations; Systems Theory; Control; Partial Differential Equations

**Target groups**
- Graduate

**Product category**
- Graduate/Advanced undergraduate textbook

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A. McInerney, Bronx Community College, City University of New York, Bronx, NY, USA

**First Steps in Differential Geometry**

Riemannian, Contact, Symplectic

Differential geometry arguably offers the smoothest transition from the standard university mathematics sequence of the first four semesters in calculus, linear algebra, and differential equations to the higher levels of abstraction and proof encountered at the upper division by mathematics majors. Today it is possible to describe differential geometry as “the study of structures on the tangent space,” and this text develops this point of view.

**Features**
- Introduces symplectic and contact geometry alongside Riemannian geometry, unlike other texts in differential geometry
- Develops tools from linear algebra and advanced calculus, including differential forms and tensors, that are necessary in differential geometry
- Introduces the reader to higher mathematics, including proofs of most of the main statements and results
- Aimed as a text for undergraduate students who have finished two years of standard mathematics curriculum, including courses in calculus, linear algebra, and differential equations

**Contents**
- Basic Objects and Notation.
- Linear Algebra Essentials.
- Advanced Calculus.
- Differential Forms and Tensors.
- Riemannian Geometry.
- Contact Geometry.
- Symplectic Geometry.
- References.

**Fields of interest**
- Differential Geometry; Global Analysis and Analysis on Manifolds; Manifolds and Cell Complexes (incl. Diff. Topology)

**Target groups**
- Upper undergraduate

**Product category**
- Graduate/Advanced undergraduate textbook

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Š. Nečasová, Institute of Mathematics of Academy of Sciences, Prague, Czech Republic; M. Pokorný, Charles University, Prague, Czech Republic; V. Sverak, University of Minnesota, Minneapolis, MN, USA (Eds)

**Selected works of J. Nečas**

**PDE, Continuum Mechanics and Regularity**

The book will contain the most significant published papers which were written by outstanding Czech mathematician Jindřich Nečas. The book will follow the periods of his research. First paper will be devoted to the linear theory of partial differential equations (variational approach of the boundary value problem, generalization of Rellich’s theory, Lipschitz domains and domains with cone property). Second part will be concerned with the regularity for nonlinear partial differential equations (Hilber’s 19th and 20th problems). Third part will be devoted to the nonlinear functional analysis (mainly spectral theory) and last part will contain mathematical theory of models describing mechanics of solids and fluids (unilateral problem, plastic materials, elastoplastic materials, transonic flow, multipolar fluids, Navier-Stokes equations). All parts of his research will be introduced by several mathematicians to describe his main contributions and to give description of his works. In addition, the book will contain a contribution of I. Babuska (who was J.

**Features**
- First time that J. Necas´ important results have been collected in one publication
- Some of the articles are not anymore available elsewhere
- The theory of the PDEs of continuum mechanics is perhaps even more popular today than it was when Nečas´ seminal contributions to this area were written

**Fields of interest**
- Analysis; Partial Differential Equations; Mathematical Physics

**Target groups**
- Research

**Product category**
- Collected works

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Birkhäuser

Due August 2013

2013. Approx. 300 p. (Birkhäuser Advanced Texts Basler Lehrbücher) Hardcover
- approx. * € (D) 64,15 | € (A) 65,95 | sFr 80,00
- approx. € 59,95 | £ 53.99
ISBN 978-3-0348-0656-5

**Birkhäuser**

Due July 2013

2013. XI, 404 p. 53 illus., 25 in color. (Undergraduate Texts in Mathematics) Hardcover
- * € (D) 64,19 | € (A) 65,99 | sFr 80,00
- € 59,99 | £ 53.99
ISBN 978-1-4614-7731-0

Due December 2013

2012. 700 p. (Advances in Mathematical Fluid Mechanics, Volume) Hardcover
- approx. * € (D) 139,05 | € (A) 142,94 | sFr 186,50
- approx. € 129,95 | £ 117.00
ISBN 978-3-0348-0230-7

Only available in print
Regularity of Optimal Transport Maps and Applications

In this thesis, we study the regularity of optimal transport maps and its applications to the semi-geostrophic system. The first two chapters survey the known theory, in particular there is a self-contained proof of Brenier’s theorem on existence of optimal transport maps and of Caffarelli’s Theorem on Holder continuity of optimal maps. In the third and fourth chapter we start investigating Sobolev regularity of optimal transport maps, while in Chapter 5 we show how the above mentioned results allows to prove the existence of Eulerian solution to the semi-geostrophic equation.

Features

» Essentially self-contained account of the known regularity theory of optimal maps in the case of quadratic cost » Presents proofs of some recent results like Sobolev regularity and Sobolev stability for optimal maps and their applications too the semi-geostrophic system » Proves for the first time a partial regularity theorem for optimal map with respect to a general cost function

Contents


Field of interest

Calculus of Variations and Optimal Control; Optimization

Target groups

Research

Product category

Monograph

Due August 2013


<table>
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<th>Language</th>
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<td>€ (D)</td>
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ISBN 978-88-7642-456-4

Mathematical and Numerical Models for Eddy Currents and Magnetostatics

With Selected Applications

This monograph addresses fundamental aspects of mathematical modeling and numerical solution methods of electromagnetic problems involving low frequencies, i.e. magnetostatic and eddy current problems which are rarely presented in the applied mathematics literature. In the first part, the authors introduce the mathematical models in a realistic context in view of their use for industrial applications.

Features

» Thorough description of eddy current processes from an applied mathematics perspective » Contains a large list of industrial applications with their mathematical formulations » Addresses the mathematical analysis of coupled problems involving eddy currents

Contents


Fields of interest

Computational Science and Engineering; Numerical and Computational Physics; Applied Mathematics/Computational Methods of Engineering

Target groups

Research

Product category

Monograph

Due August 2013

2013. 200 p. 100 illus. (Scientific Computation) Hardcover

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<th>Language</th>
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ISBN 978-94-007-0201-1

Neuromathematics of Vision

This book develops mathematical models of the primary visual cortex and proposes geometrical models of its functional architecture, i.e. the internal organization of its neural connectivity. It aims at explaining the neuromathematics immanent to visual perception and at clarifying the neural origin of spatial representations. The constitution of perceptual units is considered in relation to its neural implementation as the emergence of activity patterns in the connectivity structure of the primary visual cortex. The book also includes algorithms which are necessary to simulate the functionality of the visual cortex. It is written by specialists of the field and primarily addresses researchers but may also be beneficial for graduate students.

Features

» Includes helpful algorithms for applications in computer vision and bioengineering » Rigorous mathematical approach » Written by experts in the field

Fields of interest

Mathematical Models of Cognitive Processes and Neural Networks; Image Processing and Computer Vision; Cognitive Psychology

Target groups

Research

Product category

Monograph

Due September 2013

2013. Approx. 290 p. 80 illus., 30 in color. (Lecture Notes in Morphogenesis) Hardcover

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ISBN 978-3-642-34443-5
Z. Schuss, Tel Aviv University, Israel

Brownian Dynamics at Boundaries and Interfaces

In Physics, Chemistry, and Biology

Brownian dynamics serve as mathematical models for the diffusive motion of microscopic particles of various shapes in gaseous, liquid, or solid environments. The renewed interest in Brownian dynamics is due primarily to their key role in molecular and cellular biophysics: diffusion of ions and molecules is the driver of all life. Brownian dynamics simulations are the numerical realizations of stochastic differential equations that model the functions of biological micro devices such as protein ionic channels of biological membranes, cardiac myocytes, neuronal synapses, and many more. Stochastic differential equations are ubiquitous models in computational physics, chemistry, biophysics, computer science, communications theory, mathematical finance theory, and many other disciplines.

**Features**
- Written in an accessible, easy to read manner without detailed rigorous proofs
- Lots of examples and exercises throughout the book
- Written from the scientists point of view with deep insight into several modelling situations in biology

**Contents**
- The Mathematical Brownian Motion.
- Euler Simulation of Ito SDEs.
- Simulation of the Overdamped Langevin Equation.
- The First Passage Time of a Diffusion Process.
- Chemical Reaction in Microdomains.
- The Stochastic Separatrix.
- Narrow Escape in R2.
- Narrow Escape in R3.

**Fields of interest**
- Probability Theory and Stochastic Processes;
- Partial Differential Equations;
- Mathematical Methods in Physics

**Target groups**
- Graduate

**Product category**
- Graduate/Advanced undergraduate textbook

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J.-P. Serre, Collège de France, Paris, France

**Oeuvres - Collected Papers**

**Volume 2: 1960 - 1971**

The impact and influence of Jean-Pierre Serre's work have been notable ever since his doctoral thesis on homotopy groups. The abundance of significant results and deep insight contained in his research and survey papers ranging through topology, several complex variables, and algebraic geometry to number theory, group theory, commutative algebra and modular forms, continues to provide inspiring reading for mathematicians working in these areas, in their research and their teaching. Characteristic of Serre's publications are the many open questions he formulated suggesting further research directions. Four volumes specify how he has provided comments on and corrections to most articles, and described the present status of the open questions with reference to later results. Jean-Pierre Serre is one of a few mathematicians to have won the Fields medal, the Abel prize, and the Wolf prize.

**Fields of interest**
- Number Theory; Algebraic Geometry; Category Theory; Homological Algebra

**Target groups**
- Research

**Product category**
- Graduate

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I. R. Shafarevich, Steklov Mathematical Institute, Moscow, Russia

**Basic Algebraic Geometry 1**

**Varieties in Projective Space**

Transl. Russian: M. Reid, Warwick University, UK

Shafarevich’s Basic Algebraic Geometry has been a classic and universally used introduction to the subject since its first appearance over 40 years ago. As the translator writes in a preface note, “For all [advanced undergraduate and beginning graduate] students, and for the many specialists in other branches of math who need a liberal education in algebraic geometry, Shafarevich’s book is a must.” The third edition, in addition to some minor corrections, now offers a new treatment of the Riemann–Roch theorem for curves, including a proof from first principles. Shafarevich’s book is an attractive and accessible introduction to algebraic geometry, suitable for beginning students and nonspecialists, and the new edition is set to remain a popular introduction to the field.

**Features**
- Elementary introduction
- Author is one of the pioneers in the subject
- Author is outstanding mathematics writer

**Contents**
- Preface.
- Book 1. Varieties in Projective Space:
  - Chapter 1. Basic Notions.
  - Chapter II. Local Properties.
  - Chapter III. Divisors and Differential Forms.
  - Chapter IV. Intersection Numbers.
- Algebraic Appendix.
- References.
- Index

**Fields of interest**
- Algebraic Geometry; Theoretical, Mathematical and Computational Physics

**Target groups**
- Graduate

**Product category**
- Graduate/Advanced undergraduate textbook
Shafarevich’s Basic Algebraic Geometry has been a classic and universally used introduction to the subject since its first appearance over 40 years ago. As the translator writes in a prefatory note, “For all [advanced undergraduate and beginning graduate] students, and for the many specialists in other branches of math who need a liberal education in algebraic geometry, Shafarevich’s book is a must.” The second volume is in two parts: Book II is a gentle cultural introduction to scheme theory, with the first aim of putting abstract algebraic varieties on a firm foundation; a second aim is to introduce Hilbert schemes and moduli spaces, that serve as parameter spaces for other geometric constructions. Book III discusses complex manifolds and their relation with algebraic varieties, Kahler geometry and Hodge theory. It raises an important problem in unifying higher dimensional varieties that has been widely studied as the “Shafarevich conjecture”.

Features
► Elementary introduction ► Author is one of the pioneers in the subject ► Author is outstanding mathematician

Contents

Fields of interest
Algebraic Geometry; Theoretical, Mathematical and Computational Physics

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

Due August 2013

Original third Russian edition published in one volume by MCCME, Moscow, 2007

► • (D) 54,99 | (A) 54,99 | sFr 67,00
► • 49,99 | £44.99
ISBN 978-3-642-38009-9

T. Soomere, E. Quak, Tallinn University, Estonia (Eds)

Preventive Methods for Coastal Protection
Towards the Use of Ocean Dynamics for Pollution Control

Contents

Fields of interest
Computational Science and Engineering; Mathematical Modeling and Industrial Mathematics; Simulation and Modeling

Target groups
Research

Product category
Contributed volume

Due July 2013

2013. XX, 454 p. 167 illus., 131 in color. Hardcover
► • (D) 101,64 | (A) 104,49 | sFr 126,50
► • 94,99 | £85.50
ISBN 978-3-319-00439-6

A. Terras, University of California at San Diego, La Jolla, CA, USA

Harmonic Analysis on Symmetric Spaces—Euclidean Space, the Sphere, and the Poincaré Upper Half Plane

Contents
► New edition extensively revised and updated ► Features many new examples and figures (such as density plots of modular forms as well as finite analogues) ► New topics include: wavelets, quasicrystals, Ramanujan graphs, elliptic curves, modular knots, triangle and quaternion groups, comparisons of the continuous theory with its finite analogues, and recent progress on Mark Kac’s question “Can you hear the shape of a drum?”

Contents
Chapter 1 Flat Space. Fourier Analysis on R^m.- 1.1 Distributions or Generalized Functions.- 1.2 Fourier Integrals.- 1.3 Fourier Series and the Poisson Summation Formula.- 1.4 Mellin Transforms, Epstein and Dedekind Zeta Functions.- 1.5 Finite Symmetric Spaces, Wavelets, Quasicrystals, Weyl’s Criterion for Uniform Distribution.- Chapter 2 A Compact Symmetric Space—The Sphere.- 2.1 Fourier Analysis on the Sphere.- 2.2 O(3) and R^3. The Radon Transform.- 2.3 The Poincaré Upper Half-Plane.- 3.1 Hyperbolic Geometry.- 3.2 Harmonic Analysis on H.- 3.3 Fundamental Domains for Discrete Subgroups Γ of G = SL(2, R).- 3.4 Modular of Automorphic Forms—Classical.- 3.5 Automorphic Forms—Not So Classical—Maass Waveforms.- 3.6 Modular Forms and Dirichlet Series. Hecke Theory and Generalizations.- References.- Index.

Fields of interest
Abstract Harmonic Analysis; Fourier Analysis; Group Theory and Generalizations

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

Due August 2013

2nd ed. 2013. XII, 314 p. 100 illus., 10 in color. Hardcover
► • (D) 64,19 | (A) 65,99 | sFr 80,00
► • 59,99 | £53.99
ISBN 978-1-4614-7971-0
M. Trifković, University of Victoria, BC, Canada

Algebraic Theory of Quadratic Numbers

By focusing on quadratic numbers, this advanced undergraduate or master’s level textbook on algebraic number theory is accessible even to students who have yet to learn Galois theory. The techniques of elementary arithmetic, ring theory and linear algebra are shown working together to prove important theorems, such as the unique factorization of ideals and the finiteness of the ideal class group. The book concludes with two topics particular to quadratic fields: continued fractions and quadratic forms. The treatment of quadratic forms is somewhat more advanced than usual, with an emphasis on their connection with ideal classes and a discussion of Bhargava cubes. The numerous exercises in the text offer the reader hands-on computational experience with elements and ideals in quadratic number fields. The reader is also asked to fill in the details of proofs and develop extra topics, like the theory of orders. Prerequisites include elementary number theory and a basic familiarity with ring theory.

Features
► Offers an accessible introduction to number theory by focusing on quadratic numbers ► Includes many exercises that provide students with hands-on computational experience with quadratic number fields ► Presents a modern treatment of binary quadratic forms

Contents
1 Examples. - 2 A Crash Course in Ring Theory. - 3 Lattices. - 4 Arithmetic in Q[√D]. - 5 The Ideal Class Group and Geometry of Numbers. - 6 Continued Fractions. - 7 Quadratic Forms. - Appendix: Hints to Selected Exercises. - Index.

Fields of interest
Number Theory; Algebra

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

C. Wang, Institute of Analysis, LLC, MI, USA

Application of Integrable Systems to Phase Transitions

The eigenvalue densities in various matrix models in quantum chromodynamics (QCD) are ultimately unified in this book by a unified model derived from the integrable systems. Many new density models and free energy functions are consequently solved and presented. The phase transition models including critical phenomena with fractional power-law for the discontinuities of the free energies in the matrix models are systematically classified as means of a clear and rigorous mathematical demonstration. The methods here will stimulate new research directions such as the important Seiberg-Witten differential in Seiberg-Witten theory for solving the mass gap problem in quantum Yang-Mills theory. The formulations and results will benefit researchers and students in the fields of phase transitions, integrable systems, matrix models and Seiberg-Witten theory.

Features
► First book in the field of matrix models to apply integrable systems to solve the phase transition problems ► The only book to date to provide a unified model for the densities of eigenvalues in quantum chromodynamics (QCD) ► An application book but with rigorous mathematical proofs to present a systematic classification of phase transition models in the momentum aspect

Contents

Fields of interest
Mathematical Applications in the Physical Sciences; Special Functions; Mathematical Physics

Target groups
Research

Product category
Monograph

F.-Y. Wang, Beijing Normal University, China

Harnack Inequalities for Stochastic Partial Differential Equations

In this book the author presents a self-contained account of Harnack inequalities and applications for the semigroup of solutions to stochastic partial and delayed differential equations. Since the semigroup refers to Fokker-Planck equations on infinite-dimensional spaces, the Harnack inequalities the author investigates are dimension-free. This is an essentially different point from the above mentioned classical Harnack inequalities.

Features
► Focuses on dimension-free Harnack inequalities with applications to typical models of stochastic partial/delayed differential equations ► A useful reference for researchers and graduated students in probability theory, stochastic analysis, partial differential equations and functional analysis ► Comparing with exiting Harnack inequalities in analysis which applies only to finite-dimensional models, those introduced in the book are dimension-free and thus are efficient also in infinite dimensions

Contents

Fields of interest
Partial Differential Equations; Probability Theory and Stochastic Processes; Analysis

Target groups
Research

Product category
Brief
H. Cramér
A. Martin-Löf, Stockholm University, Stockholm, Sweden (Ed)

Collected Works I

This is a collection of Harald Cramer’s extensive work on number theory, probability, mathematical statistics and insurance mathematics. Many of these are not easily found in their original sources nowadays, for instance his pioneering work on risk theory published in the Skandia Insurance Company’s jubilee volumes in 1930 and 1955. Despite their age, these eminent examples of Cramer’s expository style remain highly readable. Cramer was one of the “fathers” of modern mathematical statistics. His famous book on the subject is still an important reference. His statistical papers included here were seminal to the subsequent development of the subject. The collection includes a complete bibliography of Cramer’s work.

Fields of interest
Statistics, general; Quantitative Finance; Number Theory

Target groups
Research

Product category
Collected works

Converting Data into Evidence
A Statistics Primer for the Medical Practitioner

Converting Data into Evidence: A Statistics Primer for the Medical Practitioner provides a thorough introduction to the key statistical techniques that medical practitioners encounter throughout their professional careers. These techniques play an important part in evidence-based medicine or EBM. Adherence to EBM requires medical practitioners to keep abreast of the results of medical research as reported in their general and specialty journals. At the heart of this research is the science of statistics. It is through statistical techniques that researchers are able to discern the patterns in the data that tell a clinical story worth reporting.

Features
➤ Provides a broad statistical overview immediately relevant to postgraduate physicians and nurses
➤ Provides the essence of potentially esoteric statistical distributions and applications so they are accessible to non-statistician health care professionals
➤ Utilizes real data sets from recent clinical trials and observational studies in urology to illustrate data analysis techniques

Contents

Fields of interest
Statistics for Life Sciences, Medicine, Health Sciences; Statistics, general

Target groups
Professional/practitioner

Product category
Professional book

Due July 2013

Originally published in 2 Volumes not available separately

Only available in print
➤ approx. *€ (D) 64,15 | € (A) 65,95 | sFr 80,00
➤ approx. € 59,95 | £53.99
ISBN 978-3-642-38358-8

Due July 2013

2013. X, 332 p. 48 illus., 24 in color. Softcover
➤ *€ (D) 64,19 | € (A) 65,99 | sFr 80,00
➤ € 59,99 | £53.99
ISBN 978-1-4614-7791-4

Due September 2013

➤ approx. *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
➤ approx. € 49,99 | £44.99
ISBN 978-3-642-36849-3

W. K. Härdle, V. Spokoiny, Humboldt-Universität zu Berlin, Germany; V. Panov, Universität Duisburg-Essen, Germany; W. Wang, Humboldt-Universität zu Berlin, Germany

Basics of Modern Mathematical Statistics
Exercises and Solutions

The complexity of today’s statistical data calls for modern mathematical tools. Many fields of science make use of mathematical statistics and require continuous updating on statistical technologies. Practice makes perfect, since mastering the tools makes them applicable. Our book of exercises and solutions offers a wide range of applications and numerical solutions based on R. In modern mathematical statistics, the purpose is to provide statistics students with a number of basic exercises and also an understanding of how the theory can be applied to real-world problems. The application aspect is also quite important, as most previous exercise books are mostly on theoretical derivations. Also we add some problems from topics often encountered in recent research papers.

Features
➤ Presents numerous exercises with solutions to help the reader better understand different aspects of modern statistics
➤ Applications with R and Matlab code show how to practically use the methods
➤ Includes numerous explanations and tips on how to apply modern statistical methods

Contents

Fields of interest
Statistical Theory and Methods; Statistics, general; Statistics for Business/Economics/Mathematical Finance/Insurance

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook
Statistics

L. Held, D. Sabanes Bove, University of Zurich, Switzerland

Applied Statistical Inference

Likelihood and Bayes

This book covers modern statistical inference based on the likelihood function with applications in medicine, epidemiology and biology. Two introductory chapters discuss the importance of statistical models in applied quantitative research and the central role of the likelihood function. The rest of the book is divided into three main parts. The first part describes frequentist likelihood-based inference from a Fisherian viewpoint, including frequentist properties of the MLE, score function, likelihood-ratio, Wald statistic and the bootstrap.

Features
> Offers a non-technical introduction to model-based likelihood and Bayesian inference
> Covers many applications illustrating the concepts and approaches
> Complemented by exercises at the end of each chapter, accompanied by an online solutions manual
> Complete with program examples in the open-source software R
> Includes a comprehensive appendix covering the necessary mathematical prerequisites

Contents

Fields of interest
Statistical Theory and Methods; Statistics for Life Sciences, Medicine, Health Sciences; Statistics and Computing/Statistics Programs

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

Due September 2013
2013. X, 390 p. Softcover
► approx. *€ (D) 64,19 | € (A) 65,99 | sFr 80,00
► approx. £59,99 | £53,99
ISBN 978-3-642-37886-7

Introduction to Probability and Statistics for Engineers

The theory of probability and mathematical statistics is becoming an indispensable discipline in many branches of science and engineering. This is caused by increasing significance of various uncertainties affecting performance of complex technological systems. Fundamental concepts and procedures used in analysis of these systems are often based on the theory of probability and mathematical statistics. The book sets out fundamental principles of the probability theory, supplemented by theoretical models of random variables, evaluation of experimental data, sampling theory, distribution updating and tests of statistical hypotheses. Basic concepts of Bayesian approach to probability and two-dimensional random variables, are also covered.

Features
> A concise guide on practical applications of probabilistic concepts in engineering
> Includes a number of instructive examples and exercises
> For undergraduate and graduate students

Contents

Fields of interest
Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Engineering Design; Engineering, general

Target groups
Upper undergraduate

Product category
Graduate/Advanced undergraduate textbook

Due July 2013
2013. X, 190 p. Hardcover
► *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
► € 49,99 | £44,99
ISBN 978-3-642-38298-4

Biostatistiques pour le clinicien

Contents

Fields of interest
Statistics for Life Sciences, Medicine, Health Sciences

Target groups
Upper undergraduate

Product category
Monographie

A paraître September 2013
► approx. *€ (D) 55,78 | € (A) 57,35 | sFr 69,50
► approx. £52,13 | £46,99
Quantile-Based Reliability Analysis

Quantile-Based Reliability Theory presents a novel approach to reliability theory using quantile functions in contrast to the traditional approach based on distribution functions. Quantile functions and distribution functions are mathematically equivalent ways to define a probability distribution. However, quantile functions have several advantages over distribution functions. First, many data sets with non-elementary distribution functions can be modeled by quantile functions with simple forms.

Features
► Quantile functions provide a unique, unprecedentedly simple, robust, and precise approach to reliability theory. ► Broad applicability across fields such as statistics, survival analysis, economics, engineering, demography, insurance, and medical science. ► Clear presentation with many examples, figures, and tables.

Contents

Fields of interest
Statistical Theory and Methods; Probability Theory and Stochastic Processes; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

XML and Web Technologies for Data Sciences with R

Web technologies are increasingly relevant to scientists working with data, for both accessing data and creating rich dynamic and interactive displays. The XML and JSON data formats are widely used in Web services, regular Web pages and JavaScript code, and visualization formats such as SVG and KML for Google Earth and Google Maps. In addition, scientists use HTTP and other network protocols to scrape data from Web pages, access REST and SOAP Web Services, and interact with NoSQL databases and text search applications. This book provides a practical hands-on introduction to these technologies, including high-level functions the authors have developed for data scientists. It describes strategies and approaches for extracting data from HTML, XML, and JSON formats and how to programmatically access data from the Web.

Features
► First book of its kind to showcase these developments. ► Features useful glossary, bibliography, and index. ► Case studies will be useful for statistician and those using the computing environment.

Contents
Data Formats XML and JSON.- Web Technologies.- Getting Data from the Web.- XML Applications.- Glossary.- Bibliography.- Index.

Field of interest
Statistics and Computing/Statistics Programs

Target groups
Research

Product category
Monograph

Excel 2010 for Physical Sciences Statistics

A Guide to Solving Practical Problems

Features
► Suitable for upper undergraduates or graduate students. ► Includes 159 color screen shots so you can be sure you are performing Excel steps correctly. ► Statistical theory and formulas are explained in clear language without bogging the reader down in mathematical fine points. ► You will be told each step of the way, not only how to use Excel, but also why you are doing each step — so you can learn the techniques to apply Excel beyond this book. ► You will learn both how to write statistical formulas and how to use drop-down menus to have Excel create formulas for you. ► Each chapter includes specific objectives for each concept so you know the purpose of the Excel steps. ► Each chapter presents key steps needed to solve practical science problems using Excel. In addition, three practice problems at the end of each chapter enable you to test your new knowledge.

Contents
Sample Size, Mean, Standard Deviation, and Standard Error of the Mean.- Random Number Generator.- Confidence Interval About the Mean Using the TINV Function and Hypothesis Testing.- One-Group t-Test for the Mean.- Two-Group t-Test of the Difference of the Means for Independent Groups.- Correlation and Simple Linear Regression.

Fields of interest
Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Statistics, general

Target groups
Upper undergraduate

Product category
Graduate/Advanced undergraduate textbook
New Series
Statistics and Econometrics for Finance

Series editors: D. Ruppert, J. Fan, E. Renault, E. Zivot

The aim of this series is to provide academics, students, researchers, and practitioners with information and analysis on the cutting edge of statistics and econometrics related to finance. Volumes in this series can focus on finance topics that utilize econometrics principles to obtain results, finance topics unique to statistical analysis, or topics that cut across both fields simultaneously. Each volume will provide rigorous analysis with the purpose of advancing understanding of a particular area of finance through statistics and econometrics. Volumes may include any or all of the following: modelling and analysis, empirical investigations, or description and interpretation of key software packages and methodologies. Books in the series could be research monographs, advanced textbooks, or edited volumes aimed toward statisticians, econometricians, upper-level undergraduate/graduate students studying quantitative finance or financial engineering, financial engineers, and financial analysts.

Y. Zeng, University of Missouri at Kansas City, MO, USA; S. Wu, The University of Kansas, Lawrence, KS, USA (Eds)

State-Space Models
Applications in Economics and Finance

State-space models as an important mathematical tool has been widely used in many different fields. This edited collection explores recent theoretical developments of the models and their applications in economics and finance. The book includes nonlinear and non-Gaussian time series models, regime-switching and hidden Markov models, continuous- or discrete-time state processes, and models of equally-spaced or irregularly-spaced (discrete or continuous) observations. The contributed chapters are divided into four parts. The first part is on Particle Filtering and Parameter Learning in Nonlinear State-Space Models. The second part focuses on the application of Linear State-Space Models in Macroeconomics and Finance.

Features
► First comprehensive work to explore recent developments of state-space models in economics and finance
► State-space modeling is taught in a wide range of subject areas from economics, finance, and statistics to probability theory and stochastic analysis
► Features contributions from well-known academic and modeling experts

Contents

Fields of interest
Statistics for Business/Economics/Mathematical Finance/Insurance; Statistical Theory and Methods

Target groups
Research

Product category
Contributed volume

Due July 2013

2013. XVIII, 363 p. 68 illus., 21 in color. (Statistics and Econometrics for Finance, Volume 1) Hardcover
► * (D) 101,64 | (A) 104,49 | sFr 126,50
► € 94,99 | £85.50
ISBN 978-1-4614-7788-4
**Dynamics of the Crowd in Social Media**

The authors aim at illuminating several fundamental and powerful yet theoretically obscure aspects of collective actions in social media. The reader will gain an advanced and deep understanding of collective action in the new generation of (ICT) enabled by Web 2.0, referring to social media, to help critical decision and policy making. The developed theories will be a valuable and comprehensive reference for those interested in newer Information and Communication Technologies (ICTs), in examining their role in decision and policy making, understanding the dynamics of interaction, communication, and information propagation, and researching in social networks for years to come. This interdisciplinary work is the result of researchers, practitioners, working in computer science, sociology, behavioral science, psychology, cultural study, information systems, operations research and communication, and methodologies research. The researchers present their new concepts, ideas, principles, and methodologies, aiming to advance and deepen our understanding of collective action in social media to help critical decision and policy making.

**Features**
- Focus on efficient algorithms and architectures for information reduction
- Includes comprehensive review of wireless multimedia sensor network
- Benefits researchers and engineers in image processing and wireless sensor networks

**Fields of interest**
- Computer Appl. in Social and Behavioral Sciences;
- Statistical Physics, Dynamical Systems and Complexity; Sociology, general

**Target groups**
- Research

**Product category**
- Monograph

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**Wireless Multimedia Sensor Networks on Reconfigurable Hardware**

Traditional wireless sensor networks (WSNs) capture scalar data such as temperature, vibration, pressure, or humidity.

**Features**
- Focus on efficient algorithms and architectures for information reduction
- Includes comprehensive review of wireless multimedia sensor network
- Benefits researchers and engineers in image processing and wireless sensor networks

**Contents**
- Chap. 1 Introduction.
- Chap. 2 Wireless Multimedia Sensor Network Technology.
- Chap. 3 Hardware Technology and Programming Languages for Reconfigurable Devices.
- Chap. 7 Multiple-View Information Reduction Techniques for WMSN Using Image Stitching.

**Fields of interest**
- Image Processing and Computer Vision; Electrical Engineering; Computer Systems Organization and Communication Networks

**Target groups**
- Research

**Product category**
- Monograph

---

**Modelling and Simulation**

*Exploring Dynamic System Behaviour*

This textbook presents a practical introduction to the fundamental aspects of modelling and simulation. It provides the necessary foundations both for those wishing to learn about this methodology and also for those who have a need to apply it in their work. Illustrative examples are drawn from projects formulated within the domains of both DEDS and CTDS.

**Features**
- Fully updated and expanded new edition
- The only textbook to give a balanced and integrated presentation of modelling and simulation activity for both discrete-event dynamic systems and continuous-time dynamic systems
- Contains numerous examples, algorithms, exercises and projects, in addition to a series of primers in the appendices, and teaching support material at an associated website

**Contents**
- Part I: Fundamentals.
- Part II: DEDS Modelling and Simulation.
- Part III: CTDS Modelling and Simulation.
- Part IV: Modelling and Simulation in Continuous Time Dynamic Systems.

**Fields of interest**
- Computer Graphics; Simulation and Modeling; Appl.Mathematics/Computational Methods of Engineering

**Target groups**
- Graduate

**Product category**
- Graduate/Advanced undergraduate textbook

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**Online Collective Action**

**Dynamics of the Crowd in Social Media**

L. Agarwal, R. T. Wigand, University of Arkansas, Little Rock, AR, USA; M. Lim, Arizona State University, Tempe, AZ, USA

L. G. Birta, G. Arbez, University of Ottawa, ON, Canada

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**Due August 2013**

2013. 350 p. 100 illus. (Lecture Notes in Social Networks) Hardcover

**Due June 2013**

Y. Borenstein, VisualDNA, London, UK; A. Moraglio, University of Birmingham, UK (Eds)

Theory and Principled Methods for the Design of Metaheuristics

This edited book puts together theoretical and principled methods for incorporating problem knowledge in evolutionary algorithms and other metaheuristics, and for designing and adapting them to the specific problems’ features. The first part of the book suggests a line of theoretical enquiry aimed at deriving new search algorithms from “scratch” based on well-formulated assumptions on the class of problems considered.

Features
► Valuable for practitioners and researchers
► Explains theoretical basis of key metaheuristic techniques
► Contributing authors among the leading authorities on the theory of evolutionary computation, search, and heuristics

Contents

Fields of interest
Artificial Intelligence (incl. Robotics); Computational Intelligence; Optimization

Target groups
Research

Product category
Monograph

Due June 2013
► approx. *€ (D) 90,90 | € (A) 93,45 | sFr 113,50
► approx. *€ 84,95 | £76.50
ISBN 978-3-642-33205-0

P. Campisi, Roma Tre University, Rome, Italy (Ed)

Security and Privacy in Biometrics

This important text/reference presents the latest secure and privacy-compliant techniques in automatic human recognition. Featuring viewpoints from an international selection of experts in the field, the comprehensive coverage spans both theory and practical implementations, taking into consideration all ethical and legal issues.

Features
► Provides an overview of the most recent privacy-enhancing techniques for biometric-based recognition systems
► Presents real-world applications of biometric-based recognition systems
► Covers ethical, legal, and procedural aspects

Contents

Fields of interest
Biometrics; Data Encryption; User Interfaces and Human Computer Interaction

Target groups
Research

Product category
Monograph

Due June 2013
2013. X, 470 p. 113 illus. Hardcover
► *€ (D) 101,64 | € (A) 104,49 | sFr 126,50
► *€ 94,99 | £85.50

G. Cervone, J. Lin, N. Waters, George Mason University, Fairfax, VA, USA (Eds)

Data Mining for Geoinformatics

Methods and Applications

The rate at which geospatial data is being generated exceeds our computational capabilities to extract patterns for the understanding of a dynamically changing world. Geoinformatics and data mining focuses on the development and implementation of computational algorithms to solve these problems. This unique volume contains a collection of chapters on state-of-the-art data mining techniques applied to geoinformatic problems of high complexity and important societal value.

Features
► Presents a series of geoinformatic techniques and methodologies to solve real world problems of important societal value
► Provides geoinformatic algorithms necessary to extract knowledge from massive amounts of geographically distributed data
► Bridges fields together such as GIS, statistics, machine learning, remote sensing, natural hazards, earth and atmospheric sciences

Contents

Fields of interest
Data Mining and Knowledge Discovery; Database Management; Geographical Information Systems/Cartography

Target groups
Research

Product category
Contributed volume

Due July 2013
2014. XX, 172 p. 63 illus., 35 in color. Hardcover
► *€ (D) 90,94 | € (A) 93,49 | sFr 113,50
► *€ 84,99 | £76.50
Belief-based Stability in Coalition Formation with Uncertainty
An Intelligent Agents’ Perspective

Belief-based stability in Coalition Formation with Uncertainty: An Intelligent Agents’ Perspective discusses coalition stability. It extends the classic stability concept of the non-transferable utility core by proposing new belief-based stability criteria under uncertainty, and illustrates how the new concept can be used to analyze the stability of a new type of belief-based coalition formation game. The book is intended for graduate students, engineers, and researchers in the field of artificial intelligence and computer science. Chi-kong Chan is a laboratory manager and a visiting lecturer at the Hong Kong Polytechnic University, China; Ho-fung Leung is a Professor and the Chairman of the Department of Computer Science and Engineering, The Chinese University of Hong Kong, China.

Features
- First attempt to model uncertainty in belief-based coalition formation
- Application in buyer coalition problems
- Multiple illustrating examples

Contents
Game Theoretic Analysis of Coalition Formation.- Strong Core and Weak Core.- b-Core.- An Example Application of the b-Core.- The Complete Picture—the sb-Core and the wb-Core.

Fields of interest
Artificial Intelligence (incl. Robotics); Game Theory, Economics, Social and Behav. Sciences; Computers and Society

Target groups
Research

Product category
Monograph

Due August 2013
Jointly published with Higher Education Press.

Distribution rights in China: Higher Education Press

2013. 200 p. 20 illus. Hardcover
- approx. *€ (D) 85,55 | € (A) 87,95 | sFr 115,00
- approx. € 79,95 | £72.00
ISBN 978-3-642-38214-7

Wireless Network Security
Theories and Applications

Wireless Network Security: Theories and Applications discusses the relevant security technologies, vulnerabilities, and potential threats, and introduces the corresponding security standards and protocols, as well as provides solutions to security concerns. Authors of each chapter in this book, mostly top researchers in relevant research fields in the U.S. and China, presented their research findings and results about the security of the following types of wireless networks: Wireless Cellular Networks, Wireless Local Area Networks (WLANs), Wireless Metropolitan Area Networks (WMANs), Bluetooth Networks and Communications, Vehicular Ad Hoc Networks (VANETs), Wireless Sensor Networks (WSNs), Wireless Mesh Networks (WMNs), and Radio Frequency Identification (RFID). The audience of this book may include professors, researchers, graduate students, and professionals in the areas of Wireless Networks, Network Security and Information Security, Information Privacy and Assurance, as well as Digital Forensics.

Features
- Most recent research
- Most popular types of wireless networks
- Both theories and applications

Contents

Fields of interest
Computer Communication Networks; Data Encryption; Communications Engineering, Networks

Target groups
Research

Product category
Monograph

Due June 2013
Jointly published with Higher Education Press.


**Computation, Logic, Games, and Quantum Foundations - The Many Facets of Samson Abramsky**

**Essays Dedicated to Samson Abramsky on the Occasion of His 60th Birthday**

**Contents**

Use of a Canonical Hidden-Variable Space in Quantum Mechanics.
- Imperfect Information in Logic and Concurrent Games.
- Compositional Quantum Logic.
- The Algebra of Directed Acyclic Graphs.
- Diagrammatic Reasoning for Delay-Inensitive Asynchronous Circuits.
- Payoffs, Intensionality and Abstraction in Games.
- On the Theory of Composition in Physics.
- On the Functor 2.
- Quantum Speedup and Categorical Distributivity.
- Unifying Semantics for Concurrent Programming.
- Unfixing the Fixpoint: The Theories of the X.
- Calculus.
- Continuous Domain Theory in Logical Form.
- Presheaf Models of Quantum Computation: An Outline.
- Nothing Can Be Fixed.
- Dialogue Categories and Frobenius Monoids.
- Anatomy of a Domain of Continuity.
- Quantum Field Theory for Legspinners.
- Bicompletions of Distance Matrices.
- Partial Recursive Functions and Finality.
- Breaking the Atom with Samson.
- Distance Matrices.
- Partial Recursive Functions.
- Quantum Field Theory for Legspinners.
- Bicompletions of Distance Matrices.
- Partial Recursive Functions and Finality.
- Breaking the Atom with Samson.
- Reasoning about Strategies.
- Domain Theory in Topical Form.
- Kolmogorov Complexity of Categories.

**Fields of interest**

Logics and Meanings of Programs; Computation by Abstract Devices; Mathematical Logic and Formal Languages

**Target groups**

Research

**Product category**

Contributed volume

**Open Learning Cultures**

**A Guide to Quality, Evaluation, and Assessment for Future Learning**

Today we are seeing a new form of blended learning: not only is technology enhancing the learning environment but formal and informal learning are combining and there is self- and peer-assessment of results. Open learning cultures are challenging the old and long-practiced methods used by educators and transforming learning into a more student-driven and independent activity, which uses online tools such as blogs, wikis or podcasts to connect resources, students and teachers in a novel way. While in higher education institutions most assessments are still tied to formal learning scenarios, teachers are more and more bound to recognize their students’ informal learning processes and networks. This book will help teachers, lecturers and students to better understand how open learning landscapes work, how to define quality and create assessments in such environments, and how to apply these new measures.

**Features**

- Details the influence of collaborative web-based technology on learning environments and learning behavior
- Provides educators, teachers, lecturers and students with a practical guide to developing customized quality concepts in open learning environments
- Includes guidelines, templates and use cases to facilitate the practical implementation of the methods presented
- Presents a concept of quality control and assessments as an integral part of learning processes

**Fields of interest**

Assessment, Testing and Evaluation; Computers and Education; Educational Technology

**Target groups**

Professional/practitioner

**Product category**

Professional book

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**Survey of Cloud Computing**

SpringerBriefs present concise summaries of cutting-edge research and practical applications across a wide spectrum of fields. Featuring compact volumes of 50 to 100 pages, the series covers a range of content from professional to academic. Briefs allow authors to present their ideas and readers to absorb them with minimal time investment. As part of Springer's eBook collection, SpringerBriefs are published to millions of users worldwide. A Survey of Cloud Computing covers a wide range of topics making it a great tool for anyone looking for a quick, yet comprehensive reference on this subject. Cloud computing has become a significant technology trend, and many experts expect that cloud computing will reshape information technology processes and the IT marketplace. This new web-based technology can be used with a variety of devices, including PCs, laptops, smart phones, and PDAs to access programs, storage, and application-development platforms over the Internet. Covering key topics like cloud computing, cloud architecture, and cloud platforms, this book is a great reference for practitioners, academicians, researchers, and students.

**Field of interest**

Computer Communication Networks

**Target groups**

Professional/practitioner

**Product category**

Brief
Web Dynpro ABAP for Practitioners

Web Dynpro ABAP, a NetWeaver web application user interface tool from SAP, enables web programming connected to SAP Systems. The authors’ main focus was to create a book based on their own practical experience. Each chapter includes examples which lead through the content step-by-step and enable the reader to gradually explore and grasp the Web Dynpro ABAP process.

Contents

Fields of Interest
Software Engineering/Programming and Operating Systems; Information Systems and Communication Service; Operating Systems

Target groups
Professional/practitioner

Product category
Professional book

Due July 2013

J. Graba, Sheffield Hallam University, UK
An Introduction to Network Programming with Java
Java 7 Compatible

Since the second edition of this text, the use of the Internet and networks generally has continued to expand at a phenomenal rate. This has led to both an increase in demand for network software and to improvements in the technology used to run such networks, with the latter naturally leading to changes in the former. During this time, the Java libraries have been updated to keep up with the new developments in network technology, so that the Java programming language continues to be one of the mainstays of network software development. In providing a very readable text that avoids getting immersed in low-level technical details, while still providing a useful, practical guide to network programming for both undergraduates and busy IT professionals, this third edition continues the trend of its predecessors.

Contents

Fields of Interest
Computer Communication Networks; Input/Output and Data Communications; Software Engineering/Programming and Operating Systems

Target groups
Lower undergraduate

Product category
Undergraduate textbook

Due June 2013

C. Gerth, University of Paderborn, Germany
Business Process Models
Change Management

Driven by the need for a closer alignment of business and IT requirements, the role of business process models in the development of enterprise software systems has increased continuously. Similar to other software artifacts, process models are developed and refined in team environments by several stakeholders, resulting in different versions. These versions need to be merged in order to obtain an integrated process model. Existing solutions to this basic problem in the field of software configuration management are mainly limited to textual documents, e.g., source code. This monograph presents a generally applicable framework for process model change management, which provides easy-to-use comparison and merging capabilities for the integration of different process model versions. The framework supports popular modeling languages such as BPMN, BPEL, or UML Activity Diagrams. Differences between process models are represented in terms of intuitive, high-level change operations. Equipped with a sophisticated analysis of dependencies and a semantic-aware computation of conflicts between differences, the framework constitutes a comprehensive and practically usable solution for process model change management in the model-driven development of enterprise software systems.

Features
➤ Gives a modern approach  ➤ Unique visibility  ➤ State of the art

Fields of Interest
Information Systems Applications (incl.Internet); Software Engineering; Computers and Society

Target groups
Research

Product category
Monograph

Due July 2013

Due June 2013

Due July 2013
Human Target provides a comprehensive coverage of computer security and security management. Dr. Leon Hempel explores the legal and ethical issues surrounding the topic, and Prof. Angela Sasse analyses the technical aspects. The two complementary sections contribute to a formidable Brief.

**Contents**
Foreword.- Non-technical Aspects.- Technical Aspects.

**Fields of interest**
User Interfaces and Human Computer Interaction; Systems and Data Security; Industrial, Organisational and Economic Psychology

**Target groups**
Research

**Product category**
Brief

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**Concepts, Ontologies, and Knowledge Representation**
Recording knowledge in a common framework that would make it possible to seamlessly share global knowledge remains an important challenge for researchers. This brief examines several ideas about the representation of knowledge addressing this challenge. A widespread general agreement is followed that states uniform knowledge representation should be achievable by using ontologies populated with concepts. A separate chapter is dedicated to each of the three introduced topics, following a uniform outline: definition, organization, and use. This brief is intended for those who want to get to know the field of knowledge representation quickly, or would like to be up to date with current developments in the field. It is also useful for those dealing with implementation as examples of numerous operational systems are also given.

**Contents**

**Fields of interest**
Information Storage and Retrieval; Multimedia Information Systems; Models and Principles

**Target groups**
Research

**Product category**
Brief

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**Security for Cloud Storage Systems**
Cloud storage is an important service of cloud computing, which offers service for data owners to host their data in the cloud. This new paradigm of data hosting and data access services introduces two major security concerns. The first is the protection of data integrity. Data owners may not fully trust the cloud server and worry that data stored in the cloud could be corrupted or even removed. The second is data access control. Data owners may worry that some dishonest servers provide data access to users that are not permitted for profit gain and thus they can no longer rely on the servers for access control. To protect the data integrity in the cloud, an efficient and secure dynamic auditing protocol is introduced, which can support dynamic auditing and batch auditing. To ensure the data security in the cloud, two efficient and secure data access control schemes are introduced in this brief: ABAC for Single-authority Systems and DAC-MACS for Multi-authority Systems. While Ciphertext-Policy Attribute-based Encryption (CP-ABE) is a promising technique for access control of encrypted data, the existing schemes cannot be directly applied to data access control for cloud storage systems because of the attribute revocation problem. To solve the attribute revocation problem, new Revocable CP-ABE methods are proposed in both ABAC and DAC-MACS.

**Contents**

**Fields of interest**
Systems and Data Security; Data Encryption

**Target groups**
Research

**Product category**
Brief
R. Y. Lee, Central Michigan University, Mount Pleasant, MI, USA

**Software Engineering: A Hands-On Approach**

This textbook provides a progressive approach to the teaching of software engineering. First, readers are introduced to the core concepts of the object-oriented methodology, which is used throughout the book to act as the foundation for software engineering and programming practices, and partly for the software engineering process itself.

**Features**

- A software engineering textbook for learning core concepts and practical skills
- Over 70 easy-to-follow diagrams and tables depicting concepts and tools used in software engineering
- A special chapter outlining the completion of a hands-on project with templates and examples makes the concepts learned more concrete
- The comprehensive layout and selection of chapters show the important processes and underlying knowledge to complete a software engineering project

**Contents**


**Fields of interest**

Computer Imaging; Vision; Pattern Recognition and Graphics; Models and Principles; Computer Science; general

**Target groups**

Upper undergraduate

**Product category**

Graduate/Advanced undergraduate textbook

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K. Markantonakis, K. Mayes, Royal Holloway, University of London, Egham, UK (Eds)

**Secure Smart Embedded Devices, Platforms and Applications**

**Contents**


**Fields of interest**

Systems and Data Security; Data Structures, Cryptology and Information Theory; Information Systems Applications (incl.Internet)

**Target groups**

Research

**Product category**

Contributed volume

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X. Meng, Renmin University of China, Beijing, China; Z. Ding, J. Xu, Chinese Academy of Sciences, Beijing, China

**Moving Objects Management Models, Techniques and Applications, 2nd Edition**

Applications, 2nd Edition focuses on moving object management, from the location management perspective to determining how constantly changing locations affect the traditional database and data mining technology.

**Features**

- Significantly reorganized and expanded second edition includes not only basic theories and new concepts but also practical technologies and applications
- Updates novel database techniques in modeling, location tracking, indexing, querying as well as data mining in clustering analysis of moving objects
- Updates the latest research on location privacy, uncertainty management and traffic flow analysis of moving objects
- Presents a typical application of moving objects management in intelligent transportation systems

**Contents**


**Fields of interest**

Database Management; Transportation; Geographical Information Systems/Cartography

**Target groups**

Research

**Product category**

Monograph

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**Due June 2013**

2013. XXIV, 285 p. 70 illus., 3 in color. Hardcover

- *€ (D) 64,19 | € (A) 65,99 | sFr 80,00
- *€ 39,99 | £33.99

ISBN 978-94-6239-005-8

**Due July 2013**

2014. XXXVI, 560 p. 135 illus. Hardcover

- *€ (D) 117,69 | € (A) 120,99 | sFr 164,50
- *€ 109,99 | £99.00


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Due August 2014

Jointly published with Tsinghua University Press, Beijing

Distribution rights in China: Tsinghua University Press

2nd ed. 2014. 237 p. 105 illus., 10 in color. Hardcover

- approx. *€ (D) 149,79 | € (A) 153,99 | sFr 186,50
- approx. € 139,99 | £126.00

ISBN 978-3-642-38275-8
Logics in Computer Science
A Study on Extensions of Temporal and Strategic Logics

In this monograph we introduce and examine four new temporal logic formalisms that can be used as specification languages for the automated verification of the reliability of hardware and software designs with respect to a desired behavior. The work is organized in two parts. In the first part two logics for computations, the graded computation tree logic and the computation tree logic with minimal model quantifiers are discussed. These have proved to be useful in describing correct executions of monolithic closed systems. The second part focuses on logics for strategies, strategy logic and memoryful alternating-time temporal logic, which have been successfully applied to formalize several properties of interactive plays in multi-entities systems modeled as multi-agent games.

Features
► Provides four extensions of classic temporal and strategic logics  ► Comprises new results on expressiveness and succinctness of logics in computer science  ► Includes new techniques for proving upper and lower computational bounds

Contents
Graded Computation Tree Logic.- Minimal Model Quantifiers.- Reasoning About Strategies.- Relentful Strategic Reasoning.- Appendix A Mathematical Notation.

Fields of interest
Logics and Meanings of Programs; Mathematical Logic and Formal Languages; Algorithm Analysis and Problem Complexity

Target groups
Professional/practitioner

Product category
Monograph

Sustainable Web Ecosystem Design

This book is about the process of creating web-based systems (i.e., websites, content, etc.) that consider each of the parts, the modules, the organisms – binary or otherwise – that make up a balanced, sustainable web ecosystem. In the current media-rich environment, a website is more than a collection of relative html documents of text and images on a static desktop computer monitor. There is now an unlimited combination of screens, devices, platforms, browsers, locations, versions, users, and exabytes of data with which to interact. Written in a highly approachable, practical style, this book is useful for stakeholders, system administrators, developers, designers, content managers, and the anonymous web user in industry, as well as faculty, staff, and students of all levels involved in teaching and learning in information technology.

Contents

Fields of interest
Software Engineering/Programming and Operating Systems; User Interfaces and Human Computer Interaction

Target groups
Research

Product category
Brief

Distributed Algorithms for Message-Passing Systems

Features
► Constitutes an introduction to distributed computing  ► Author among the leading researchers in the area of distributed computing  ► Textbook features include summaries, keywords, bibliographic notes and exercises for each chapter

Contents

Fields of interest
Theory of Computation; Computer Communication Networks; Programming Techniques

Target groups
Upper undergraduate

Product category
Graduate/Advanced undergraduate textbook
Annual Dynamics of Daylight Variability and Contrast
A Simulation-Based Approach to Quantifying Visual Effects in Architecture

Daylight is a dynamic source of illumination in architectural space, creating diverse and ephemeral configurations of light and shadow within the built environment. Perceptual qualities of daylight, such as contrast and temporal variability, are essential to our understanding of both material and visual effects in architecture. Although spatial contrast and light variability are fundamental to the visual experience of architecture, architects still rely primarily on intuition to evaluate their designs because there are few metrics that address these factors. Through an analysis of contemporary architecture, this work develops a new typological language that categorizes architectural space in terms of contrast and temporal variation.

Features
- Introduces a new typological language that categorizes architectural space in terms of contrast and temporal variation
- Proposes a new family of metrics that quantify the magnitude of contrast-based visual effects and time-based variation within daylit spaces
- Demonstrates how, through the use of time-segmented daylight renderings, a more holistic analysis of daylight performance is made possible

Contents
- Introduction
- Research Context
- Architectural Context
- Defining New Metrics for Contrast and Variability
- Application of Metrics to Abstract Spatial Models
- Application of Metrics to Detailed Case Studies
- Conclusion

Fields of interest
- Simulation and Modeling
- Architecture
- general

Target groups
- Research

Product category
- Brief
Multilayered Security and Privacy Protection in Car-to-X Networks

Solutions from Application down to Physical Layer

Car-to-X (C2X) communication in terms of Car-to-Car (C2C) and Car-to-Infrastructure (C2I) communication aims at increasing road safety and traffic efficiency by exchanging foresighted traffic information. Thereby, security and privacy are regarded as an absolute prerequisite for successfully establishing the C2X technology on the market. Towards the paramount objective of covering the entire ITS reference model with security and privacy measures, Hagen Stübing develops dedicated solutions for each layer, respectively.

On application layer a security architecture in terms of a Public Key Infrastructure is presented, which provides low complexity and operational costs, while at the same time security and privacy constraints are preserved. On facility layer complementary security solutions based on mobility data verification are proposed, which promise efficient message content protection at a low computational complexity.

Feature
- Publication in the field of technical science

Contents

Fields of interest
Input/Output and Data Communications; Computer Systems Organization and Communication Networks

Target groups
Research

Product category
Ph.D. Thesis

Due June 2013
2013. XVII, 191 p. 82 illus., 26 in color. Softcover
- € (D) 69,99 | € (A) 71,95 | sFr 87,50
- € 65,41 | £58.99
ISBN 978-3-658-02530-4

Due July 2013
2014. XII, 248 p. 104 illus., 90 in color. (Advances in Computer Vision and Pattern Recognition) Hardcover
- € (D) 101,64 | € (A) 104,49 | sFr 126,50
- £ 94,99 | £79.95
ISBN 978-1-4471-5282-8

Due August 2013
- approx. € (D) 85,55 | € (A) 87,95 | sFr 115,00
- approx. £ 79.95 | £59.95
ISBN 978-1-84882-741-7
S. Xiao, Hunan University, Changsha, China; W. Gong, D. Towsley, University of Massachusetts Amherst, MA, USA

Dynamic Secrets in Communication Security

Dynamic secrets are constantly generated and updated from messages exchanged between two communication users. When dynamic secrets are used as a complement to existing secure communication systems, a stolen key or password can be quickly and automatically reverted to its secret status without disrupting communication. Dynamic Secrets in Communication Security presents unique security properties and application studies for this technology. Password theft and key theft no longer pose serious security threats when parties frequently use dynamic secrets. This book also illustrates that a dynamic secret based security scheme guarantees impersonation attacks are detected even if an adversary steals a user’s password or their key is lost. Practitioners and researchers working in network security or wireless communications will find this book a must-have reference. Dynamic Secrets in Communication Security is also a valuable secondary text for advanced-level students in computer science and electrical engineering.

Features
► Presents unique security properties and application studies for dynamic secrets
► Compares dynamic secrets with conventional forms of secrets such as passwords and cryptographic keys using theoretical analysis and daily life analogies
► Includes a case study on wireless medical devices and smart grid communications as examples for the practicality of dynamic secrets

Fields of interest
Systems and Data Security; Computer Communication Networks; Data Encryption

Target groups
Professional/practitioner

Product category
Monograph

Due August 2013

2014, V, 145 p. 50 illus. Hardcover
► approx. *€ (D) 85,55 | € (A) 87,95 | sFr 107,50
► approx. € 79,95 | £73.00
ISBN 978-1-4614-7830-0
R. Aparicio, Instituto de la Grasa (CSIC), Seville, Spain; J. Harwood, Cardiff University, Wales, UK (Eds)

**Handbook of Olive Oil**

**Analysis and Properties**

The Handbook of Olive Oil presents an up-to-date view of all aspects of olive oil. It is written from an inter-disciplinary point of view and will be of use in research and development as well as in routine laboratory and process operations.

**Features**

- New edition reanalyzes the role of lipids and olive oil, in particular, in nutrition and health
- Discusses traceability and adulteration
- Intended as a tutorial on the practical aspects of olive oil

**Contents**


**Fields of interest**

Food Science; Nutrition; Analytical Chemistry

**Target groups**

Professional/practitioner

**Product category**

Contributed volume

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P. Bajpai

**Bleach Plant Effluents from the Pulp and Paper Industry**

This book covers bleach plant effluents, that most polluting effluent from the pulp and paper industry. Disappearance of benthic invertebrates, a high incidence of fish diseases, and mutagenic effects on the aquatic fauna are some of the consequences of the disposal of bleach effluents into surface waters. This book describes environmental impact of bleach plant effluents, environmental regulations, and measures to reduce the pollution load by internal process modification and external treatment of bleach plant effluents.

**Features**

- Covers emerging technologies in waste water treatment
- Gives detailed practical information
- Cites real-world mill experiences

**Contents**

Background.- Pulp and Paper making process.- Pulp Bleaching and Bleaching effluents.- Environmental effects on bleach plant effluents.- Strategies used for reducing the generation of pollutants.- External treatments.- Conclusions and future perspectives.- References.

**Fields of interest**

Textile Engineering: Waste Management/Waste Technology; Industrial Chemistry/Chemical Engineering

**Target groups**

Professional/practitioner

**Product category**

Brief

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A. J. Ceulemans, Katholieke Universiteit Leuven, Belgium

**Group Theory applied to Chemistry**

Chemists are used to the operational definition of symmetry, which crystallographers introduced long before the advent of quantum mechanics. The ball-and-stick models of molecules naturally exhibit the symmetrical properties of macroscopic objects. However, the practitioner of quantum chemistry and molecular modeling is not concerned with balls and sticks, but with subatomic particles: nuclei and electrons. This textbook introduces the subtle metaphors which relate our macroscopic understanding of symmetry to the molecular world. It gradually explains how bodily rotations and reflections, which leave all inter-particle distances unaltered, affect the study of molecular phenomena that depend only on these internal distances. It helps readers to acquire the skills to make use of the mathematical tools of group theory for whatever chemical problems they are confronted with in the course of their own research.

**Features**

- Takes a mathematical approach to understanding group theory
- Includes exercises
- Goes back to basics
- Takes a didactic approach
- Written for advanced undergraduates and Masters students

**Contents**

Operations.- Function spaces and matrices.- Groups.- Representations.- What has quantum chemistry got to do with it?.- Interactions.- Spherical symmetry and spins.

**Fields of interest**

Theoretical and Computational Chemistry; Crystallography; Inorganic Chemistry

**Target groups**

Graduate

**Product category**

Graduate/Advanced undergraduate textbook
**Preservation of Meat- and Fish-Based Products**

The book will be focused on the three most important aspects of food packaging: Modeling, Materials and Packaging Strategies. The modeling section will provide a complete overview of mass transport phenomena in polymers intended for food packaging applications. The materials section will cover the most interesting problem-solving solutions in the field of food packaging, i.e., low environmental impact active films with antimicrobial activity. Lastly, the packaging section will provide an overview of the most recent approaches used to prolong the shelf life of several food products.

**Features**
- Discusses new strategies to prolong food shelf life
- Reviews the development of active packaging
- Analyzes the mass transport properties of food packaging

**Contents**
Section I. Shelf life modeling of packaged food.
- Direct Models for Shelf Life Prediction.
- Influence of mass transport properties of films on the shelf life of packaged food.
- Mechanistic models for shelf life prediction.
- Section II. Low Environmental Impact Active Packaging.
- Different approaches to manufacture active films.
- Bio-based packaging materials for controlled release of active compounds.
- Section III. New Strategies to Prolong Food Shelf Life.
- Packaging Protection for Liquid Foods.
- Minimally processed food: packaging for quality preservation.
- Innovations in Fresh Dairy Products Packaging.
- Packaging for Preservation of Meat- and Fish-Based Products.

**Fields of interest**
- Food Science; Biochemical Engineering

**Target groups**
- Professional/practitioner

**Product category**
- Monograph

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**Physochemical Interactions of Amino Acids and Peptides in Aqueous Media**

The present work covers in detail the results of measurements of apparent molar volumes, viscosities and apparent molar adiabatic isothermal compressibility of various -amino acids and peptide in water and in aqueous sodium nitrate (NaNO3), potassium nitrate (KNO3) and magnesium nitrate hexahydrate [Mg(NO3)2.6H2O] solutions at different temperatures as follows:

**Features**
- Provides detailed thermodynamic data for amino acids and peptides
- Treats both solute and solvent effects on amino acids
- Includes temperature-dependent effects

**Contents**
From the Contents: General Introduction.
- Structure of Water.
- Forces that Stabilize the Protein Structure.
- Outline of the Present Research Work.
- Review of Literature.
- Experimental.
- Sources & Grades of Chemicals.
- Experimental Techniques.
- Theoretical Background of Physico-Chemical Properties.
- Results and Discussion.
- Apparent Molar Volumes of -Amino Acids and Diglycine in Aqueous Sodium Nitrate at Different Temperatures (T=288.15-318.15)K.
- Apparent Molar Volumes of -Amino Acids and Diglycine in Aqueous Potassium Nitrate at Different Temperatures (T=288.15-318.15)K.
- Apparent Molar Volumes of -Amino Acids and Diglycine in Aqueous Magnesium Nitrate Hexahydrate at Different Temperatures (T=288.15-318.15)K.

**Fields of interest**
- Physical Chemistry; Protein Structure; Analytical Chemistry

**Target groups**
- Research

**Product category**
- Monograph

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**New Gold-Catalyzed Reactions and Applications for the Synthesis of Lundurines**

Ana Escribano Cuesta’s thesis presents a detailed study of the inter- and intramolecular reactions of carbonyl compounds with 1,6-enynes using gold (I) complexes. An important part of the work involved streamlining the variables that allow the selective synthesis of different products such as tricyclic compounds, dihydropyrans, 1,3-dienes or cyclobutanes. The second chapter highlights the importance and difficulties in synthesising a cyclobutene subunit and the author includes a detailed description of how the products were prepared. The final chapter outlines the synthesis of lundurines using methodology developed by the author’s research group for intramolecular gold-catalyzed cyclization of indoles with alkynes.

**Features**
- Nominated as an outstanding Ph.D. thesis by the Institute of Chemical Research of Catalonia, ICIQ
- A number of important publications in high profile chemistry journals have derived from this work
- The lundurines products developed in this work show significant in vitro cytotoxicity toward B16 melanoma cells

**Contents**
Introduction.
- General Objectives.
- Gold(I)-Catalyzed Reactions of 1,6-Enynes with Aldehydes: Cycloaddition versus Metathesis-Type Reactions.
- Formation of Cyclobutene Compounds via Gold(I)-Catalyzed Cycloisomerization of 1,n-Enynes.
- Approach Toward the Total Synthesis of Lundurines.

**Fields of interest**
- Organometallic Chemistry; Catalysis; Organic Chemistry

**Target groups**
- Research

**Product category**
- Monograph
Nanomedicine
Principles and Perspectives

Coeditor: R. Moore, University of Stirling, Scotland

Nanotechnology and medicine have revolutionized medicine by enabling researchers to gain a deeper understanding of many diseases and offers new insights in fields as diverse as diagnostics, therapy, imaging, drug delivery, and regenerative medicine.

Features
► Up-to-date, in-depth, and integrated knowledge of nanotechnology applications to medicine
► Academia, industry, government agencies, and the health care system all represented among the contributors
► The book’s format is based on the established and renowned textbook format

Contents

Fields of interest
Biotechnology; Nanotechnology; Molecular Medicine

Target groups
Research

Product category
Monograph

Hydroxamic Acids
A Unique Family of Chemicals with Multiple Biological Activities

Satya P. Gupta’s Hydroxamic Acids is the first book to compile invited articles written by international experts on the class of compounds hydroxamic acids. Found to possess a wide spectrum of biological activities, the hydroxamic acids are of interest to theoretical and experimental chemists who can study and make use of them in drug design and development.

Features
► The first comprehensive compilation of studies on the compound class hydroxamic acids
► Provides a wider scope to those working with hydroxamic acids
► Suitable for researchers in the chemical, pharmaceutical and biological sciences

Contents

Fields of interest
Medicinal Chemistry; Organic Chemistry; Pharmaceutical Sciences/Technology

Target groups
Research

Product category
Monograph

Acid-Base Diagrams
Understanding acid-base equilibria made easy

The math behind the pH-logci diagrams.- Constructing pH-logci diagrams.- The application of pH-logci diagrams for graphical estimation of the pH of solutions and for the derivation of simplified equations.- The use of pH-logci diagrams for the construction of titration diagrams.- Titration errors.

Fields of interest
Analytical Chemistry; Biochemistry, general; Environmental Chemistry

Target groups
Upper undergraduate

Product category
Undergraduate textbook
**Light-Sensitive Polymeric Nanoparticles Based on Photo-Cleavable Chromophores**

The triggered release of functional compounds from such polymeric carriers as micelles, nanoparticles or nanogels is a rapidly developing and highly versatile concept which is expected to be one of the key approaches to future therapeutics. In his thesis, Daniel Klinger highlights the approach of stimuli-responsive microgels for such applications and discusses why especially light as a trigger has an outstanding position amongst the family of conventional stimuli. Based on these considerations, the author focuses on the design, synthesis and characterization of novel photo-sensitive microgels and nanoparticles as potential materials for the loading and light-triggered release/accessibility of functional compounds.

**Features**
- Nominated as an outstanding Ph.D. thesis by the Max-Planck Institute for Polymer Research
- Describes a versatile method for controlling the properties of light-responsive microgels and nanoparticles through molecular design of the respective building blocks
- Demonstrates the effective synergy between different disciplines and forms the basis for a number of publications in internationally renowned journals

**Contents**
- Introduction
- Motivation
- Theoretical Part
- Outline
- Results and Discussion
- Conclusion and Outlook
- Experimental Part

**Fields of interest**
- Polymer Sciences; Nanotechnology; Nanoscale Science and Technology

**Target groups**
- Research

**Product category**
- Monograph

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**Toward Dual and Targeted Cancer Therapy with Novel Phthalocyanine-based Photosensitizers**

Janet Lau's thesis describes her studies into the use of phthalocyanine-based photosensitizers in combined chemotherapeutic and photodynamic therapy (PDT) and targeted PDT.

**Features**
- Nominated as an outstanding Ph.D. thesis by the The Chinese University of Hong Kong, People's Republic of China
- Explores different approaches to develop phthalocyanine-based photosensitizers toward dual and targeted photodynamic therapy (PDT), with a view to improving their specific delivery to cancerous tissues and efficiency in PDT
- Provides the grounding and stimulates further exploration in the development ofsmart and efficient photosensitizers for dual and targeted PDT

**Contents**
- A Zinc(II) Phthalocyanine Conjugated with an Oxaliplatin Derivative for Dual Chemo- and Photodynamic Therapy
- A Redox-Responsive Silicon(IV) Phthalocyanine for Targeted Photodynamic Therapy
- A Dual pH- and Redox-Responsive Phthalocyanine-Based Photosensitizer for Targeted Photodynamic Therapy

**Fields of interest**
- Physical Chemistry; Medicinal Chemistry; Cancer Research

**Target groups**
- Research

**Product category**
- Monograph

---

**Sustainability of Biofuel Production from Oil Palm Biomass**

Janet Lau's thesis describes her studies into the use of phthalocyanine-based photosensitizers in combined chemotherapeutic and photodynamic therapy (PDT) and targeted PDT.

**Features**
- Elaborates the thermodynamic feasibility which describes the quality and quantity of energy and materials used in the production of biofuels
- Describes the sustainability assessment of all the production processes involved in biofuel production from oil palm biomass beginning from feedstock cultivation to waste management
- Addresses sustainable utilization of oil palm wastes as a means of adding economic, environmental and social values to the oil palm biomass

**Contents**
- Part 1: Biofuels and Sustainable Development
- Introduction to Sustainability of Biofuels Towards Sustainable Development
- Biofuels: Production Technologies, Global Profile and Market Potentials
- Part 2: Biofuels Production from Oil Palm Biomass and Sustainable Development
- Oil Palm Biomass as Feedstock for Biofuel Production
- Production of Palm Biofuels Towards Sustainable Development
- Part 3: Sustainability Assessment of Biofuel Production from Oil Palm Biomass
- Environmental Sustainability Assessment of Biofuels Production From Oil Palm Biomass
- Economic Sustainability Assessment of Biofuels Production from Oil Palm Biomass
- Social and Policy Issues Affecting the Sustainability of Palm Biofuels Production

**Fields of interest**
- Biochemical Engineering; Waste Management/Waste Technology; Energy Policy, Economics and Management

**Target groups**
- Research

**Product category**
- Monograph
**Disruption of Protein-Protein Interfaces**

In Search of New Inhibitors

“Disruption of Protein-Protein Interfaces” reviews the latest developments and future perspectives in drug discovery at protein-protein interfaces. The authors detail experimental and computational tools to tackle the subject and highlight the contribution of the Italian research community to the field. Evidence shows that blocking or modulating protein-protein interactions might lead to the development of useful new drugs. Consequently, in recent years great effort has been dedicated to unveiling the molecular details of protein-protein interfaces by structural techniques e.g. X-ray diffraction, NMR spectroscopy.

**Features**

- Provides an overview of the present state and future perspectives of drug discovery at protein-protein interfaces
- Gives details of both computational and experimental tools used in the field
- Gives positive examples of drug-like molecules effective in interacting at protein-protein interfaces

**Contents**

Drug discovery by targeting protein-protein interactions.- Protein-Protein Interaction Inhibitors: case studies on small molecules and natural compounds.- Disrupting Protein-Protein Interfaces using GRID Molecular Interaction Fields.- NMR as a tool to target protein-protein interactions.- Protein-protein interactions in the solid state: The troubles of crystallizing of protein-protein complexes.- Fluorescence observables and enzyme kinetics in the investigation of PPI modulation by small molecules Detection, mechanistic insight, functional consequences.

**Field of interest**

Organic Chemistry

**Target groups**

Research

**Product category**

Monograph

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**Sonocrystallization of Fats**

Sonocrystallization of Fats will summarize the latest research efforts and discoveries in the relatively new area of sonocrystallization of edible lipids. Ultrasound has been used extensively in the past to induce the crystallization of molecules. Until recently, however, very little work has been done using power ultrasound to induce the crystallization of edible lipids and understand how the phenomena applies in these systems. Power ultrasound is used in fats to induce their crystallization and to generate small crystals, which ultimately result in a harder material. Since the elimination of trans-fats from food products, novel processing technologies have been sought to improve the functional properties of low saturated, no-trans lipids. Power ultrasound can be used as a new processing condition to modify the crystallization of fats and tailor their functional properties to specific food uses. This Springer Brief will describe recent research performed in the area of sonocrystallization of fats and the possible application in the food industry. An overview of ultrasound theories will be presented at the beginning of the book followed by a brief description of the uses of power ultrasound in the food industry. Description of recent research in the area of fat sonocrystallization and detailed information regarding the experimental conditions used, such as type of equipment and ultrasound settings, will be presented.

**Contents**


**Field of interest**

Food Science; Lipidology; Biochemical Engineering

**Target groups**

Research

**Product category**

Brief
J. Marwan, Dr Marwan Chemie, Berlin, Germany

**Nanostructured Palladium Electrochemistry**

**Fundamentals and Applications**

This book describes in detail the electrochemical deposition and electrochemical features of nanostructured palladium, outlining the advantageous use of the nanotechnology with which the preparation of these films occurs. The text specifically addresses the use of nanotechnology to intensively investigate the hydrogen electrode reaction and the permeation process of hydrogen into bulk material. Using this approach, the studies presented will provide a standard and profound knowledge about the palladium hydrogen (deuterium) electrochemistry as a fundamental basis for common science, and will increase the reader's understanding of Low Energy Nuclear Reactions.

**Features**
- Discusses the considerably controversial science of Low Energy Nuclear Reaction in great detail
- Outlines the advantageous use of the nanotechnology with which preparation of nanostructured palladium occurs
- Provides readers with through explanation of what occurs inside the Palladium bulk metal lattice and how it works as a catalyst

**Contents**
- Electrochemistry of Palladium and Noble Metals in General
- Fabrication Process of Nanostructured Palladium
- Preparation and Characterisation of Nanostructured Palladium Films
- Palladium – Hydrogen (Deuterium) System
- Use of Nanostructured Palladium to Approach Low Energy Nuclear Reactions

**Fields of interest**
- Electrochemistry
- Catalysis
- Surfaces and Interfaces
- Thin Films

**Target groups**
- Research

**Product category**
- Monograph

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T. Mizuhara, University of Massachusetts Amherst

**Development of Novel Anti-HIV Pyrimidobenzothiazine Derivatives**

The author successfully developed novel anti-HIV PD 404182 derivatives that exhibited submicromolar inhibitory activity against both HIV-1 and HIV-2. His thesis is in three parts. The first part expounds efficient methods for the synthesis of tricyclic heterocycles related to PD 404182 based on the sp2-carbon-heteroatom bond formations. Starting from arene or haloarene, C-O, C-N, or C-S bonds were formed by simply changing the reactants. These synthetic methods provide powerful approaches for the divergent preparation of pyrimido-benzoxazine, -quinazoline, or -benzothiazine derivatives. The second part explains SAR studies of PD 404182 for the development of anti-HIV agents.

**Features**
- Nominated by Kyoto University as an outstanding Ph.D. thesis
- Divergent synthetic methods that enable efficient structure-activity relationship studies
- Development of more potent derivatives based on extensive structure-activity relationship studies

**Contents**
- Introduction
- Development of Divergent Synthetic Methods of Pyrimidobenzothiazine and Related Tricyclic Heterocycles
- Structure–Activity Relationship Study of PD 404182 Derivatives for the Highly Potent Anti-HIV Agents
- Design and Synthesis of Photoaffinity Probes and Their Application to Target Identification Study of PD 404182

**Fields of interest**
- Organic Chemistry
- Pharmaceutical Sciences
- Technology
- Medicinal Chemistry

**Target groups**
- Research

**Product category**
- Ph.D. Thesis

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Y. Ohashi, Ibaraki Quantum Beam Research Center, Tokai, Japan

**Direct Observation of Crystalline State Reactions**

**Structures of Metastable Intermediates**

This book focuses on chemical reactions in the crystalline state. Because the reactions cover a variety of fields in inorganic and organic chemistry, with more than 300 references, the book is an indispensable resource for inorganic, organic, and physical chemists and graduate students. The crystalline state reaction is a new category of solid state reaction, in which a reaction occurs with retention of the single crystal form. The whole reaction process can be observed directly by X-ray and neutron diffractions. Not only the structures of metastable intermediates, such as radicals, carbenes, and nitrenes, but also the metastable species of photochromic compounds and unstable photo-excited structures are shown with colored figures of the molecular structures.

**Features**
- Direct observation of various pathways of a molecule in the different environment
- More than 200 figures and tables clearly showing the structures of the intermediates
- More than 300 references in the field of the crystalline state reactions

**Contents**
- Single-Crystal-to-Single-Crystal Reaction and Crystalline State Reaction
- Direct Observation of Isomerization Processes in Cobaloxime Complex Crystals
- Structures of Metastable or Unstable Intermediates in Organic Chemical Reactions

**Fields of interest**
- Physical Chemistry
- Crystallography
- Organic Chemistry

**Target groups**
- Research

**Product category**
- Monograph
Structure and Bonding

S. Zhang, Chinese Academy of Sciences, Beijing, China (Ed)

Contents


Features

- This series presents critical reviews of the present position and future trends in modern chemical research concerned with chemical structure and bonding - Short and concise reports, each written by the world’s renowned experts - Still valid and useful after 5 or 10 years - More information as well as the electronic version of the whole content available at: springerlink.com

Contents


Features

- Nominated as an outstanding Ph.D. thesis by the Institute of Applied Physical Chemistry, University of Heidelberg, and the German Cancer Research Center (DKFZ) Heidelberg, Germany - Outlines an improvement of the quality of in situ synthesized high-complexity peptide micro arrays - Highlights the development of a new method allowing for fast one-step purification of entire arrays without loss of resolution or spatial information

Contents


Fields of interest

Bioorganic Chemistry; Protein Science; Physical Chemistry

Target groups

Research

Product category

Monograph

Due September 2013

2014. 210 p. 59 illus., 53 in color. (Springer Theses) Hardcover

Approx. * € (D) 106,99 | € (A) 109,99 | sFr 133,50
Approx. € 99,99 | £90.00
ISBN 978-3-319-00806-6

Topics in Heterocyclic Chemistry


Volume 151

S. Zhang, Chinese Academy of Sciences, Beijing, China (Ed)

Synthesis and Modifications of Porphyrinoids

The McMurry Reaction in Porphyrinoid Chemistry, by Kevin M. Smith Meso-t tetraarylporphyrins: synthetic strategies and reactivity profiles based on nitro/ amino substituents, by Maria da Graça Neves Functionalization of corroles, by José Cavaleiro Degradation pathways for porphyrinoids, by Jacek Wojaczynski Synthetic routes to porphyrinoids, by Sara Nardis Recent developments of non covalent porphyrin assemblies, by Donato Monti

Features

- Heterocyclic chemistry is the biggest branch of chemistry covering two-third of the chemical literature - The series covers hot topics of frontier research summarized by reputed scientists in the field - Our review series is topic related Online version available on SpringerLink.com

Contents


Field of interest

Organic Chemistry

Target groups

Research

Product category

Reviews

Due August 2013

2013. Approx. 220 p. Hardcover

Approx. * € (D) 203,29 | € (A) 208,99 | sFr 253,00
Approx. € 189,99 | £171.00
ISBN 978-3-642-38618-3

Due July 2013

2013. Approx. 260 p. Hardcover

Approx. * € (D) 245,03 | € (A) 251,99 | sFr 305,00
Approx. € 229,00 | £206.50
ISBN 978-3-642-38532-2
**Chemistry**

L. Utracki, National Research Council, Montreal, QC, Canada; C. Wilkie, Marquette University, Milwaukee, WI, USA (Eds)

**Polymer Blends Handbook**

Contents

**Fields of interest**
Polymer Sciences; Soft and Granular Matter, Complex Fluids and Microfluidics; Characterization and Evaluation of Materials

**Target groups**
Research

**Product category**
Handbook

**Due January 2014**

Print
2nd ed. 2014. XX, 1800 p. 295 illus.  
| *€ (D) 747,93 | € (A) 768,90 | sFr 931,00 |
| approx. € 699,00 | £629.50 |
ISBN 978-94-007-6063-9  

eReference
2nd ed. 2014.  
| *€ (D) 813,81 | € (A) 838,80 | sFr 978,00 |
| approx. € 699,00 | £629.50 |
ISBN 978-94-007-6064-6

**S. Yanniotis**, Agricultural University of Athens, Greece; P. Taoukis, National Technical University of Athens, Greece; N. G. Stoforos, Agricultural University of Athens, Greece; V. T. Karathanos, National Technical University of Athens, Greece (Eds)

**Advances in Food Process Engineering Research and Applications**

Contents

**Target groups**
Research

**Product category**
Contributed volume

**Due September 2013**

2014. 100 p. 15 illus. (SpringerBriefs in Molecular Science / SpringerBriefs in History of Chemistry) Hardcover  
| *€ (D) 53,49 | € (A) 54,99 | sFr 74,00 |
| approx. € 49,99 | £44.99 |
ISBN 978-3-319-00641-3

**Due August 2013**

2013. X, 690 p. 160 illus., 76 in color. (Food Engineering Series) Hardcover  
| *€ (D) 181,89 | € (A) 186,99 | sFr 226,50 |
| approx. € 169,99 | £153.00 |
Computing and science reveal a synergic relationship. On the one hand, it is widely evident that computing plays an important role in the scientific endeavor. On the other hand, the role of scientific method in computing is getting increasingly important, especially in providing ways to experimentally evaluate the properties of complex computing systems. This book critically presents these issues from a unitary conceptual and methodological perspective by addressing specific case studies at the intersection between computing and science. The book originates from, and collects the experience of, a course for PhD students in Information Engineering held at the Politecnico di Milano. Following the structure of the course, the book features contributions from some researchers who are working at the intersection between computing and science.

**Contents**
How far chemistry and toxicology are computational sciences?.- Computational models for environmental systems.- Good experimental methodologies for autonomous robotics: from theory to practice.- Robotics benchmarking from the inside, i.e., the RAWSEEDS experience.- Artificial Intelligence and the explanation of intelligent behavior: methodological problems.

**Fields of interest**
Computational Intelligence; Computer Applications; Artificial Intelligence (incl. Robotics)

**Target groups**
Research

**Product category**
Brief

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**A. Amine**, Taher Moulay University of Saida, Ennasr Saida, Algeria; **A. M. Otmane**, Concordia University, Montreal, QC, Canada; **L. Bellatreche**, LIAS/ISAE-ENSMA, Futuroscope Chasseneuil Cedex, France (Eds)

**Modeling Approaches and Algorithms for Advanced Computer Applications**

"During the last decades Computational Intelligence has emerged and showed its contributions in various broad research communities (computer science, engineering, finance, economic, decision making, etc.). This was done by proposing approaches and algorithms based either on turnkey techniques belonging to the large panoply of solutions offered by computational intelligence such as data mining, genetic algorithms, bio-inspired methods, Bayesian networks, machine learning, fuzzy logic, artificial neural networks, etc. or inspired by computational intelligence techniques to develop new ad-hoc algorithms for the problem under consideration.

**Features**
- Current research in Computational Intelligence
- Selected papers from the Computational Intelligence track held at CIIA'2013 conference in Algeria at May 2013
- Written by experts in the field

**Contents**
- Invited Talks
- Computational Intelligence (CI)
- Security Network Technologies (SNT)
- Information Technology (IT)
- Computer Systems and Applications (CSA)

**Fields of interest**
Computational Intelligence; Artificial Intelligence (incl. Robotics)

**Target groups**
Research

**Product category**
Monograph

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SystemVerilog for Design and Verification using UVM
From RTL to Synthesis
This book is an “A-Z” guide to using SystemVerilog for ASIC design, from conception to RTL coding, to synthesis and verification. Readers will benefit from a thorough introduction to the powerful constructs and features of SystemVerilog. In addition, the verification methodology of Universal Verification Methodology (UVM) is used to build test-benches that allow for verification of complicated designs and synthesis basics are discussed, using the Synopsys Design Compiler (DC). To complete this book’s package as a practical guide, readers are introduced to the fundamentals of static timing analysis.

Features
► Provides a practical guide to the use of SystemVerilog for both design and verification, unlike any other book currently available
► Uses the Universal Verification Methodology (UVM) to build test-benches, in a manner accessible to novices
► Covers the practical essentials needed for design, verification, synthesis and static timing analysis, which readers might otherwise have to find in several books

Contents

Fields of interest
Circuits and Systems; Processor Architectures

Target groups
Professional/practitioner

Product category
Professional book

Radio Link Quality Estimation in Low-Power Wireless Networks
This book provides a comprehensive survey on related work for radio link quality estimation, which covers the characteristics of low-power links, the fundamental concepts of link quality estimation in wireless sensor networks, a taxonomy of existing link quality estimators and their performance analysis. It then shows how link quality estimation can be used for designing protocols and mechanisms such as routing and hand-off.

Feature
► Provides a comprehensive survey on related work for radio link quality estimation of Cooperation Objects

Contents

Fields of interest
Communications Engineering, Networks; Information Systems Applications (incl.Internet); Electrical Engineering

Target groups
Research

Product category
Brief

Natural Convection in Superposed Fluid-Porous Layers
Natural Convection in Composite Fluid-Porous Domains provides a timely overview of the current state of understanding on the phenomenon of convection in composite fluid-porous layers. Natural convection in horizontal fluid-porous layers has received renewed attention because of engineering problems such as post-accident cooling of nuclear reactors, contaminant transport in groundwater, and convection in fibrous insulation systems. Because applications of the problem span many scientific domains, the book serves as a valuable resource for a wide audience.

Features
► Provides overview of critical numerical modeling approaches ► Offers vital comparisons of experimental and numerical results ► Presents comprehensive overview of current literature ► Outlines current and future challenges

Contents

Fields of interest
Engineering Fluid Dynamics; Energy Systems; Nuclear Engineering

Target groups
Professional/practitioner

Product category
Brief

Due June 2013
2013. XII, 146 p. 42 illus, 29 in color. (SpringerBriefs in Electrical and Computer Engineering / SpringerBriefs in Cooperating Objects) Softcover
► *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
► € 49,99 | £44.99
ISBN 978-3-319-00773-1

Due July 2013
2013. XII, 146 p. 42 illus, 29 in color. (SpringerBriefs in Electrical and Computer Engineering / SpringerBriefs in Cooperating Objects) Softcover
► *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
► € 49,99 | £44.99
ISBN 978-3-319-00773-1

Due July 2013
► *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
► € 49,99 | £44.99
ISBN 978-1-4614-6575-1
A. Balasinski, Cypress Semiconductor, San Diego, CA, USA

Design for Manufacturability
From 1D to 4D for 22 nm Technology Nodes

This book explains integrated circuit design for manufacturability (DfM) at the product level (packaging, applications) and applies engineering DfM principles to the latest standards of product development at 22 nm technology nodes. It is a valuable guide for layout designers, packaging engineers and quality engineers, covering DfM development from 1D to 4D, involving IC design flow setup, best practices, links to manufacturing and product definition, for process technologies down to 22 nm node, and product families including memories, logic, system-on-chip and system-in-package.

Features
► Provides design for manufacturability guidelines on layout techniques for the most advanced, 22 nm technology nodes ► Includes information valuable to layout designers, packaging engineers and quality engineers, working on memories, logic, system-on-chip and system-in-package ► Offers a highly-accessible, single-source reference to information otherwise available only from disparate sources ► Helps readers to translate reliability methodology into real design flows

Contents
2D DfM.- 3D DfM.- 4D DfM.- Correlation to Rule of 10.- X-fab manufacturability and sharing.

Fields of interest
Circuits and Systems; Electronics and Microelectronics; Instrumentation; Quality Control, Reliability, Safety and Risk

Target groups
Professional/practitioner

Product category
Professional book

Due October 2013
2013. 300 p. 150 illus. Hardcover
► approx. € (D) 106,95 | € (A) 109,95 | sFr 127,50
► approx. € 99,95 | £86.50
ISBN 978-1-4614-1760-6

S. Bartling, German Cancer Research Center, Heidelberg, Germany; S. Friesike, Alexander von Humboldt Institut für Internet und Gesellschaft, Berlin, Germany (Eds)

Opening Science
The Evolving Guide on How the Web is Changing Research, Collaboration and Scholarly Publishing

This book is about scientific communication and cooperation technologies. It provides an overview on current Web 2.0 opportunities for scientists, gives an outlook for future developments. It explains, how the present cooperative internet tools can be used for scientific purposes and which are the practical and legal consequences for scientific and research communities.

Features
► Closes the gap between those who are online already and who are not ► Provides with the status-quo and and a glimpse at future developments ► Provides an overview of web 2.0 tools for scientists with concrete how-to’s ► Introduce the concept of science 2.0

Contents

Fields of interest
Communication, Engineering, Networks; Coding and Information Theory

Target groups
Research

Product category
Monograph

Due July 2013
2014. 500 p. Hardcover
► approx. € (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-319-00025-1

O. Bazan, M. Jaseemuddin, Ryerson University, Toronto, ON, Canada

Beamforming Antennas in Multi-Hop Wireless Networks

In this book, the authors first present an overview of the challenges and issues facing MAC and routing in multi-hop wireless networks with beamforming antennas. Subsequently, we discuss various MAC and routing protocols that are specifically designed to address those issues and hence exploit the benefits of beamforming antennas. We also present a framework to provide Quality of Service (QoS) in contention-based wireless networks with beamforming antennas. Finally, we conclude the book with a discussion on open research topics.

Contents

Fields of interest
Changing Research, Collaboration and Scholarly Publishing

Target groups
Research

Product category
Brief

Due June 2014
2014. 125 p. (SpringerBriefs in Electrical and Computer Engineering) Softcover
► * € (D) 53,45 | € (A) 54,95 | sFr 66,50
► € 49,95 | £44.99
ISBN 978-3-642-25997-5
Mechanics and Model-Based Control of Advanced Engineering Systems

The volume contains selected publications from the Russia-Austria-Japan Joint Workshop on Advanced Dynamics and Model Based Control of Structures and Machines. The workshop brings together scientists from Russia, Austria and Japan with an outstanding expertise in mechanics and control, completed by distinguished researchers from Germany, Italy, France and Taiwan. Main topics are fundamental studies on nonlinear control of structures and systems, sensing and actuation, active and passive damping, nano- and micromechanics, vibrations and waves. The volume particularly will also deal with smart materials, which allow the design and implementation of new types of actuator/sensor fields and networks.

Features
- Presents up-to-date results to the international community
- Stimulates further technological developments in mechatronics
- Articles by international experts in the fields

Fields of interest
- Vibration, Dynamical Systems, Control; Mechanics
- Mechanics of Materials; Geoengineering, Foundations, Hydraulics

Target groups
- Research

Product category
- Monograph

Plasticity

R. I. Borja, Stanford University, CA, USA

Modeling & Computation

There have been many excellent books written on the subject of plastic deformation in solids, but rarely can one find a textbook on this subject. “Plasticity Modeling & Computation” is a textbook written specifically for students who want to learn the theoretical, mathematical, and computational aspects of inelastic deformation in solids. It adopts a simple narrative style that is not mathematically overbearing, and has been written to emulate a professor giving a lecture on this subject inside a classroom. Each section is written to provide a balance between the relevant equations and the explanations behind them. Where relevant, sections end with one or more exercises designed to reinforce the understanding of the “lecture.”

Color figures enhance the presentation and make the book very pleasant to read. For professors planning to use this textbook for their classes, the contents are sufficient for Parts A and B that can be taught in sequence over a period of two semesters or quarters.

Features
- Introduces a computational platform for implementing plasticity models into nonlinear finite element codes
- Presents the mathematical foundations of theory of plasticity
- Discusses plasticity models appropriate for different materials

Contents
- Motivations and Scope
- One-Dimensional Problems
- J2 Plasticity
- Isotropic Functions
- Finite Deformation
- Cap Models
- Discontinuities
- Crystal Plasticity
- Bifurcation

Fields of interest
- Geomechanics, Foundations, Hydraulics
- Continuum Mechanics and Mechanics of Materials
- Earth Sciences, general

Target groups
- Research

Product category
- Monograph

Fuzzy Information & Engineering and Operations Research & Management

B.-Y. Cao, Guangzhou University, China; H. Nasseri, Mazandaran University, Babolsar, Iran (Eds)

Fuzzy Information & Engineering and Operations Research & Management is the monograph from submissions by the 6th International Conference on Fuzzy Information and Engineering (ICFIE2012, Iran) and by the 6th academic conference from Fuzzy Information Engineering Branch of Operation Research Society of China (FIEBORSC2012, Shenzhen, China). It is published by Advances in Intelligent and Soft Computing (AISC). We have received more than 300 submissions. Each paper of it has undergone a rigorous review process. Only high-quality papers are included in it containing papers as follows: I Programming and Optimization, II Lattice and Measures, III Algebras and Equation, IV Forecasting, Clustering and Recognition, V Systems and Algorithm, VI Graph and Network, VII Others.

Features
- Recent Research on Fuzzy Systems and Operations Research
- Results of the International Conference on Fuzzy Information and Engineering
- Written by leading experts in the field

Contents
- Part I Programming and Optimization
- Part II Lattice and Measures
- Part III Algebras and Equations
- Part IV Forecasting, Clustering and Recognition
- Part V Systems and Algorithm
- Part VI Graph and Network

Target groups
- Research

Product category
- Monograph
**Compressed Sensing & Sparse Filtering**

This book is aimed at presenting fundamental concepts, methods and algorithms able to cope with undersampled data. One such trend that recently gained popularity and to some extent revolutionized signal processing is compressive sampling, called also compressive sensing. Apart from compressed sensing, this book introduces the readers to other related approaches. Each methodology has its own formalities for dealing with such problems. As an example, in the Bayesian approach, sparseness promoting priors such as Laplace and Cauchy are normally used for penalising improbable model variables, thus promoting low complexity solutions.

**Features**
- Presents fundamental concepts, methods and algorithms able to cope with undersampled data
- Introduces compressive sampling, called also compressed sensing.
- Written by well-known experts in the field

**Contents**
1. CLASSIFICATION OF FLUIDS.
2. FLOW PHENOMENA.
3. BASIC EQUATIONS IN FLUID MECHANICS.
4. DEFORMATION KINEMATICS.
5. MATERIAL FUNCTIONS.
6. GENERALIZED NEWTONIAN FLUIDS.
7. LINEARLY VISCOELASTIC FLUIDS.
8. ADVANCED FLUID MODELS.
9. PROBLEMS.
10. REFERENCES.
11. SYMBOLS.
12. INDEX.

**Fields of Interest**
- Signal, Image and Speech Processing
- Numeric Computing
- Mathematics of Algorithmic Complexity

**Target groups**
Research

**Product category**
Contributed volume

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**Programming Heterogeneous MPSoCs**

**Tool Flows to Close the Software Productivity Gap**

This book provides embedded software developers with techniques for programming heterogeneous Multi-Processor Systems-on-Chip (MPSoCs), capable of executing multiple applications simultaneously. It describes a set of algorithms and methodologies to narrow the software productivity gap, as well as an in-depth description of the underlying problems and challenges of today’s programming practices.

**Features**
- Provides a novel set of algorithms and methodologies for programming heterogeneous Multi-Processor Systems-on-Chip (MPSoCs)
- Equips embedded software developers with a unified presentation of sequential and parallel programming
- Focuses on industry-relevant methodologies and uses real case studies to demonstrate techniques
- Enables solution of multi-application problems, with generalized and unified programming models

**Contents**
1. Introduction.
2. Background and Problem Definition.
3. Related Work.
4. MPSoC Runtime Management.
5. Sequential Code Flow.

**Fields of Interest**
- Circuits and Systems
- Processor Architectures
- Electronics and Microelectronics
- Instrumentation

**Target groups**
Research

**Product category**
Monograph

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**Copper Wire Bonding**

This critical volume provides an in-depth presentation of copper wire bonding technologies, processes and equipment, along with the economic benefits and risks. Due to the increasing cost of materials used to make electronic components, the electronics industry has been rapidly moving from high cost gold to significantly lower cost copper as a wire bonding material. However, copper wire bonding has several process and reliability concerns due to its material properties.

**Features**
- Introduces copper wire bonding technologies
- Presents copper wire bonding processes
- Discusses copper wire bonding metallurgies
- Covers recent advancements in copper wire bonding including the bonding process, equipment changes, bond–pad materials and surface finishes
- Covers the reliability tests and concerns
- Covers the current implementation of copper wire bonding in the electronics industry
- Features 120 figures and tables

**Contents**
- Copper Wire Bonding
- Bonding Process
- Bonding Metallurgies
- Wire Bond Evaluation
- Thermal Reliability Tests
- Mechatronics
- Operating Procedures
- Materials Treatment
- Optical and Electronic Materials

**Target groups**
Professional/practitioner

**Product category**
Professional book
A. El Aroudi, Universitat Rovira i Virgili, Tarragona, Spain

**Bifurcation Behavior in Switched Mode Power Supplies**

This book addresses the needs of researchers in electrical engineering interested in the modeling, simulation, dynamics and bifurcations of switched mode power supplies. It presents in a comprehensive and pedagogical manner, state-of-the-art research on bifurcation prediction in switched mode power supplies, which will help yield design-oriented results for power electronics practitioners.

**Features**
- Uses as examples practical power electronic converters, with practical controllers and parameters
- Reformulates previous research in terms of “figures of merit” widely used by the power electronics community, such as the crossover frequency and phase margin, allowing prediction of sub-harmonic instability
- Offers readers various perspectives on prediction and analysis of the different nonlinear phenomena that a switched mode power converter may exhibit

**Contents**
- Introduction
- Complex Behavior of VMC Buck Converter: Characterization
- Design-oriented Models for Predicting Instabilities in a Buck Switching Power Converter
- Control of PSI in Switching Power Converters
- Extension to Alternative Topologies and Functionalities Aiming Power Management Integrated Circuits

**Fields of interest**
- Circuits and Systems
- Power Electronics
- Electrical Machines and Networks
- Electronics and Micro-electronics

**Target groups**
- Research

**Product category**
- Monograph

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M. Ergen, Koç University, Istanbul, Turkey

**Mobile Broadband**

**WiMAX and LTE**

Mobile Broadband, Second Edition: WiMAX and LTE, provides an up-to-date treatment of mobile broadband and cellular systems along with LTE. The author integrates discussion of the latest wireless standards including cognitive radio and the newest technology and practices in the field into one book. The material is supported by over 300 illustrative illustrations and photos. The work continues to be a good balance of foundational material as well as a good balance of theory, technology and practice.

**Features**
- Offers thorough information on OFDMA and its present technology in 4G
- Helps industry to understand the OFDMA and IEEE 802.16e
- Assists developers and designers of OFDMA based networking systems

**Contents**
- Part I: Fundamentals of Wireless Communication and IP Networking
- Part II: Theory of OFDMA and MIMO
- Part III: Applications of IP-OFDMA and WiMAX Physical Layer

**Fields of interest**
- Communications Engineering
- Networks
- Circuits and Systems
- Signal, Image and Speech Processing

**Target groups**
- Professional/practitioner

**Product category**
- Professional book

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B. Evans, Atherstone, UK

**Partnership in Space**

**The Mid to Late Nineties**

April 12, 2011 was the 50th Anniversary of Yuri Gagarin’s pioneering journey into space. To commemorate this momentous achievement, Springer-Praxis has produced a mini-series of books that reveals how humanity’s knowledge of flying, working, and living in space has grown in the last half century. "Partners in Space" focuses on the early to late 1990s, a time in the post-Soviet era when relations between East and West steadily - though not without difficulty - thawed and the foundations of real harmony and genuine co-operation were laid for the first time with Shuttle-Mir and the International Space Station. This book explores the events which preceded that new ear, including the political demise of Space Station Freedom and the consequences of the fall of the Soviet Union on a once-proud human space program. It traces the history of “the Partnership” through the often traumatic times of Shuttle-Mir and closes on the eve of the launch of Zarya, the first component of today’s International Space Station.

**Features**
- Continues the History of the Human Space Exploration miniseries by Evans, which commemorates over 50 years of humans in space
- Provides complete coverage of the partnership between the Russian and American space shuttle program
- Explores the events which preceded the new era of the mid to late Nineties

**Contents**
- A Stable Time
- An Unstable Time
- Hitting the Stride
- Shuttle-Mir
- Plans for the Future

**Fields of interest**
- Aerospace Technology and Astronautics
- Popular Science in Astronomy
- Extraterrestrial Physics
- Space Sciences

**Target groups**
- Popular/general

**Product category**
- Popular science

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Due July 2013

2013. 200 p. 100 illus. (Lecture Notes in Electrical Engineering, Volume 119) Hardcover
- approx. € (D) 106,95 | € (A) 109,95 | sFr 137,00
- € 99,95 | £86.50

Due July 2013

2nd ed. 2013. 400 p. 300 illus. Hardcover
- approx. € (D) 112.30 | € (A) 115,45 | sFr 137,50
- € 104,95 | £93.00
ISBN 978-1-4614-1736-1

Due September 2013

2013. XX, 580 p. 100 illus. (Springer Praxis Books / Space Exploration) Softcover
- approx. € (D) 205 | € (A) 210 | sFr 260
- € 190 | £165
ISBN 978-1-4614-3277-7
Energy-Efficient Communication Processors

Design and Implementation for Emerging Wireless Systems

This book describes a new design approach for energy-efficient, Domain-Specific Instruction set Processor (DSIP) architectures for the wireless baseband domain. The innovative techniques presented enable co-design of algorithms, architectures and technology, for efficient implementation of the most advanced technologies. To demonstrate the feasibility of the author’s design approach, case studies are included for crucial functionality of advanced wireless systems with increased computational performance, flexibility and reusability.

Features
- Describes a DSIP architecture explicitly for the wireless domain, significantly more efficient than methods commonly in use
- Includes an efficient DSIP architecture template, which can be reused for specific designs
- Uses holistic design approach, considering all relevant requirements and combining many innovative/disruptive design concepts
- Enables design portability, given changing target devices

Contents

Fields of interest
- Circuits and Systems; Processor Architectures; Electronics and Microelectronics, Instrumentation

Target groups
Research

Product category
Monograph

Due June 2013

2013. XXII, 289 p. 88 illus. Hardcover
- € (D) 139,09 | € (A) 142,99 | sFr 173,50
- € 129,99 | £ 117.00
ISBN 978-1-4614-4991-1

Due October 2013

2014. 150 p. 40 illus. Hardcover
- € (D) 64,15 | € (A) 65,95 | sFr 86,00
- € 59,95 | £ 55.99
ISBN 978-3-540-31774-6

Due August 2013

2014. 160 p. 37 illus. in color. Hardcover
- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £ 90.00
ISBN 978-81-322-1301-7
Biologically Inspired Design

Features
- Outlines the state of the art in bioinspired design methods and the outstanding research questions in the field thus clarifying what can be done, what can be done, and what needs to be done
- Contains contributions by a diverse set of leaders in the field that provide existing methods to conduct bio-inspired design
- Provides detailed, specific, and formal methods for how to use nature as inspiration for engineering design
- Thus enabling the design practitioner to apply such methods to their design problems
- Includes chapter relevant URLs, examples and a range of figures an diagrams to illustrate and explain methods and their design and research applications

Contents
1. Introduction
2. The AskNature Database: Enabling Solutions in Biomimetic Design
3. A Natural Language Approach to Biomimetic Design
4. A Thesaurus for Bioinspired Engineering Design
5. Function-Based Bioinspired Design
6. Information-Processing Accounts of Biologically Inspired Sustainable Design
7. Evolution of Undergraduate Biologically Inspired Design Course
8. Supporting Analogical Transfer in Biologically Inspired Design
10. Bioinspiration in Robotics: A Design-Manufacturing Perspective
11. Finding the gaps for BID
12. Evolution and Bio-inspired Design: Natural Limitations

Fields of interest
Engineering Design; Computer-Aided Engineering (CAD, CAE) and Design; Structural Materials

Target groups
Research

Product category
Monograph

Due June 2013
2013. XVII, 345 p. 94 illus. Hardcover
EUR 139,09 | USD 142,99 |
EUR 117,00
ISBN 978-1-4471-5247-7

Due July 2013
2014. XXIX, 481 p. 14 illus. Hardcover
EUR 96,29 | USD 98,99 |
EUR 81,00
ISBN 978-1-4614-7911-6

Due November 2013
2014. X, 376 p. 88 illus., 61 in color. Hardcover
EUR 106,95 |
EUR 109,95 |
EUR 127,50
ISBN 978-1-4614-3295-1

High Performance Cloud Auditing and Applications

Features
- Discusses techniques to improve cloud performance and security
- Covers cloud auditing techniques, cloud data collection techniques, cloud security mechanisms, cloud storage and sharing techniques
- Presents the state of the art in cloud auditing, computing and security techniques

Contents
An Overview of Issues and Recent Developments in Cloud Computing and Storage Security
- Moving Target Defense for Cloud Infrastructures: Lessons from Botnets
- Secure Mobile Cloud Computing and Security Issues
- Information Fusion in a Cloud-Enabled Environment
- Diagnosing Vulnerability Patterns in Cloud Audit Logs
- Exploiting Timing Side Channel for Secure Cloud Scheduling
- Federated Cloud Security Architecture for Secure and Agile Clouds
- Trust-Based Access Control for Secure Computing
- Assured Information Sharing (AIS) Using Private Clouds
- GPGPU Computing for Cloud Auditing
- CPU-GPU System Designs for High Performance Cloud Computing
- MapReduce Performance in Federated Cloud Computing Environments
- Improving Cloud Performance with Router-based Filtering

Fields of interest
Computational Intelligence; Management of Computing and Information Systems; Information Systems and Communication Service

Target groups
Research

Product category
Monograph

Due November 2013
2014. X, 376 p. 88 illus., 61 in color. Hardcover
approx. EUR 106,95 | USD 109,95 |
approx. EUR 127,50
ISBN 978-1-4614-3295-1
Interactive Segmentation Techniques

Algorithms and Performance Evaluation

This book focuses on interactive segmentation techniques, which have been extensively studied in recent decades. Interactive segmentation emphasizes clear extraction of objects of interest, whose locations are roughly indicated by human interactions based on high level perception. This book will first introduce classic graph-cut segmentation algorithms and then discuss state-of-the-art techniques, including graph matching methods, region merging and label propagation, clustering techniques, including graph matching methods, and segmentation methods based on edge detection.

Features

- A comprehensive, up-to-date survey helps readers to learn interactive segmentation techniques quickly and thoroughly.
- Numerous segmentation results and comparisons guide readers to choose appropriate techniques for their applications.
- Provides source codes of representative segmentation algorithms with a convenient user interface for readers’ own testing and further researches.

Contents

Introduction.
- Overview and classification of interactive segmentation methods.
- Interactive segmentation algorithms.
- Performance evaluation.
- Conclusion and future work.

Fields of interest

Signal, Image and Speech Processing; Image Processing and Computer Vision; User Interfaces and Human Computer Interaction.

Target groups

Research.

Product category

Brief.

Due June 2013

2013. 85 p. 27 illus., 20 in color. (SpringerBriefs in Electrical and Computer Engineering / SpringerBriefs in Signal Processing) Softcover

- * (D) 53.45 | (A) 54.95 | sFr 66.50
- * (D) 49.95 | €44.99

ISBN 978-3-642-4451-59-8

Economic Geography

Bifurcation Theory for Hexagonal Agglomeration in Economic Geography

The self-organization of hexagonal agglomeration patterns of industrial regions was first predicted by the central place theory in economic geography based on empirical investigations of cities in West Germany. Its emergence for economic geography models was envisaged by Krugman. This book produces a theoretical foundation for this prediction by its investigation of the bifurcations of economic geography models for a system of cities on a hexagonal lattice. After a brief introduction of the central place theory, the prediction is verified using group-theoretic analysis by first solving the bifurcation equation and next by applying an equivariant branching lemma.

Features

- Attractive new research field for bifurcation theory.
- Interdisciplinary study of economic geography and nonlinear mathematics.
- Detailed theoretical and numerical recipe serviceable for wide audience.

Contents

Hexagonal Distributions in Economic Geography.
- Group-Theoretic Bifurcation Theory.
- Race-track Economy.
- Hexagonal Lattice.
- Hexagons of Christaller and Losch: Solving Bifurcation Equations.
- Numerical Bifurcation Analysis Procedure.
- Hexagonal Distributions in Core-Periphery Models.

Fields of interest


Target groups

Research.

Product category

Monograph.

Due September 2013

2014. 160 p. 43 illus. Hardcover

- * (D) 106.95 | (A) 109.95 | sFr 133.50
- * (D) 99.95 | £90.00


Evolutionary Paths Towards the Mobility Patterns of the Future

This edited volume presents new insights and challenges in the field of electric mobility in relation to new mobility and infrastructure concepts as well as to renewable energies. The book covers the socio-economic view on the topic as well as technical aspects and thus offers valuable knowledge for future business models. It primarily addresses practitioners and researchers in the field but may also be of use to graduate students.

Features

- Highlights trends in the field of electric mobility.
- Includes a socio-economic view as well as technical aspects.
- Provides valuable impulses for new fields of research.

Contents

Mobility needs and mobility concepts.
- Challenges for Companies and Policy.
- Renewable Energy and Mobility.

Fields of interest

Automotive Engineering; Innovation/Technology Management; Renewable and Green Energy.

Target groups

Professional/practitioner.

Product category

Monograph.
Digital Background Calibration of Analog to Digital Converters

Digital Background Calibration of Analog to Digital Converters takes a deep look at the digital calibration techniques in analog-to-digital converters. The problem of compensating for analog circuits impairments is divided into a system identification problem and an error compensation problem. Different approaches in modelling the analog impairments are discussed. Although Digital Background Calibration of Analog to Digital Converters focuses on two popular types of ADCs mainly: Pipeline and Sigma Delta the techniques can be easily used for any analog and mixed-signal design. Design examples are provided that support the theory and show the application of these techniques in designing high performance data acquisitions systems for wireless communication systems, bio-implantable devices and space electronics.

Features
▶ The first book to cover the topic of digital calibration of ADCs for a general type of ADC and general application

Fields of interest
Circuits and Systems; Electronics and Microelectronics, Instrumentation; Electrical Engineering

Target groups
Research

Product category
Monograph

Nonlinear Approaches in Engineering Applications 2

Nonlinear Approaches in Engineering Applications 2 focuses on the application of nonlinear approaches to different engineering and science problems.

Features
▶ Provides updated principles and applications of the nonlinear approaches in solving engineering and physics problems
▶ Demonstrates how nonlinear approaches may open avenues to better, safer, cheaper systems with less energy consumption
▶ Has a strong emphasis on the application, physical meaning, and methodologies of nonlinear approaches in different engineering and science problems

Contents

Fields of interest
Vibration, Dynamical Systems, Control; Control; Calculus of Variations and Optimal Control; Optimization

Target groups
Research

Product category
Monograph

Modern Earthquake Engineering for Offshore and Onland Structures

Promoting Real World Engineering Toward State of the Art

Features
▶ First book focusing on offshore earthquake engineering
▶ Covers a wide range of related topics including tsunamis and the sudden drop of platforms
▶ Reflects the current state-of-the-art in earthquake engineering
▶ Addresses practicing engineers as well as academic researchers and graduate students

Contents

Fields of interest
Geotechnical Engineering, Foundations, Hydraulics; Geotechnical Engineering & Applied Earth Sciences; Structural Mechanics

Target groups
Professional/practitioner

Product category
Professional book
Introduction to Embedded Systems
Using Microcontrollers and the MSP430

This textbook serves as an introduction to the subject of embedded systems design, using microcontrollers as core components. It develops concepts from the ground up, covering the development of embedded systems technology, architectural and organizational aspects of controllers and systems, processor models, and peripheral devices. Since microprocessor-based embedded systems tightly blend hardware and software components in a single application, the book also introduces the subjects of data representation formats, data operations, and programming styles.

Features
- Provides textbook coverage of embedded systems, with an emphasis on the practical use of microcontrollers
- Covers embedded software fundamentals, including software planning, assembly language, and C-language program development
- Includes detailed treatment of embedded hardware fundamentals, discussing structure, interfacing and configuration of hardware building blocks
- Emphasizes examples and exercises that reflect real applications for embedded systems design

Contents
Introduction
Number Systems and Data Formats
Microcomputer Organization
Assembly Language Programming
Embedded Programming Using C
Fundamentals of Interfacing
Embedded Peripherals
External World Interfaces
Principles of Serial Communication
The Analog Signal Chain

Fields of interest
Circuits and Systems; Processor Architectures; Electronics and Microelectronics; Instrumentation

Target groups
Upper undergraduate

Product category
Undergraduate textbook

N.-D. Jin, Z.-K. Gao, Tianjin University, China;
W.-X. Wang, Arizona State University, Tempe, AZ, USA

Nonlinear Analysis of Gas-Water/Oil-Water Two-Phase Flow in Complex Networks

Understanding the dynamics of multi-phase flows has been a challenge in the fields of nonlinear dynamics and fluid mechanics. This chapter reviews our work on two-phase flow dynamics in combination with complex network theory. We systematically carried out gas-water/oil-water two-phase flow experiments for measuring the time series of flow signals which is studied in terms of the mapping from time series to complex networks.

Features
- Complex network theory and its applications to multi-phase flow
- Complex flow behavior in multi-phase flow
- Details about complex networks from experimental time series signals are provided
- Understanding the complex dynamics underlying multi-phase flow

Contents

Fields of interest
Engineering Fluid Dynamics; Industrial Chemistry/Chemical Engineering; Phase Transitions and Multiphase Systems

Target groups
Professional/practitioner

Product category
Brief

J. U. Kang, Johns Hopkins University, Baltimore, MD, USA (Ed)

Fiber Optic Sensing and Imaging

This book is designed to highlight the basic principles of fiber optic imaging and sensing devices. The book provides the readers with a solid foundation in fiber optic imaging and sensing devices. The text begins with an introductory chapter that starts from Maxwell’s equations and ends with the derivation of the basic optical fiber characteristic equations and solutions (i.e., fiber modes). Also covered within are reviews of the most common fiber optic interferometric devices which are the basis for many fiber optic imaging and sensing systems. The author discusses the basics of fiber optic imagers with an emphasis on fiber optic confocal microscope. Including chapters on fiber Bragg grating based sensor and various applications and fiber Sagnac loop based sensors. The book also provides useful forms of device characteristic equations.

Features
- Discusses basic optical and mechanical properties of optical fiber
- Covers a large number of figures that will help readers understand the material
- Demonstrates easy to follow derivations and analysis
- Presents a list of references that will be helpful to professionals and researchers

Contents

Fields of interest
Microwaves, RF and Optical Engineering; Communications Engineering, Networks; Signal, Image and Speech Processing

Target groups
Research

Product category
Monograph

Due June 2013

- € (D) 96,29 | € (A) 98,99 | sFr 120,00
- € 89,99 | £81.00
ISBN 978-1-4614-3142-8

Due June 2013

2013. X, 109 p. 73 illus., 41 in color. (SpringerBriefs in Applied Sciences and Technology) Softcover
- € (D) 53,45 | € (A) 54,95 | sFr 66,50
- € 49,95 | £44.99
ISBN 978-3-642-38372-4

Due June 2013

2013. V, 245 p. 124 illus., 70 in color. Hardcover
- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00
ISBN 978-1-4614-7481-4
Independent Component Analysis of Edge Information for Face Recognition

The book presents research work on face recognition using edge information as features for face recognition with ICA algorithms. The independent components are extracted from edge information. These independent components are used with classifiers to match the facial images for recognition purpose. In their study, authors have explored Canny and LOG edge detectors as standard edge detection methods. Oriented Laplacian of Gaussian (OLOG) method is explored to extract the edge information with different orientations of Laplacian pyramid. Multiscale wavelet model for edge detection is also proposed to extract edge information.

Features

- Discusses novel approaches on face recognition using edge information with ICA algorithms
- Details different methods and models for edge detection
- Provides insights for advance research work in the area of image processing and biometrics

Contents

Canny Edge Detection for Face Recognition using ICA.
- Laplacian of Gaussian (LOG) Edge Detection for Face Recognition using ICA.
- Oriented Laplacian of Gaussian (OLOG) Edge Detection for Face Recognition using ICA.
- Multiscale Wavelet based Edge Detection for Face Recognition using ICA.

Fields of interest

Signal, Image and Speech Processing; Biometrics; Computational Intelligence

Target groups

Research

Product category

Brief

Due July 2013

2014. Approx. 1500 p. 250 illus., 50 in color.
- approx. € (D) 747.93 | £ (A) 768.90 | sFr 931.00
- approx. € 699.00 | £629.50
ISBN 978-94-007-5051-7

Due May 2013

- * (D) 80.24 | (A) 82.49 | sFr 100.00
- € 74.99 | £67.99
ISBN 978-3-642-38052-5

Handbook of Photonics in Biomedical Engineering

Contents

I Principles and computational methods of nanophotonics describes fundamentals of electromagnetic waves when they interact with nanostructures and numerical approaches that can be adopted to understand and simulate the wave behavior affected and modulated by nanoscale optical systems.
- II Materials and fabrication for nanophotonic structures presents novel nanophotonic materials and structures that may be used to implement specific optical properties: for example, nanoparticles, nanopolymers, nanocrystals, photonic crystals, nanorods, and nanophotonic waveguides and fibers.

Fields of interest

Biomedical Engineering; Optics, Optoelectronics, Plasmonics and Optical Devices; Nanotechnology

Target groups

Research

Product category

Handbook
F. Klocke, RWTH Aachen, Germany

**Modeling and Planning of Manufacturing Processes**

*Numerical Methods on Forming Processes*

“Modeling and planning of manufacturing processes” provides the reader with detailed information about the different kinds of numerical modeling methods for the manufacturing processes forming, cutting and grinding, integrated in technology planning and design of process chains. Basic approaches in modeling are presented. The orientation towards industrial applications for many kinds of modeling methods was evaluated. Empirical, analytical and numerical models are introduced. Finite Element Methods (FEM) are widely applied in the design of new manufacturing tools, their application is described and numerous application examples of FEM are presented. The method is a valuable device for the process planner for the design and the analysis of the metal forming process. Even complex forming processes can be analysed by means of the FEM.

**Features**
- Modeling and simulation of forming processes become useful tools for the development, planning and surveillance of industrial forming processes
- They will be integrated into complex manufacturing planning systems
- The topics are highly relevant for advanced industries

**Contents**
- Introduction.
- Fundamentals of Modeling.
- Forming processes.
- Cutting processes.
- Grinding processes.
- Processing of Simulation Data.
- Introduction in Technology Planning.
- Design of Process Chains.

**Fields of interest**
- Operating Procedures, Materials Treatment;
- Manufacturing, Machines, Tools;
- Characterization and Evaluation of Materials

**Target groups**
- Professional/practitioner

**Product category**
- Professional book

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O. Kramer, University of Oldenburg, Oldenburg, Germany

**Dimensionality Reduction with Unsupervised Nearest Neighbors**

This book is devoted to a novel approach for dimensionality reduction based on the famous nearest neighbor method that is a powerful classification and regression approach. It starts with an introduction to machine learning concepts and a real-word application from the energy domain. Then, unsupervised nearest neighbors (UNN) is introduced as efficient iterative method for dimensionality reduction. Various UNN models are developed step by step, reaching from a simple iterative strategy for discrete latent spaces to a stochastic kernel-based algorithm for learning submanifolds with independent parameterizations. Extensions that allow the embedding of incomplete and noisy patterns are introduced. Various optimization approaches are compared, from evolutionary to swarm-based heuristics. Experimental comparisons to related methodologies taking into account artificial test data sets and also real-world data demonstrate the behavior of UNN in practical scenarios.

**Features**
- Presents recent research in the Hybridization of Metaheuristics for Optimization Problems
- State-of-the-Art book
- Written from a leading expert in this field

**Contents**
- Part I Foundations.
- Part II Unsupervised Nearest Neighbors.
- Part III Conclusions.

**Fields of interest**
- Appl. Mathematics/Computational Methods of Engineering;
- Artificial Intelligence (incl. Robotics);
- Operation Research/Decision Theory

**Target groups**
- Research

**Product category**
- Monograph

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V. Krishnaraj, PSG College of Technology, Tamil Nadu, India; R. Zitoune, Toulouse University, France; J. P. Davim, University of Aveiro, Portugal

**Drilling of Polymer-Matrix Composites**

This brief focus on drilling of polymer matrix composites for aerospace and defence applications. It gives an introduction to machining of polymer composites and discusses drilling as a processing of composites.

**Features**
- Presents practical solution for composites damage
- Reports an important issue in aerospace research
- Focus on a single, specific controlling process

**Contents**
- Introduction.
- Drilling of Composites.
- Effects of drill points while drilling of composites.
- Effects of drill points while drilling at high spindle speed.
- Numerical prediction of the critical thrust force causing delamination at hole exit.
- Effects of drilling parameters on mechanical strength.
- Behavior of composite plates with drilled and molded hole under tensile load.

**Fields of interest**
- Operating Procedures, Materials Treatment;
- Structural Materials; Aerospace Technology and Astronautics

**Target groups**
- Research

**Product category**
- Monograph

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Due August 2013

2014. Approx. 250 p. Softcover
- € (D) 106,95 | € (A) 109,95 | sFr 133,50
- € 99,95 | €90.00
ISBN 978-3-540-23494-4

Due June 2013

2013. XII, 132 p. (Intelligent Systems Reference Library, Volume 51) Hardcover
- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00
ISBN 978-3-642-38651-0

Due July 2013

- € (D) 53,49 | € (A) 54,99 | sFr 67,00
- € 49,99 | £44.99
ISBN 978-3-642-38344-1
**Engineering**

T. Kubiak, Lodz University of Technology, Poland

**Static and Dynamic Buckling of Thin-Walled Plate Structures**

This monograph deals with buckling and postbuckling behavior of thin plates and thin-walled structures with flat wall subjected to static and dynamic load. The investigations are carried out in elastic range. The basic assumption here is the thin plate theory. This method is used to determine the buckling load and postbuckling analysis of thin-walled structures subjected to static and dynamic load. The book introduces two methods for static and dynamic buckling investigation which allow for a wider understanding of the phenomenon. Two different methods also can allow uncoupling of the phenomena occurring at the same time and attempt to estimate their impact on the final result. A general mathematical model, adopted in proposed analytical-numerical method, enables the consideration of all types of stability loss i.e. local, global and interactive forms of buckling.

**Features**

- Deals with buckling and postbuckling behavior of thin plates and thin-walled structures
- Presents two distinct models which allow for a wider understanding of the phenomenon
- Allows to uncouple the phenomena occurring at the same time and to estimate their impact on the final result

**Contents**


**Fields of interest**

Continuum Mechanics and Mechanics of Materials; Computational Science and Engineering

**Target groups**

Research

**Product category**

Monograph

Due June 2013

2013. VI, 189 p. 142 illus., 99 in color. Hardcover

- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00

ISBN 978-3-319-00653-6

S. Kulkarni, P. Agrawal, Auburn University, AL, USA

**TCP Performance Analysis for Data Center Networks**

This book addresses the need to improve TCP's performance inside data centers by providing solutions that are both practical and backward compatible with standard TCP versions. The authors approach this challenge first by deriving an analytical model for TCP's performance under typical data center workload traffic. They then discuss some solutions that are designed to improve TCP performance by either proactively detecting network congestion through probabilistic retransmission or by avoiding timeout penalty through dynamic resizing of TCP segments. Experimental results show that each of techniques discussed outperforms standard TCP inside a data center.

**Features**

- Analyzes the reasons behind TCP performance slump inside data centers when operating under synchronized workload traffic
- Introduces solutions to TCP performance slump inside data centers that are both practical and backward compatible
- Describes mechanisms that are responsible for TCP's reliable data transfer flow control and congestion control

**Contents**


**Fields of interest**

Communications Engineering, Networks; Circuits and Systems; Computer Communication Networks

**Target groups**

Research

**Product category**

Brief

Due August 2013

2013. 100 p. 50 illus. (SpringerBriefs in Electrical and Computer Engineering) Softcover

- € (D) 42,75 | € (A) 43,95 | sFr 49,50
- € 39,95 | £33.99


M. Lech, RMIT University, Melbourne, VIC, Australia; I. Song, James Cook University Australia, Singapore; P. Yellowlees, UC Davis, Sacramento, CA, USA; J. Diederich, The University of Queensland, Brisbane, QLD, Australia (Eds)

**Mental Health Informatics**

This book introduces approaches that have the potential to transform the daily practice of psychiatrists and psychologists. This includes the asynchronous communication between mental health care providers and clients as well as the automation of assessment and therapy. Speech and language are particularly interesting from the viewpoint of psychological assessment.

**Features**

- First book on ’Mental Health Informatics’ on the market
- Presents computational methods in mental health
- Written by a leading expert in the field

**Contents**


**Fields of interest**

Computational Intelligence; Artificial Intelligence (incl. Robotics); Biomedical Engineering

**Target groups**

Research

**Product category**

Monograph

Due July 2013

2014. XII, 255 p. 85 illus. (Studies in Computational Intelligence, Volume 491) Hardcover

- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00

ISBN 978-3-642-38549-0
New Series
Solid State Lighting Technology and Application Series

Ed: W. Ling, Series editor: G. Q. Zhang

Driven by societal needs and challenges, fast development of LED and semiconductors technologies, lighting is going through a radical transformation. This transformation is characterized by continuous and aggressive efficacy increase and cost reduction to replace traditional light sources by LED; revolution of forms and fixtures; seamless integration of LED light sources with semiconductors to create digitalized and smart lighting systems and solutions; emerging of “more than Illumination” functions and applications by using LED for healthcare and wellbeing, horticulture and food, communication, safety and security, etc. The success of this lighting transformation depends on not only the industry and market development, but also the creation and exploitation of new fundamental knowledge and talent development. This book series is the concerted action of global experts from industry and academia. It aims to provide the state-of-the-art fundamental theory and knowledge, the latest technology development, best industrial practices and guidance for academic research, technology and industrial development. It will cover all aspects of development of SSL, such as materials, device technologies, packaging and modules, luminaries & systems, thermal management, testing, reliability, total life time management, equipment, power management, sensors, communication and control, design and architecture, and other newly emerged scientific domains.

C. J. Lasance, Philips Research Emeritus, Nuenen, The Netherlands; A. Poppe, Mentor Graphics Mechanical Analysis Division, Budapest, Hungary (Eds)

Thermal Management for LED Applications

Features
▶ Presents a comprehensive overview of the basics of thermal management as it relates to LEDs and LED-based systems
▶ Discusses both design and thermal management considerations when manufacturing LEDs and LED-based systems
▶ Covers reliability and performance of LEDs in harsh environments
▶ Has a hands-on applications approach that looks at the importance of thermal management of LEDs in the automotive and aerospace fields

Contents

Fields of interest
Electronics and Microelectronics, Instrumentation; Optical and Electronic Materials; Circuits and Systems

Target groups
Research

Product category
Monograph

Due July 2013

▶ € (D) 181,89 | € (A) 186,99 | sFr 226,50
▶ € 169,99 | £153.00
ISBN 978-1-4614-5090-0

X.-J. Liu, J. Wang, Tsinghua University, Beijing, China

Parallel Kinematics
Type, Kinematics, and Optimal Design

Parallel Kinematics - Type, Kinematics, and Optimal Design presents the results of 15 year’s research on parallel mechanisms and parallel kinematics machines. This book covers the systematic classification of parallel mechanisms (PMs) as well as providing a large number of mechanical architectures of PMs available for use in practical applications. It focuses on the kinematic design of parallel robots.

Features
▶ The first book concerning about kinematics of parallel mechanisms covering type, kinematics and optimal design
▶ Presenting many novel concepts and approaches, i.e. type synthesis based on evolution, performance evaluation and optimization based on screw theory, singularity analysis taking into account motion and force transmissibility
▶ Providing a large number of novel mechanical architectures of PMs available for use in practical application

Contents

Fields of interest
Mechanical Engineering; Robotics and Automation; Manufacturing, Machines, Tools

Target groups
Research

Product category
Monograph

Due July 2013

2014, CCCLXIV, 10 p. 239 illus., 7 in color. (Springer Tracts in Mechanical Engineering) Hardcover
▶ € (D) 106,99 | € (A) 109,99 | sFr 133,50
▶ € 99,99 | £90.00
ISBN 978-3-642-36928-5
**Engineering**

X. Liu, University of California, Berkeley, CA, USA; Q. Xu, The Chinese University of Hong Kong, Shatin, Hong Kong

**Trace-Based Post-Silicon Validation for VLSI Circuits**

This book first provides a comprehensive coverage of state-of-the-art validation solutions based on real-time signal tracing to guarantee the correctness of VLSI circuits. The authors discuss several key challenges in post-silicon validation and provide automated solutions that are systematic and cost-effective.

**Features**

- Provides a comprehensive summary of state-of-the-art post-silicon validation
- Offers automated solutions that are systematic and cost-effective for post-silicon validation, from trace signal selection to trace data transfer
- Illustrate key concepts and algorithms with real examples

**Contents**


**Fields of interest**

Circuits and Systems; Processor Architectures; Semiconductors

**Target groups**

Research

**Product category**

Monograph

---

**J. M. Maestre**, University of Seville, Spain; **R. R. Negenborn**, Delft University of Technology, The Netherlands (Eds)

**Distributed Model Predictive Control Made Easy**

**Contents**


**Fields of interest**

Control; Vibration, Dynamical Systems, Control; Systems Theory, Control

**Target groups**

Research

**Product category**

Monograph

---

**M. Mihelj, D. Novak, S. Begus**, University of Ljubljana, Slovenia

**Virtual Reality Technology and Applications**

As virtual reality expands from the imaginary worlds of science fiction and pervades every corner of everyday life, it is becoming increasingly important for students and professionals alike to understand the diverse aspects of this technology. This book aims to provide a comprehensive guide to the theoretical and practical elements of virtual reality, from the mathematical and technological foundations of virtual worlds to the human factors and the applications that enrich our lives: in the fields of medicine, entertainment, education and others.

**Features**

- Presents the main technological and design aspects of virtual reality in a concise form
- Provides theoretical background for all sensing and feedback modalities of virtual reality systems (including kinematics and dynamics of virtual environments)
- Theoretical and practical aspects are illustrated with more than 170 detailed figures explaining basic principles

**Contents**


**Fields of interest**

Engineering Design; Computer Imaging, Vision, Pattern Recognition and Graphics; Information Systems Applications (incl. Internet)

**Target groups**

Graduate

**Product category**

Graduate/Advanced undergraduate textbook
**Computer Vision Analysis of Image Motion by Variational Methods**

This book presents a unified view of image motion analysis under the variational framework. Variational methods, rooted in physics and mechanics, but appearing in many other domains, such as statistics, control, and computer vision, address a problem from an optimization standpoint, i.e., they formulate it as the optimization of an objective function or functional. The methods of image motion analysis described in this book use the calculus of variations to minimize (or maximize) an objective functional which transcribes all of the constraints that characterize the desired motion variables. The book addresses the four core subjects of motion analysis: Motion estimation, detection, tracking, and three-dimensional interpretation. Each topic is covered in a dedicated chapter.

**Features**
- Covers the four core subjects of motion analysis: motion estimation, detection, tracking, and 3d-interpretation
- Includes an overview on the mathematical background needed for variational methods
- Written by well-known experts in the field

**Contents**

**Fields of interest**
Signal, Image and Speech Processing; Fluid- and Aerodynamics; Engineering Fluid Dynamics

**Target groups**
Research

**Product category**
Monograph

---

**Optimization of Structures and Components**

Written by an international group of active researchers in the field, this volume presents innovative formulations and applied procedures for sensitivity analysis and structural design optimization. Eight chapters discuss subjects ranging from recent developments in the determination and application of topological gradients, to the use of evolutionary algorithms and meta-models to solve practical engineering problems. With such a comprehensive set of contributions, the book is a valuable source of information for graduate students and researchers entering or working in the matter.

**Features**
- Presents innovative formulations and applied procedures for sensitivity analysis and structural design optimization
- Written by an international group of active researchers in the field
- Valuable source of information for graduate students and researchers entering or working in the matter

**Contents**

**Fields of interest**
Theoretical and Applied Mechanics; Optimization; Characterization and Evaluation of Materials

**Target groups**
Research

**Product category**
Monograph

---

**Security, Privacy and Trust in Cloud Systems**


**Fields of interest**
Communications Engineering, Networks; Systems and Data Security; Data Encryption

**Target groups**
Research

**Product category**
Monograph

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Due June 2013

2013. VII, 209 p. 54 illus., 29 in color. (Springer Topics in Signal Processing, Volume 10) Hardcover

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ISBN 978-3-319-00710-6

Due June 2013

2013. VI, 214 p. 80 illus., 32 in color. (Advanced Structured Materials, Volume 43) Hardcover

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ISBN 978-3-319-00716-8

Due September 2013

2014. 450 p. 130 illus., 100 in color. Hardcover

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ISBN 978-3-642-38585-8
Hydraulically Actuated Hexapod Robots
Design, Implementation and Control

Legged robots are a promising locomotion system, capable of performing tasks that conventional vehicles cannot. Even more exciting is the fact that this is a rapidly developing field of study for researchers from a variety of disciplines.

Features
- Discusses the major control issues of walking robots that the authors have been faced with over the past 10 years
- Is the first book to focus especially on very large hydraulically driven hexapod robot locomotion systems weighing more than 2,000 kg
- Touches on many diverse topics including design aspects, implementation issues, navigation and control, walking and working tasks of hexapod robots, and the future of walking robots

Contents

Fields of interest
Mechanical Engineering; Robotics and Automation; Computer System Implementation

Target groups
Research

Product category
Monograph

Due July 2013

- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 133,50
- € 99,95 | £90.00
ISBN 978-4-311-54348-0

Computing Platforms for Software-Defined Radio

Software-Defined Radio (SDR) has been a hot topic both in academic and industrial research already for several years, yet no final definite solution to the implementation architecture for it has emerged. As SDR is a key enabling technology for taking the next step, implementing a true Cognitive Radio, it is high time to overview and discuss the proposals for SDR architecture. The computing platforms for SDR have not been addressed thoroughly and holistically in the literature by now. There are a few books that analyse from a theoretical point of view algorithms, software and hardware techniques to implement SDRs, but a clear point of reference for computer architects is missing.

Features
- Thoroughly and holistically addresses the computing platforms for SDR
- Targets a detailed exploration of the different computing platforms proposed by major players in the field
- Classifies the different approaches by highlighting the common features related to SDR requirements and by showing pros and cons of the proposed solutions

Contents

Fields of interest
Communications Engineering, Networks; Computer Systems Organization and Communication Networks

Target groups
Research

Product category
Monograph

Due June 2013

2013. 300 p. (Signals and Communication Technology, Volume 183) Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 133,50
- € 99,95 | £90.00
ISBN 978-94-007-1832-6

Advances in Bio-Mechanical Systems and Materials

This monograph presents the latest results related to bio-mechanical systems and materials.

Features
- Reports recent activities in characterization and developments of biomaterials and biosystems research
- Includes mechanics of prostheses, implants, medical operation robots, and muscular re-training systems
- Written by well-known experts

Contents
Effect of Lesion Eccentricity on Recirculation Length, Fractional Flow Reserve and Coronary Flow Reserve in Coronary Arteries.- Design of Biomechatronics Robot to Provide Therapy and Remove Tumors.- Nanostructured Hydroxyapatite Coating for Biodegradability Improvement of Magnesium-based alloy Implant.- The effects of cracks emanating from microvoid and bone inclusion in cemented total hip replacement.- Safety measures for avoiding or mitigating the occupant exposure in collisions with large animals.- Mechanical Evaluation of Microimplants for Dental Surgery.- Biomechanical prosthesis design of an orbital cranial cavity.- Optimization of the design of a four bar mechanism for a lower limb prosthesis using the taboo search algorithm.- Chitosan and Poly Vinyl Alcohol blends modified by radiation.- Mutual connections between mechanical and material factors, and the biological processes of implants adaptation.

Fields of interest
Biomedical Engineering; Biomaterials; Biophysics and Biological Physics

Target groups
Research

Product category
Monograph

Due August 2013

- approx. *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00
ISBN 978-3-319-00478-5
A. Öchsner, Technical University of Malaysia, Skudai, Malaysia; H. Altenbach, Otto-von-Guericke University Magdeburg, Germany (Eds)

**Experimental and Numerical Investigation of Advanced Materials and Structures**

**Contents**

- Neural Model for Prediction of Tires Eigenfrequencies.
- Effect of Steady Ampoule Rotation on Radial Dopant Segregation in Vertical Bridgman Growth.
- Discontinuity Detection in the Vibration Signal of Turning Machines.
- Visualization of Global Illumination Variations in Motion Segmentation.
- Evaluation of Fatigue Behavior of SAE 9254 Steel Suspension Springs Manufactured by Two Different Processes: Hot and Cold Winding.
- The Optimum Design of Laminated Slender Beams with Complex Curvature using a Genetic Algorithm.
- A Finite Element Approach For the Vibration of Single-Walled Carbon Nanotubes.
- Characteristics of Welded Thin Sheet AZ31 Magnesium Alloy.
- Localization of Rotating Sound Sources using Time Domain Beamforming Code.
- Free Vibration Analysis of Clamped-Free Composite Elliptical Shell with a Plate Supported By Two Aluminum Bars.
- Vibration Analysis of Carbon Fiber T-Plates with Different Damage Patterns.
- Mechanical Characteristics Of Aa5083 - Aa6013 Weldment Joined With AISI12 And AISI5 Wired - Numerical Simulation of the Penetration of 7.62 mm Armour Piercing Projectile into Ceramic/Composite Armour.

**Fields of interest**

- Continuum Mechanics and Mechanics of Materials; Characterization and Evaluation of Materials; Computational Science and Engineering

**Target groups**

- Research

**Product category**

- Monograph

**Due July 2013**

2013. VI, 330 p. 183 illus., 125 in color. (Advanced Structured Materials, Volume 41) Hardcover

- € (D) 106,99 | € (A) 109,99 | CHF 133,50
- € 99,99 | £90.00

ISBN 978-3-319-00505-8

A. Öchsner, Technical University of Malaysia, Skudai, Malaysia

**Introduction to Scientific Publishing**

**Backgrounds, Concepts, Strategies**

This book is a very concise introduction to the basic knowledge of scientific publishing. It starts with the basics of writing a scientific paper, and recalls the different types of scientific documents. It gives an overview on the major scientific publishing companies and different business models. The book also introduces to abstracting and indexing services and how they can be used for the evaluation of science, scientists, and institutions. Last but not least, this short book faces the problem of plagiarism and publication ethics.

**Features**

- Concise introduction to the basic knowledge of scientific publishing
- Addresses the problem of Plagiarism and Publication Ethics

**Contents**

- Introduction.
- Types of Scientific Publications.
- Publishing Companies, Publishing Fees, and Open Access Journals.
- Abstract and Index Databases (Web of Knowledge, Scopus, Google Scholar).
- Statistical Evaluation of Bibliographical Data.
- Evaluation of Journals, Scientists, and Institutions.
- Publishing in Scientific Journals.
- Ethical Guidelines for Publishing.
- Strategies to Publish.

**Fields of interest**

- Job Careers in Science and Engineering; Science Education; Library Science

**Target groups**

- Research

**Product category**

- Monograph

**Due June 2013**

2013. XII, 117 p. 26 illus., 13 in color. (SpringerBriefs in Applied Sciences and Technology) Softcover

- € (D) 54,99 | € (A) 54,99 | sFr 67,00
- € 49,99 | £44.99

ISBN 978-3-642-38645-9

D. Ortloff, Process Relations, Dortmund, Germany; K. Hahn, R. Brück, Universität Siegen, Germany; T. Schmidt, Elmos Semiconductor AG, Dortmund, Germany; T. Bieniek, G. Janczyk, Instytut Technologii Elektronowej, Warsaw, Poland (Eds)

**MEMS Product Engineering**

**Handling the Diversity of an Emerging Technology**

The book provides methodological background for directing cooperative product engineering projects in a micro and nano technology setting. The methodology is based on well-established methods like PRINCE2 and StageGate and extended by best practices that can be individually tailored to the actual nature and size of the project at hand. The target group are product managers that have a frequent need for customized MNT products.

**Features**

- Provides methodological recipes for directing cooperative product engineering projects in a micro and nano technology setting
- Bridges the gap between theoretical methodology and practical use in MEMS product engineering
- Provides various examples from practice

**Fields of interest**

- Nanotechnology and Microengineering; Engineering Design; Computer-Aided Engineering (CAD, CAE) and Design

**Target groups**

- Research

**Product category**

- Monograph

**Due September 2013**

2014. 300 p. 50 illus. Hardcover

- approx. € (D) 149,75 | € (A) 153,94 | sFr 201,00
- approx. € 139,95 | £126.00

ISBN 978-3-7091-0705-8
Emerging Therapies in Neurorehabilitation

This book reports on the latest technological and clinical advances in the field of neurorehabilitation. It is, however, much more than a conventional survey of the state-of-the-art in neurorehabilitation technologies and therapies. It was formed on the basis of a week of lively discussions between curious PhD students and leading research experts during the summer school on neurorehabilitation (SSNR2012), September 16-21 in Nuévalos, Zaragoza (Spain). Its unconventional format makes it a perfect guide for all PhD students, researchers and professionals interested in gaining a multidisciplinary perspective on current and future neurorehabilitation scenarios.

Features
► Reports on the latest technological and clinical advances in the field of neurorehabilitation ► It is the result of lively discussions between curious PhD students and leading research experts during the summer school on neurorehabilitation (SSNR2012) held on September 16-21 in Nuévalos, Zaragoza (Spain) ► Represents an essential guide for all PhD students, researchers and professionals interested in gaining a multidisciplinary perspective on current and future neurorehabilitation scenarios ► Includes practical examples and case studies related to the application of some of the latest neurorehabilitation techniques in realistic clinical scenarios

Contents
Emerging perspectives in stroke rehabilitation.- Emerging rehabilitation in Cerebral Palsy.

Fields of interest
Biomedical Engineering; Rehabilitation Medicine; Robotics and Automation

Target groups
Research

Product category
Monograph

Due July 2013

2014. VI, 365 p. 54 illus., 13 in color. (Biosystems & Biorobotics, Volume 4) Hardcover
► * € (D) 106,99 | € (A) 109,99 | sFr 133,50
► * € 99,99 | £90.00
ISBN 978-3-642-38555-1
Topological Signal Processing

This authored monograph presents a topological approach to signal processing. Topology is the study of space under continuous transformations. In engineering, continuous distortions arise when there is significant uncertainty. Rather than taking a stochastic approach, recent progress in topological methods allows practitioners in signal processing to address uncertainty in a deterministic fashion. To this end, one uses local data to make global inferences; a hallmark of the mathematics of sheaves. This book provides an efficient treatment of cellular sheaves, and explains how their use is decisive in treating difficult problems in signal processing. The target audience comprises practitioners as well as researchers, but the book may also be beneficial for graduate students.

Features

- Discusses insights and experiences from large network testbeds
- Examines wireless communications, mobile computing, and networks
- Covers cognitive radio networks for UAVs

Contents


Fields of Interest

Communications Engineering, Networks; Signal, Image and Speech Processing; Computer Communication Networks

Target groups

Research

Product category

Monograph

Nonlinear Elastic Waves in Materials

The main goal of the book is a coherent treatment of the theory of propagation in materials of nonlinearly elastic waves of displacements, which corresponds to one modern line of development of the nonlinear theory of elastic waves.

Features

- Presents a coherent treatment of the theory of propagation in materials of nonlinearly elastic waves of displacements
- Applicable in mechanical and other engineering, material science, applied mathematics and physics
- Written by well-known experts in the field

Contents

Preliminary information about waves and materials.- Elastic materials.- The simplest linear waves in elastic materials.- Nonlinear plane longitudinal waves in elastic materials (Murnaghan model, five-constant model).- Nonlinear plane longitudinal waves in elastic materials (John model, five-constant model and Signorini model, three-constant model).- Nonlinear plane transverse waves in hyperelastic materials (Murnaghan model).- Nonlinear plane waves in hypoelastic materials.- Nonlinear plane waves in elastic mixtures (elastic composite materials).- Nonlinear cylindrical and torsional waves in hyperelastic materials.- Nonlinear Rayleigh and Love surface waves.

Fields of interest

Continuum Mechanics and Mechanics of Materials; Characterization and Evaluation of Materials; Computational Science and Engineering

Target groups

Research

Product category

Monograph
Cybernics

Fusion of human, machine and information systems

This book will interest not only graduate school students, scientists, and engineers but also newcomers to this 'Cybernics' field.

Features
- Recent research achievements in the world's leading human assistive technologies in biorobotics
- Mutual approaches from engineering in medicine, and medicine in engineering
- New perspectives and Interdisciplinary approach for quality of life research between engineering, medicine, law and ethics

Contents

Fields of interest
Robotics and Automation; Management of Computing and Information Systems; Nursing

Target groups
Research

Product category
Monograph

Due June 2013

2013. Approx. 250 p. 100 illus., 30 in color. Hardcover ► approx. * € (D) 159,99 | € (A) 129,99 | sFr 213,50
► approx. * £99.99 | * £79.99
ISBN 978-3-642-34515-9

Sliding Mode Control and Observation

The sliding mode control methodology has proven effective in dealing with complex dynamical systems affected by disturbances, uncertainties and unmodeled dynamics. Robust control technology based on this methodology has been applied to many real-world problems, especially in the areas of aerospace control, electric power systems, electromechanical systems, and robotics.

Features
- Provides the reader with a broad range of material from first principles up to the current state-of-the-art in the area of sliding mode control and observation
- Practical case studies, which present the results of real sliding mode controller implementations, are used to illustrate the successful practical application of the theory
- Exercises are provided at the end of each chapter

Contents

Fields of interest
Control, Robotics, Mechatronics; Vibration, Dynamical Systems, Control; Systems Theory, Control

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

Due May 2013

2013. XV, 356 p. 168 illus. (Control Engineering) Hardcover ► * € (D) 64,19 | € (A) 65,99 | sFr 80,00
► * £59.99 | * £53.99

Making Commercial Spaceflight a Reality

“SpaceX – The First Ten Years” is an account of commercial spaceflight's most successful venture. It describes the extraordinary feats of engineering and human achievement that have placed SpaceX at the forefront of the launch industry and made it the most likely candidate for transporting humans to Mars. Since its inception in 2002, SpaceX has sought to change the space launch paradigm by developing a family of launch vehicles that will ultimately reduce the cost and increase the reliability of space access tenfold. Coupled with the newly emerging market for governmental, private, and commercial space transport, this new model will re-ignite humanity's efforts to explore and develop space.

Features
- Describes the vision, leadership, and goals for Elon Musk, head of SpaceX
- Details the development of the Falcon 1,9 and the Falcon Heavy rockets and the technology of the Merlin engines
- Examines the hardware and software designed and built by SpaceX
- Introduces current SpaceX projects, including the Grasshopper reusable launch vehicle and the Stratolaunch System

Contents
Elon Musk - Space Exers.- The Engines – Merlin.- The Rockets: from the Falcon 1 to the Falcon 9.- The Rockets: from the Falcon 9 to the Falcon Heavy.- The Spacecraft – Dragon.- Contracts and Flight Operations.- I'll Put a Man on Mars in 10 Years.- Red Dragon.

Fields of interest
Aerospace Technology and Astronautics; Popular Science in Mathematics/Computer Science/Natural Science/Technology; Entrepreneurship

Target groups
Popular/general

Product category
Popular science
C. Silvano, W. Fornaciari, Politecnico di Milano, Milano, Italy; D. Soudris, National Technical University of Athens, Athens, Greece (Eds)

Run-time Management techniques for Many-core Architectures

This book gives a current snapshot of industrial and academic research from a European funded project, named ZPARMA. It focuses on the definition of suitable parallel programming models, instruction set virtualization, run-time resource management policies and mechanisms, as well as design space exploration methodologies for many-core computing fabrics. New techniques are described and applied in real case studies, such as scalable video coding, cognitive radio and multi-view image processing.

Features
► Addresses programmability of multicore computing fabrics at both the programming language and operating system level ► Leverages component-based software engineering and develops parallelism extraction techniques to identify opportunities for parallelization at an early stage of design ► Employs extensions of existing standards for parallel programming, such as OpenCL, to express data parallelism for manycore computing fabrics

Contents

Fields of interest
Circuits and Systems; Processor Architectures

Target groups
Research

Product category
Monograph

Due July 2013
2014. 250 p. 75 illus. Hardcover ► approx. € (D) 106,95 | € (A) 109,95 | sFr 137,00 ► approx. € 99,95 | £86.50 ISBN 978-1-4614-0955-7

T. W. Simpson, The Pennsylvania State University, University Park, PA, USA; J. Jiao, Georgia Institute of Technology, Atlanta, GA, USA; Z. Siddique, The University of Oklahoma, Norman, OK, USA; K. Hölttä-Otto, Singapore University of Technology and Design, Singapore (Eds)

Advances in Product Family and Product Platform Design

Methods & Applications

Contents

Fields of interest
Industrial and Production Engineering; Production/Logistics/Supply Chain Management; Engineering Design

Target groups
Professional/practitioner

Product category
Monograph

Due August 2013

R. Sinha, P. Roop, The University of Auckland, New Zealand; S. Basu, Iowa State University, Ames, IA, USA

Correct-by-Construction System on Chip Design

This book describes an approach for designing Systems-on-Chip such that the system meets precise mathematical requirements. The methodologies presented enable embedded systems designers to reuse intellectual property (IP) blocks from existing designs in an efficient, reliable manner, automatically generating correct SoCs from multiple, possibly mismatching, components.

Features
► Provides a single-source reference to correct-by-construction SoC design ► Focuses on system-level verification ► Enables optimized design cycles, with techniques to reuse IP blocks reliably ► Uses realistic SoC case studies to highlight the concepts introduced ► Demonstrates techniques using industrial standard SoC frameworks such as ARM AMBA

Contents

Fields of interest
Circuits and Systems; Processor Architectures; Electronics and Microelectronics, Instrumentation

Target groups
Research

Product category
Monograph

Due October 2013
Engineering

D. Sivolella, Scotland, UK
To Orbit and Back Again
How the Space Shuttle Flew in Space

The Space Shuttle has been the dominant machine in the U.S. space program for thirty years and has generated a great deal of interest among space enthusiasts and engineers. This book enables readers to understand its technical systems in greater depth than they have been able to do so before. The author describes the structures and systems of the Space Shuttle, and then follows a typical mission, explaining how the structures and systems used in the launch, orbital operations and the return to Earth. Details of how anomalous events were dealt with on individual missions are also provided, as are the recollections of those who built and flew the Shuttle. Many photographs and technical drawings illustrate how the Space Shuttle functions, avoiding the use of complicated technical jargon.

Features
► Provides a clear and complete description of the Space Shuttle as a flying machine ► Focuses on the engineering aspects of the Space Shuttle rather than mission objectives ► Explains how the Space Shuttle functions with many diagrams, technical drawings, and photographs

Contents

Fields of interest
Aerospace Technology and Astronautics; Popular Science in Astronomy; Extraterrestrial Physics, Space Sciences

Target groups
Popular/general

Product category
Popular science

C. Skelton, Gotham Innovation Greenhouse, New York, USA
Soft City Culture and Technology

The Betaville Project

Soft City Culture and Technology: The Betaville Project discusses the complete cycle of conception, development, and deployment of the Betaville platform. Betaville is a massively participatory online environment for distributed 3D design and development of proposals for changes to the built environment – an experimental integration of art, design, and software development for the public realm.

Features
► Covers artistic, social, and technological aspects of the Betaville project in its development process and implementation ► Demonstrates the feasibility of rigorous and congenial interdisciplinary work using Betaville ► Presents the full cycle from initial performance specifications to outcomes in a variety of use types and conditions

Contents
Introduction and Background.- How Betaville became possible, and necessary.- Strategy: Key Elements of the high-level project design.- Development: Methods, Tools, Specifications, and Workflow.- Deployments: Meeting Needs of Diverse User Types in the Field.- Outcomes: Engagement, Effectiveness, Lessons Learned.- Future Directions for Implementation and Development.

Fields of interest
Communications Engineering, Networks; Media Design; Software Engineering

Target groups
Research

Product category
Monograph

R. d. Sousa Camposinhos, Polytechnic Institute of Porto, Portugal
Stone Cladding Engineering

This volume presents new methodologies for the design of dimension stone based on the concepts of structural design while preserving the excellence of stonemasonry practice in façade engineering. Straightforward formulae are provided for computing action on cladding, with special emphasis on the effect of seismic forces, including an extensive general methodology applied to non-structural elements. Based on the Load and Resistance Factor Design Format (LRDF), minimum slab thickness formulae are presented that take into consideration stress concentrations analysis based on the Finite Element Method (FEM) for the most commonly used modern anchorage systems. Calculation examples allow designers to solve several anchorage engineering problems in a detailed and objective manner, underlining the key parameters. The design of the anchorage metal parts, either in stainless steel or aluminum, is also presented.

Features
► Formula and tables for the evaluation of strength capacity of dowel, undercut and kerf anchorage systems are given ► Provides an introduction to prestressed natural Stone panels ► Includes practical Calculation Examples

Contents

Fields of interest
Civil Engineering; Structural Materials; Structural Mechanics

Target groups
Research

Product category
Monograph

Due September 2013
2013. 500 p. 200 illus., 50 in color. (Springer Praxis Books / Space Exploration) Softcover ► approx. * € (D) 37,40 | € (A) 38,45 | sFr 48,00 ► approx. € 34,95 | £29.99 ISBN 978-1-4614-0982-3

Due October 2013

Due July 2013

124
K. Sozański, University of Zielona Góra, Poland

**Digital Signal Processing in Power Electronics Control Circuits**

Many digital control circuits in current literature are described using analog transmittance. This may not always be acceptable, especially if the sampling frequency and power transistor switching frequencies are close to the band of interest. Therefore, a digital circuit is considered as a digital controller rather than an analog circuit. This helps to avoid errors and instability in high frequency components.

**Features**
- Discusses problems concerning the design and realization of digital control algorithms for power electronics circuits using digital signal processing (DSP) methods
- Covers the general problems of analog signal acquisition from power electronics digital control circuitry, such as: sampling rate, number of bits, galvanic isolation, signal-to-noise ratio $SNR$, anti-aliasing filter, AC and DC current sensors, bandwidth of signal, signal range
- Includes Matlab examples for illustration of considered problems

**Contents**

**Fields of interest**
Power Electronics, Electrical Machines and Networks; Signal, Image and Speech Processing; Circuits and Systems

**Target groups**
Research

**Product category**
Monograph

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S. Srinivasan, Texas A & M International University, Laredo, TX, USA

**Cloud Computing Basics**

Cloud Computing Basics covers the main aspects of this fast moving technology so that both practitioners and students will be able to understand cloud computing. The author highlights the key aspects of this technology that a potential user might want to investigate before deciding to adopt this service. This book explains how cloud services can be used to augment existing services such as storage, backup and recovery. Addressing the details on how cloud security works and what the users must be prepared for when they move their data to the cloud. Also this book discusses how businesses could prepare for compliance with the laws as well as industry standards such as the Payment Card Industry.

**Features**
- Presents in simple terms all the essential concepts related to cloud computing
- Explains the issues of importance to consider in selecting cloud service
- Describes how to meet the compliance requirements while using cloud service

**Contents**

**Fields of interest**
Communications Engineering, Networks; Computer Systems Organization and Communication Networks; Signal, Image and Speech Processing

**Target groups**
Research

**Product category**
Brief

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P. Srinivasan, Texas Instruments, Dallas, TX, USA

**Low-Frequency Noise in Semiconductors**

Features
- Provides an accessible, comprehensive reference to low-frequency noise
- Covers perennial problems in electronic circuits, such as phase noise in DCOs and PLLs and clock jitter in communication circuits, as well as recent research in the area of random telegraph signal (RTS) affecting SRAMs and nanowires
- Includes coverage of how to identify noise criticality during circuit design, how to suppress its behavior by effective engineering and the trade-offs for a successful product design

**Contents**

**Fields of interest**
Circuits and Systems; Semiconductors

**Target groups**
Professional/practitioner

**Product category**
Professional book

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Due July 2013

2013. XVI, 263 p. 263 illus. (Power Systems) Hardcover

- *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- *€ 99,99 | £90.00

ISBN 978-1-4471-5266-8

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Due November 2013

2014. 100 p. (SpringerBriefs in Electrical and Computer Engineering) Softcover

- *€ (D) 32,05 | € (A) 32,95 | sFr 39,50
- *€ 29,95 | £26.99


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Due June 2013

2013. 500 p. 150 illus. Hardcover

- *€ (D) 112,30 | € (A) 115,45 | sFr 137,50
- *€ 104,95 | £93.00

ISBN 978-1-4614-2091-0
Wireless Power Transfer for Medical Microsystems

This book provides an in-depth introduction to the newest technologies for designing wireless power transfer systems for medical applications. The authors present a systematic classification of the various types of wireless power transfer, with a focus on inductive power coupling. Readers will learn to overcome many challenges faced in the design of a wirelessly powered implant, such as power transfer efficiency, power stability, and the size of power antennas and circuits. This book focuses exclusively on medical applications of the technology and a batteryless capsule endoscopy system and other, real wirelessly powered systems are used as examples of the techniques described.

Features
► Provides an in-depth introduction to the newest technologies for designing wireless power transfer systems for medical applications. ► Describes techniques to overcome challenges faced in the design of a wirelessly powered implant. ► Presents the newest antenna and circuit technologies of inductive power coupling for medical applications. ► Includes real examples of wirelessly powered medical Microsystems, including batteryless endoscopic capsule and other systems.

Contents

Fields of Interest
Circuits and Systems; Biomedical Engineering; Electronics and Microelectronics, Instrumentation

Target groups
Professional/practitioner

Product category
Professional book

Due August 2013


Ultrasonic Fluid Quantity Measurement in Dynamic Vehicular Applications

A Support Vector Machine Approach

Accurate fluid level measurement in dynamic environments can be assessed using a Support Vector Machine (SVM) approach. SVM is a supervised learning model that analyzes and recognizes patterns. It is a signal classification technique which has far greater accuracy than conventional signal averaging methods.

Features
► Covers the dynamic aspect (sloshing) of the fluid level measurement system in the vehicle and uses SVM as a method to improve accuracy of the system and recognize the sloshing pattern in the fuel tank with superior accuracy. ► Discusses extensive experimental results based on practical application. ► Includes many illustrations and examples.

Contents
Introduction.- Ultrasonic Sensing Technology.- Ultrasonic Sensor Based Fluid Level Sensing Using Support Vector Machines.- Methodology and Experimental Program.- Experimentation.- Results.- Discussion.- Conclusion and Future Work.

Fields of Interest
Automotive Engineering; Engineering Fluid Dynamics; Measurement Science and Instrumentation

Target groups
Research

Product category
Monograph

Due July 2013

2014. XII, 211 p. 90 illus., 24 in color. Hardcover ► * € (D) 106,99 | € (A) 109,99 | sFr 133,50 ♦ € 99,99 | £ 90.00 ISBN 978-3-319-00632-1
A. Tiwari, University of Hawaii, Honolulu, HI, USA (Ed)

**Nanomechanical Analysis of High Performance Materials**

**Contents**

**Fields of interest**
Structural Mechanics; Characterization and Evaluation of Materials; Nanotechnology

**Target groups**
Research

**Product category**
Monograph

Due September 2013

2014. X. 290 p. 80 illus., 40 in color. (Solid Mechanics and Its Applications, Volume 203) Hardcover
► approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. * € 99,95 | £90.00

H. K. Tönshoff, B. Denkena, Leibniz University of Hannover, Garbsen, Germany

**Basics of Cutting and Abrasive Processes**

Manufacturing is the basic industrial activity generating real value. Cutting and abrasive technologies are the backbone of precision production in machine, automotive and aircraft building as well as of production of consumer goods. We present the knowledge of modern manufacturing in these technologies on the basis of scientific research. The theory of cutting and abrasive processes and the knowledge about their application in industrial practice are a prerequisite for the studies of manufacturing science and an important part of the curriculum of the master study in German mechanical engineering. The basis of this book is our lecture “Basics of cutting and abrasive processes” (4 semester hours/3 credit hours) at the Leibniz University Hannover, which we offer to the diploma and master students specializing in manufacturing science.

**Features**
► Based on a lecture “Basics of cutting and abrasive processes” held at the Leibniz University Hannover, Germany ► Comprehensive research introduces the newest results in the relevant fields ► Written by renowned experts in the field

**Contents**

**Fields of interest**
Operating Procedures, Materials Treatment; Machinery and Machine Elements

**Target groups**
Research

**Product category**
Monograph

Due June 2013

2013. VI. 486 p. 348 illus., 59 in color. (Lecture Notes in Production Engineering) Hardcover
► * € (D) 139,09 | € (A) 142,99 | sFr 173,50
► * € 129,99 | £117.00
ISBN 978-3-642-33256-2

M. J. van der Horst, Amsterdam University of Applied Sciences, The Netherlands; W. A. Serdijn, Delft University of Technology, The Netherlands; A. C. Linnenbank, Heart Center, Amsterdam, The Netherlands

**EMI-Resilient Amplifier Circuits**

This book enables circuit designers to reduce the errors introduced by the fundamental limitations (noise, bandwidth, and signal power) and electromagnetic interference (EMI) in negative-feedback amplifiers. The authors describe a systematic design approach for application specific negative-feedback amplifiers, with specified signal-to-error ratio (SER). This approach enables designers to calculate noise, bandwidth, EMI, and the required bias parameters of the transistors used in application specific amplifiers in order to meet the SER requirements.

**Features**
► Describes design methods that incorporate electromagnetic interference (EMI) in the design of application specific negative-feedback amplifiers ► Provides designers with a structured methodology to avoid the use of trial and error in meeting signal-to-error ratio (SER) requirements ► Equips designers to increase EMI immunity of the amplifier itself, thus avoiding filtering at the input, reducing the number of components and avoiding detrimental effects on noise and stability

**Contents**

**Fields of interest**
Circuits and Systems; Electronics and Microelectronics; Instrumentation; Electronic Circuits and Devices

**Target groups**
Research

**Product category**
Monograph

Due June 2013

2013. XIV, 300 p. 75 illus., 1 in color. (Analog Circuits and Signal Processing, Volume 118) Hardcover
► * € (D) 106,99 | € (A) 109,99 | sFr 133,50
► * € 99,99 | £90.00
ISBN 978-3-319-00592-8
J.-E. Vinnem, University of Stavanger, Norway

**Offshore Risk Assessment vol 1.**

**Principles, Modelling and Applications of QRA Studies**

Offshore Risk Assessment was the first book to deal with quantified risk assessment (QRA) as applied specifically to offshore installations and operations. Risk assessment techniques have been used for more than three decades in the offshore oil and gas industry, and their use is set to expand increasingly as the industry moves into new areas and faces new challenges in older regions. This updated and expanded third edition has been informed by a major R&D program on offshore risk assessment in Norway and summarizes research from 2006 to the present day.

**Features**

► Gives a detailed overview of all aspects of QRA is useful for graduate students, researchers, consultants, and authorities  ► Expands on the practical applications or quantitative risk analysis methodology to offshore petroleum applications from the second edition with new research  ► Includes new chapters to cover the specific case studies of the US Macondo incident of 2010

**Contents**


**Fields of Interest**

Quality Control, Reliability, Safety and Risk; Environmental Management; Offshore Engineering

**Target groups**

Graduate

**Product category**

Graduate/Advanced undergraduate textbook

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J.-E. Vinnem, University of Stavanger, Norway

**Offshore Risk Assessment vol 2.**

**Principles, Modelling and Applications of QRA Studies**

Offshore Risk Assessment was the first book to deal with quantified risk assessment (QRA) as applied specifically to offshore installations and operations. Risk assessment techniques have been used for more than three decades in the offshore oil and gas industry, and their use is set to expand increasingly as the industry moves into new areas and faces new challenges in older regions.

**Features**

► Gives a detailed overview of all aspects of QRA is useful for graduate students, researchers, consultants, and authorities  ► Expands on the practical applications or quantitative risk analysis methodology to offshore petroleum applications from the second edition with new research  ► Includes new chapters to cover the specific case studies of the US Macondo incident of 2010

**Contents**


**Fields of Interest**

Quality Control, Reliability, Safety and Risk; Environmental Management; Offshore Engineering

**Target groups**

Graduate

**Product category**

Graduate/Advanced undergraduate textbook

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J.-E. Vinnem, University of Stavanger, Norway

**Offshore Risk Assessment**

**Principles, Modelling and Applications of QRA Studies**

Offshore Risk Assessment was the first book to deal with quantified risk assessment (QRA) as applied specifically to offshore installations and operations. Risk assessment techniques have been used for more than three decades in the offshore oil and gas industry, and their use is set to expand increasingly as the industry moves into new areas and faces new challenges in older regions. This updated and expanded third edition has been informed by a major R&D program on offshore risk assessment in Norway and summarizes research from 2006 to the present day. Rooted with a thorough discussion of risk metrics and risk analysis methodology, subsequent chapters are devoted to analytical approaches to escalation, escape, evacuation and rescue analysis of safety and emergency systems. Separate chapters analyze the main hazards of offshore structures: fire, explosion, collision, and falling objects as well as structural and marine hazards. Risk mitigation and control are discussed, as well as an illustration of how the results from quantitative risk assessment studies should be presented.

**Features**

► Gives a detailed overview of all aspects of QRA is useful for graduate students, researchers, consultants, and authorities  ► Expands on the practical applications or quantitative risk analysis methodology to offshore petroleum applications from the second edition with new research  ► Includes new chapters to cover the specific case studies of the US Macondo incident of 2010

**Fields of Interest**

Quality Control, Reliability, Safety and Risk; Environmental Management; Offshore Engineering

**Target groups**

Professional/practitioner

**Product category**

Graduate/Advanced undergraduate textbook

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Due July 2013

3rd ed. 2014. XXXIX, 515 p. 159 illus., 22 in color. (Springer Series in Reliability Engineering) Hardcover  ► * € (D) 96,29 | € (A) 98,99 | sFr 120,00  ► * € 89,99 | £ 81.00 ISBN 978-1-4471-5206-4

Due July 2013

Originally published as in one volume


Due June 2013

Electrical Overstress
The Nemesis of Semiconductor Components

This book will provide a broad but detailed view of Electrical Overstress in semiconductor devices, with a focus on integrated circuit and discrete devices. It will equip the reader with the understanding needed to address EOS damage seen in their work environment and help them identify and correct the sources of EOS damage.

Contents

Fields of interest
Circuits and Systems; Quality Control, Reliability, Safety and Risk; Electronic Circuits and Devices

Target groups
Research

Product category
Monograph

Dynamic Thermal Analysis of Machines in Running State

With the increasing complexity and dynamism in today's machine design and development, more precise, robust and practical approaches and systems are needed to support machine design. Existing design methods treat the targeted machine as stationery. Analysis and simulation are mostly performed at the component level. Although there are some computer-aided engineering tools capable of motion analysis and vibration simulation etc., the machine itself is in the dry-run state. For effective machine design, understanding its thermal behaviours is crucial in achieving the desired performance in real situation. Dynamic Thermal Analysis of Machines in Running State presents a set of innovative solutions to dynamic thermal analysis of machines when they are put under actual working conditions. The objective is to better understand the thermal behaviours of a machine in real situation while at the design stage.

Contents

Fields of interest
Manufacturing, Machines, Tools; Characterization and Evaluation of Materials; Simulation and Modeling

Target groups
Research

Product category
Monograph

Towards the Re-Industrialization of Europe

A Concept for Manufacturing for 2030

Not only are European industries shrinking and experiencing diminishing of their capability to add value, but Europe has lost more than a third of its GDP, which had been primarily based on manufacturing, and it suffers the consequences in high unemployment and weakened states finance. This book is intended as a significant contribution to the on-going European discussions after the economic crisis and the economic problems in many regions. It is meant to enrich actual political dialogues for overcoming the crises by activating new potentials of high added value. As such, it seeks to provide the necessary orientation for enacting fundamental changes of business models and factory capabilities in order to meet the challenges of the global economy and minimizing environmental impacts. It also opens perspectives for enterprise strategies and for further research topics.

Contents

Fields of interest
Industrial and Production Engineering; Engineering Economics, Organization, Logistics, Marketing

Target groups
Research

Product category
Monograph
Introduction to Reversible and Quantum Circuits
From Basics to Hardware Design

This book provides a comprehensive and self-contained introduction to reversible and quantum circuits, with which power emissions can be reduced or eliminated and processing can be performed exponentially faster compared to conventional methods. No previous knowledge of quantum mechanics is assumed, so the presentation will be accessible to students in electrical engineering, computer science, and mathematics as well as professionals new to this field. After a step-by-step introduction, the necessary background on both reversible and quantum computation is presented, core applications and physical realizations are discussed and automatic design methods for the respective circuits are described.

Features
► Provides a comprehensive introduction to reversible and quantum computation as well as applications, physical realizations, and automatic design methods ► Presents material in a step-by-step manner, assuming no prior knowledge of quantum mechanics ► Includes examples with references to the open source toolkit RevKit, with which the reader can execute and evaluate their own circuits and algorithms

Contents

Fields of interest
Circuits and Systems; Electronics and Microelectronics; Instrumentation; Logic Design

Target groups
Research

Product category
Monograph

Due July 2013
2013. 200 p. 75 illus. Hardcover
► approx. * € (D) 106,95 | € (A) 109,95 | sFr 137,00
► approx. € 99,95 | £86.50

Wireless Access in Vehicular Environments Technology
Theory, Simulation and Prototyping

This book provides fundamental theories, schemes and algorithms of WAVE system and describes relevant technologies covering all the aspects of mathematical analysis, software simulations, hardware implementations and field experiments.

Features
► Examines efficient simulation programs (written in Matlab and C/C++ codes) fitting to link level, system level and network level simulations of WAVE system ► Describes executable and advanced baseband algorithms and codes upon Altera FPGA development kit ► Covers WAVE technology and system covering theory, simulation and prototyping

Contents

Fields of interest
Communications Engineering, Networks; Robotics and Automation; Microwaves, RF and Optical Engineering

Target groups
Research

Product category
Monograph

Due October 2013
2014. Approx. 700 p. 100 illus. Hardcover
► approx. * € (D) 139,05 | € (A) 142,94 | sFr 177,00
► approx. € 129,95 | £119.50
ISBN 978-1-4614-4647-7

Laser Pulse Heating of Surfaces and Thermal Stress Analysis

This book introduces laser pulse heating and thermal stress analysis in materials surface. Analytical temperature treatments and stress developed in the surface region are also explored. The book will help the reader analyze the laser induced stress in the irradiated region and presents solutions for the stress field. Detailed thermal stress analysis in different laser pulse heating situations and different boundary conditions are also presented. Written for surface engineers.

Features
► Provides practical understanding of laser surface treatment process ► Highlights both applications and limitations of laser induced thermal stresses ► Provides practical solutions for daily surface treatment problems

Contents

Fields of interest
Operating Procedures, Materials Treatment; Surfaces and Interfaces, Thin Films; Metallic Materials

Target groups
Research

Product category
Monograph

Due July 2013
2014. X, 246 p. 52 illus. (Materials Forming, Machining and Tribology) Hardcover
► * € (D) 106,99 | € (A) 109,99 | sFr 133,50
► € 99,99 | £90.00
ISBN 978-3-319-00085-5
Planar linkages play a very important role in mechanical engineering. As the simplest closed chain mechanisms, planar four-bar linkages are widely used in mechanical engineering, civil engineering and aerospace engineering. Design of Special Planar Linkages proposes a uniform design theory for planar four-bar linkages. The merit of the method proposed in this book is that it allows engineers to directly obtain accurate results when there are such solutions for the specified n precise positions; otherwise, the best approximate solutions will be found.

**Features**
- Provides a uniform formula for the design of any planar four-bar linkages
- Develops Burmester theory to fit for the design with any number of specified positions
- Offers a method to build the statics and structural dynamics of complex planar linkages

**Contents**

**Fields of interest**
Engineering Design; Theoretical and Applied Mechanics; Mechatronics

**Target groups**
Research

**Product category**
Monograph

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This book presents the methodology and techniques of thermographic applications with focus primarily on medical thermography implemented for parametrizing the diagnostics of the human body. The first part of the book describes the basics of infrared thermography, the possibilities of thermographic diagnostics and the physical nature of thermography. The second half includes tools of intelligent engineering applied for the solving of selected applications and projects.

**Features**
- Presents knowledge in biomedical applications of thermographic diagnostics
- Uses methods of computational intelligence and software analysis on thermographic data
- Written by leading experts in the field

**Contents**
Infrared Thermography; Thermographic Diagnostics; Physical Nature of Thermography; Thermography System Implementation in Practice; Methodology of Thermographic Measurement in Medicine; Human Body Thermal Atlas; Thermographic Diagnostics Applied to Problems of Paraplegia and Tetraplegia (Quadriplegia – Practical Study No. 1); Thermographic Diagnostics of the Carpal Tunnel Syndrome – Practical Study No. 2; Application of thermographic diagnostics on the area of the distal part of the wrist 168.

**Fields of interest**
Computational Intelligence; Artificial Intelligence (incl. Robotics); Biomedical Engineering

**Target groups**
Research

**Product category**
Monograph

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Due August 2013

2013. 300 p. 110 illus. (Springer Tracts in Mechanical Engineering) Hardcover
- € (D) 106.99 | £ (A) 109.99 | sFr 133.50
- € 99.99 | £90.00
ISBN 978-3-642-38447-9

Due May 2013

2013. XX, 187 p. 42 illus. (Studies in Computational Intelligence, Volume 487) Hardcover
- € (D) 106.99 | £ (A) 109.99 | sFr 133.50
- € 99.99 | £90.00
ISBN 978-3-319-00526-3

Due June 2013

2013. XII, 194 p. (Topics in Intelligent Engineering and Informatics, Volume 5) Hardcover
- € (D) 106.99 | £ (A) 109.99 | sFr 133.50
- € 99.99 | £90.00
ISBN 978-3-642-38378-6
Comfortable Net Zero Energy Buildings

S. Carlucci, Politecnico di Milano, Italy

By outlining a new design or the Kuroshio power plant, new approaches to turbine design, anchor-
age system planning, deep sea marine engineering and power plant operations and maintenance are explored and suggested.

Features
- Details new approaches to turbine design, anchor-
age system planning, deep sea marine engineering, and power plant operations and maintenance to develop a new plan for the Kuro-
shio power plant • Provides a careful assessment for the environmental impact of the plant but also of natural phenomena on the plant • Focuses on the Kuroshio plant, but discusses designs that are applicable to all plants in deep waters with strong current such as the Gulf Stream east of Florida, the East Australian Current, the Humboldt Current west of South America, and the East Africa Coastal Current

Contents
1. Hydrology, Ecology and Environment of Kuro-

Fields of interest
Renewable and Green Energy; Offshore Engineering; Machinry and Machine Elements

Lighting Circuits Characterization and Modeling

F. Chen, National Taiwan University, Taipei, China

The Kuroshio Power Plant

By outlining a new design or the Kuroshio power plant, new approaches to turbine design, anchor-
age system planning, deep sea marine engineering and power plant operations and maintenance are explored and suggested.

Features
- A new approach based on thermal discomfort minimization for designing net zero energy buildings • An optimization process helping the designer to automatically search for the optimal solution among a large set of building variants • The design of a real building

Contents

Fields of interest
Energy Efficiency (incl. Buildings); Building Physics, HVAC; Interaction Design

Target groups
Research

Product category
Monograph

Due August 2013

2014. X. 120 p. 50 illus. (SpringerBriefs in Applied Sciences and Technology / PolIMI SpringerBriefs) Softcover
► approx. *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99

Due August 2013

2014. XII. 207 p. 69 illus., 14 in color. (Lecture Notes in Energy, Volume 15) Hardcover
► *€ (D) 139,09 | € (A) 142,99 | sFr 173,50
► € 129,99 | £117.00
ISBN 978-3-319-00821-9

Due July 2013

2013. 200 p. 100 illus. Hardcover
► approx. *€ (D) 106,95 | € (A) 109,95 | sFr 137,00
► approx. € 99,95 | £86.50
Electromagnetic Transients in Power Cables

From the more basic concepts to the most advanced ones where long and laborious simulation models are required, Electromagnetic Transients in Power Cables provides a thorough insight into the study of electromagnetic transients and underground power cables. Explanations and demonstrations of different electromagnetic transient phenomena are provided, from simple lumped-parameter circuits to complex cable-based high voltage networks, as well as instructions on how to model the cables. Supported throughout by illustrations, circuit diagrams and simulation results, each chapter contains exercises, solutions and examples in order to develop a practical understanding of the topics.

Features
► Features thorough explanations of different cable electromagnetic transient phenomena, from the simplest lumped parameters circuits to the complex cable-based high voltage networks ► Explains and demonstrates the importance of modelling and indications on how to model a cable-based network ► Includes a large number of solved exercises which can be replicated by the reader, real life examples and real network data supplemented with online cases and examples

Contents

Fields of interest
Energy Systems; Power Electronics, Electrical Machines and Networks; Circuits and Systems

Target groups
Research

Product category
Monograph

Smart-Eco Buildings towards 2020/2030

Innovative technologies for resource efficient buildings in the next future

The book aims to provide a basis for design and construction of resource-efficient buildings. The main concepts follow the vision of a European Sustainable Building as defined in the 2-years Smart-ECO research project funded by European Commission under the Sixth Framework Program. The focus is concentrated on innovations enabling the building sector to meet the requirements originating from the sustainability concept. Innovation is considered at different scales: micro (product, service and process), meso (sector, supply chain, region and system) and macro (economy-wide).

Features
► A vision of sustainable buildings in the next future, helping researchers, students and also professionals to define a conceptual framework for their work ► Several best practices and a wide international bibliography for reference ► Information on innovative sustainable materials and advanced evaluation tools

Contents

Fields of interest
Renewable and Green Energy; Building Construction; Climate Change Management and Policy

Target groups
Research

Product category
Brief

International Bioenergy Trade

History, status & outlook on securing sustainable bioenergy supply, demand and markets

Features
► Comprehensive coverage. This book includes all biomass commodities that are traded in any significant volumes in detail ► Authors from industry & academia and from the main bioenergy exporting & importing countries on 3 continents ► First of a kind.

Contents
Chapter 1 A general introduction to international bioenergy trade; André Faaij, Martin Junginger, Chun Sheng Goh. - Chapter 2 Developments in international liquid biofuel trade; Patrick Lamers, et al. - Chapter 3 Global woody biomass trade for energy; Patrick Lamers, et al. - Chapter 4 Development of bioenergy trade in four different settings - the role of potential and policies; Daniela Thrän, et al. - Chapter 5 Optimization of Biomass Transport and Logistics; Erin Searcy, et al. - Chapter 6 The role of sustainability requirements in international bioenergy markets; Luc Pielkman, et al. - Chapter 7 Drivers and barriers for bioenergy trade; Martin Junginger, et al. - Chapter 8 Medium and long-term perspectives of international bioenergy trade; Lukas Kranzl, et al. - Chapter 9 Financing bioenergy trade: Making it happens; Michael Deutmeyer, et al. - Chapter 10 Synthesis and recommendations; Martin Junginger, Chun Sheng Goh, André Faaij.

Fields of interest
Energy Policy, Economics and Management; Renewable and Green Energy; Environmental Economics

Target groups
Research

Product category
Contributed volume
Global Energy Policy and Security

Features
- Addresses the need for a multidisciplinary perspective on issues about global energy policy and security
- Covers issues related to finance, economics, and environmental science
- Integrates philosophical chapters and technical/modeling chapters to provide a comprehensive coverage

Contents
Challenges to global energy policy and supply security.
- Energy policy and security through the lenses of stochastic portfolio theory and the ACEGES model.
- Energy security as a subset of national security.
- Change in energy structure and energy security under climate mitigation scenarios.
- Energy efficiency policy initiatives and energy security: Experiences from India.
- Energy, Development and Economic Growth in Colombia.
- Energy security: Stochastic analysis of oil prices.
- Technological progress and the availability of European oil and gas resources.
- Green energy development in China: the case of clean coal technologies.
- Electricity systems and resilience.
- Understanding electricity consumption of cities through a thermodynamic analysis of social cooperation.
- An integrated approach for energy efficiency analysis in European Union countries.
- The macroeconomic effects of energy purchases: EU and Russia.

Fields of interest
- Energy Policy, Economics and Management
- Energy Economics
- Environmental Science and Engineering

Target groups
- Research

Product category
- Monograph

Due July 2013

Energy-Efficient Fault-Tolerant Systems

This book describes the state-of-the-art in energy efficient, fault-tolerant embedded systems. It covers the entire product lifecycle of electronic systems design, analysis and testing and includes discussion of both circuit and system-level approaches. Readers will be enabled to meet the conflicting design objectives of energy efficiency and fault-tolerance for reliability, given the up-to-date techniques presented.

Features
- Provides embedded systems designers with state-of-the-art solutions to the conflicting problems of energy efficiency and fault-tolerance for reliability.
- Covers the entire product lifecycle of electronic systems design, analysis and testing and includes discussion of both circuit and system-level approaches.
- Includes discussion of emerging issues related to technology scaling, next generation memory and logic design.

Contents
- Evolution of Fault Tolerant Design
- Fault and Reliability Models
- Energy Efficient Design Techniques
- Error Correction Coding
- System-level Reliable Design
- Fault Tolerant
- Finite Field Arithmetic Circuit Design and Testing Techniques
- Reliable Network-on-Chip Architectures
- Energy Efficient Reconfigurable Systems
- Bio-Inspired Online Fault Detection in NoC Interconnect
- Fault-tolerant dynamically reconfigurable NoC-based SoC

Fields of interest
- Circuits and Systems
- Semiconductors
- Renewable and Green Energy

Target groups
- Research

Product category
- Monograph

Rectenna Solar Cells

Features
- Covers higher level concepts and understanding the challenges, equipment, and skills required to develop rectenna structures.
- Discusses concepts applicable for light to electron conversion circuitry.
- Examines thermophotovoltaics, which deals specifically with IR frequencies.

Contents
- Are rectenna solar cells viable?
- Optical frequency rectification.
- Efficiency limits for solar spectrum rectification.
- Solar and thermal aperture antenna performance limits.
- Metal insulator and multi-insulator diodes for rectenna solar cells.
- Impact of Tunnel Barrier Dielectric and Roughness on MIM and MIM Diodes.
- A Mid-IR Antenna Integrated with a Geometrically Asymmetrical Metal-Insulator-Metal Rectifying Diode.
- Investigation of the infrared radiation detection mechanism for antenna-coupled metal-(oxide)-metal structures.
- Geometric diodes for optical rectennas:
- On the solar energy harvesting efficiency of nano-antennas.
- Optical antennas and enhanced nonlinear effects.
- Large-Area Fabrication of Antennas and Nanodiodes.
- Point-Contact Based MIM Diode Fabrication: A Facile Route for Materials Screening.
- Thermophotovoltaics: An alternative to and potential partner with rectenna energy harvesters.

Fields of interest
- Energy Systems
- Microwaves, RF and Optical Engineering
- Optics, Optoelectronics
- Plasmonics and Optical Devices

Target groups
- Research

Product category
- Contributed volume
Uranium Processing and Properties

Uranium Processing and Properties describes developments in uranium science, engineering and processing and covers a broad spectrum of topics and applications in which these technologies are harnessed. This book offers the most up-to-date knowledge on emerging nuclear technologies and applications while also covering new and established practices for working with uranium supplies. The book also aims to provide insights into current research and processing technology developments in order to stimulate and motivate innovation among readers.

Features
- Covers a broad spectrum of topics and applications that deal with uranium processing and the properties of uranium.
- Offers extensive coverage of both new and established practices for dealing with uranium supplies in nuclear engineering.
- Promotes the documentation of the state-of-the-art processing techniques utilized for uranium and other specialty metals.

Contents

Fields of interest
Nuclear Energy; Nuclear Engineering; Machinery and Machine Elements

Target groups
Research

Product category
Monograph

Optimization and Security Challenges in Smart Power Grids

Features
- Describes the challenges concerning an issue of national security and the merging of electric grids.
- Provides solutions for how to develop systems engineering techniques to solve many problems involved in implementing smart grids.
- Presents the key technologies and methods needed to manage a flexible distributed energy system.

Contents

Fields of interest
Energy; general; Industrial and Production Engineering; Optimization

Target groups
Research

Product category
Contributed volume

Thermal energy storage for medium and high temperatures

Concepts and applications

Principles and concepts for the technical use of thermal energy storage systems are described, for which temperatures between 373 and 1273 °K were used. The book presents criteria for classification and comparison of concepts. Innovations and actual technical applications are described. Application potentials are shown for the presented energy storage concepts from the fields power plants, electricity storage, process heat and traffic.

Features
- Overview different technologies for energy storage.
- Thermal energy storage especially for solar thermal power plants are shown.
- All actual developments are described.

Contents
- Basics.
- Thermal energy storage as option to improve energy efficiency.
- Evaluation criteria.
- Classification of concepts.
- Fundamental storage concepts.
- Sensible heat energy storage.
- Latent heat energy storage.
- thermochemical energy storage.
- Applications.
- Power Plants.
- Process Industry.
- Storage of electricity.
- Vehicles.

Fields of interest
Energy Storage; Energy Policy, Economics and Management; Energy Efficiency (incl. Buildings)

Target groups
Professional/practitioner

Product category
Professional book
Piezo-Active Composites
Orientation Effects and Anisotropy Factors

The book is devoted to the problem of microgeometry properties and anisotropy relations in modern piezo-active composites.

Features
- Comprehensive presentation of orientation effects and anisotropy in piezo-active composites
- Explains the conversion of mechanical energy into electric energy
- Explains orientation effects and anisotropy of piezoelectric properties in composites and ferroelectric single crystals
- Provides smart-materials applications of piezo-active composites
- Reveals the interconnections between microgeometry, electromechanical properties and their anisotropy in composites
- Illustrated by numerous examples of maxima (minima) of effective parameters of advanced composites based on single crystals of relaxor-ferroelectric solid solutions

Contents

Fields of interest
Optical and Electronic Materials; Engineering Thermodynamics, Heat and Mass Transfer; Electronics and Microelectronics, Instrumentation

Target groups
Research

Product category
Monograph

Impacts of Large Dams: A Global Assessment

One of the most controversial issues of the water sector in recent years has been the impacts of large dams. Proponents have claimed that such structures are essential to meet the increasing water demands of the world and that their overall societal benefits far outweigh the costs. In contrast, the opponents claim that social and environmental costs of large dams far exceed their benefits, and that the era of construction of large dams is over. A major reason as to why there is no consensus on the overall benefits of large dams is because objective, authoritative and comprehensive evaluations of their impacts, especially ten or more years after their construction, are conspicuous by their absence.

Features
- First definitive book on costs of operational large dams
- First analysis on nature of the beneficiaries of such projects
- Contributors are well-known international and national experts

Contents

Fields of interest
Energy, general; Environment, general; Environmental Law/Policy/Ecojustice

Target groups
Research

Product category
Contributed volume
**Tabletop Intense Femtosecond Pulse Sources and Their Applications**

**Contents**

Introduction 1. Chirped-Pulse Laser Amplifiers 1.1 Progress in Ti:sapphire lasers 1.2 Diode-pumped solid-state femtosecond amplifiers 1.3 Advanced amplifier concepts (thin disk, slab) 1.4 Cryogenically cooled amplifiers 1.5 Toward the Lambda3 regime 1.6 Ml-class femtosecond fiber amplifiers 2. Optical Parametric Amplifiers 2.1 Optical parametric chirped pulse amplifiers 2.2 Phase-stable optical pulse synthesis 2.3 High-energy fs pulse extension into the VUV and Mid-IR 2.4 Third-order parametric processes in optical pulses in gases 2.5 Intense THz pulse generation in gases 3. Applications 3.1 High-power high-energy fs pulse micromachining 3.2 Filamentation in atmosphere and stand-off detection 3.3 Coherent X-ray generation in the water window 3.4 Lens-less X-ray imaging 3.5 Incoherent hard X-ray sources and applications to structural dynamics 3.6 Monoelectronic particles acceleration 3.7 Tabletop free electron lasers

**Fields of interest**

Laser Technology, Photonics, Physical Chemistry, Electrical Engineering

**Target groups**

Research

**Product category**

Monograph

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**Fenomeni radioattivi**

Dai nuclei alle stelle

Questo volume raccoglie le lezioni del Corso di Radioattività impartite, inizialmente dall’autore e successivamente da suoi collaboratori, agli studenti di Fisica presso l’Università di Pavia. I temi trattati costituiscono un’introduzione ai fenomeni radioattivi in senso stretto con escursioni, aventi come base di partenza e filo conduttore il decadimento beta, nel campo della fisica delle particelle elementari, in particolare dei neutrini, e dell’astrofisica. Alcuni argomenti sono tradizionali, altri riguardano la fisica di frontiera così che al lettore sono offerti particolari itinerari dalla fisica consolidata alla fisica in evoluzione.

**Features**

- Rispetto alla prima edizione, aggiunta di di un paragrafo dedicato alla relazione fra massa del neutrino e massa oscura dell’Universo
- Introduzione ai fenomeni radioattivi con escursioni nel campo della fisica delle particelle elementari e dell’astrofisica
- Per non appesantire l’esposizione degli argomenti principali, argomenti complementari e sviluppo di calcoli sono raccolti in Appendice

**Contents**


**Fields of interest**

Particle and Nuclear Physics, Astrophysics and Astroparticles; Nuclear Fusion

**Target groups**

Lower undergraduate

**Product category**

Libro di testo introduttivo

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**Theoretical Concepts of X-Ray Nanoscale Analysis**

Theory, Experiments and Applications

This book provides a concise survey of modern theoretical concepts of X-ray materials analysis. The principle features of the book are: basics of X-ray scattering, interaction between X-rays and matter and new theoretical concepts of X-ray scattering. The various X-ray techniques are considered in detail: high-resolution X-ray diffraction, X-ray reflectivity, grazing-incidence small-angle X-ray scattering and X-ray residual stress analysis. All the theoretical methods presented use the unified physical approach. This makes the book especially useful for readers learning and performing data analysis with different techniques.

**Features**

- Gives a state-of-the-art report of the understanding of X-ray scattering and diffraction
- Contains theoretical methods for a wide range of X-ray materials research
- Includes detailed explanations of theoretical models and approaches

**Contents**


**Fields of interest**

Measurement Science and Instrumentation; Characterization and Evaluation of Materials; Theoretical, Mathematical and Computational Physics

**Target groups**

Research

**Product category**

Monograph
Measuring the Angular Momentum of Supermassive Black Holes

Measuring the spin distribution of supermassive black holes is of critical importance for understanding how these black holes and their host galaxies form and evolve over time, yet this type of study is only in its infancy. This brief describes how astronomers measure spin in supermassive black holes using X-ray spectroscopy. It also reviews the constraints that have been placed on the spin distribution in local, bright active galaxies over the past six years, and the cosmological implications of these constraints. Finally, it summarizes the open questions that remain in this exciting new field of research and points toward future discoveries soon to be made by the next generation of space-based observatories.

Contents
I. Introduction on importance of black hole spin. - II. Description of spectroscopic techniques used to measure spin in AGN. - III. Review of current spin measurements. - IV. Implications for the growth of black holes and their host galaxies. - V. Future Directions.

Fields of interest
Astronomy, Astrophysics and Cosmology; Classical and Quantum Gravitation, Relativity Theory; Astronomy, Observations and Techniques

Target groups
Research

Product category
Brief

Kinetic Simulations of Ion Transport in Fusion Devices

This thesis deals with the problem of ion confinement in thermonuclear fusion devices. It is a topic of general interest, as it helps to understand via numerical simulations the ion confinement properties in complex geometries, in order to predict their behavior and maximize the performance of future fusion reactors. The main work carried out in this thesis is the improvement and exploitation of an existing simulation code called ISDEP. This code solves the so-called ion collisional transport in arbitrary plasma geometry, improving in this sense other existing codes. Additionally, it presents outstanding portability and scalability in distributed computing architectures, such as Grid or Volunteer Computing. The main physical results can be divided into two blocks. First, the study of 3D ion transport in ITER is presented. ITER is the largest fusion reactor (under construction) and most of the simulations so far assume the axisymmetry of the device. Unfortunately, this symmetry is only an approximation because of the discrete number of magnetic coils used.

Contents
Introduction. - ISDEP. - 3D Transport in ITER. - Simulations of Fast Ions in Stellarators. - Simulations of NBI Ion Transport in ITER. - Overview and Conclusions.

Fields of interest
Plasma Physics; Numerical and Computational Physics; Nuclear Energy

Target groups
Research

Product category
Monograph

Alien Seas

Oceans in Space

Oceans were long thought to exist in all corners of the Solar System, from carbonated seas percolating beneath the clouds of Venus to features on the Moon’s surface given names such as “the Bay of Rainbows” and the “Ocean of Storms.”

Features
- Offers a unique approach to understanding the nature of the surfaces of the planets and moons in our Solar System
- Includes original artwork by Carroll depicting alien seas as well as the latest ground-based and spacecraft images
- Discusses the facts and issues concerning the search for active biology on other worlds

Contents

Fields of interest
Extraterrestrial Physics, Space Sciences; Popular Science in Astronomy; Planetology

Target groups
Popular/general

Product category
Popular science
J. Clark, Cambridge, UK

Viewing and Imaging the Solar System

A Complete Guide for Amateur Astronomers

‘Viewing and Imaging the Solar System: A Complete Guide for Amateur Astronomers’ is for amateur astronomers who are beginners or who want to move beyond the beginner level and develop better observing skills. Newcomers to astronomy are almost always wowed by sights such as the rings of Saturn and the moons of Jupiter, but have little idea how to find Solar System objects for themselves, or what equipment they will need to see or even photograph such objects. This book makes it easy for less advanced astronomers to achieve success quickly by observing and photographing the Solar System rather than trying to find deep sky objects. It is written by an expert on the Solar System, who gained experience by teaching others how to make the most of relatively simple and low-cost equipment. This book presents the material in a way that is both easy to digest and entertaining.

Features
- Helps inexperienced amateur astronomers to move beyond the beginner level to develop better observing skills
- Surveys equipment needed to observe and image
- Solar System objects
- Includes specifics on how to identify hard to observe objects
- Explains why our Solar System is the ideal place for an amateur astronomer to get serious with their observations!

Contents
How to Find the Solar System.
- Looking at the Planets.
- Photographing the Planets.
- What You Can Reasonably Expect to See.
- Observing Asteroids and Dwarf Planets.
- Comets.
- Moons.

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy

Target groups
Popular/general

Product category
Popular science

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E. Crandall, Auburn University, AL, USA

Factors Governing Tin Whisker Growth

Tin (Sn) whiskers are electrically conductive, single crystal eruptions that grow from Sn film surfaces. Their high aspect ratio presents reliability problems for the electronics industry due to bridging and metal arcing, leading to malfunctions and catastrophic failures in many electronic systems (including satellite and defense sectors). Due to legislation in the EU, Japan, and the U.S., mandating a gradual shift from lead (Pb)-based to lead-free solders and board finishes, there has been a reemergence of Sn whiskers. Continuing reports of Sn whisker induced failures coupled with the lack of an industry-accepted understanding of whisker growth and/or test methods to identify whisker prone products has made pure/high Sn substitutes a risky proposition in high reliability systems. This thesis is designed to clarify and control the fundamental mechanisms that govern whisker formation.

Features
- Nominated by Auburn University, USA, as an outstanding Ph.D. thesis
- Identifies and defines several factors that govern whisker formation and growth
- Describes whisker prevention using a variety of impenetrable topside hard metal films which prevent Sn whiskers from penetrating through capping barriers
- Studies why particular topside metal films prevent whisker growth while others do not

Contents
Whiskers and Their Role in Component Reliability.
- Film/Substrate Effects on Whisker Growth.
- Environmental Effects of Whisker Growth.
- Whisker Mitigation and Prevention.

Fields of interest
Electronic Circuits and Devices; Circuits and Systems; Metallic Materials

Target groups
Research

Product category
Monograph

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M. Cristelli, University of Rome, Italy

Complexity in Financial Markets

Modeling Psychological Behavior in Agent-Based Models and Order Book Models

Tools and methods from complex systems science can have a considerable impact on the way in which the quantitative assessment of economic and financial issues is approached, as discussed in this thesis. First it is shown that the self-organization of financial markets is a crucial factor in the understanding of their dynamics. In fact, using an agent-based approach, it is argued that financial markets’ stylized facts appear only in the self-organized state.

Features
- Nominated as an outstanding PhD thesis by the University of Rome La Sapienza
- Explains the self-organization of financial markets
- Provides new metrics for economic complexity: measuring countries’ competitiveness and product complexity
- Applies big data and new generation tools for forecasting economic growth

Contents
Introduction.
- Stylized Facts.
- Agent-Based Modeling.
- Critical Review of Agent-Based Models.
- A Minimal Agent-Based Model.
- Financial Market Dynamics: Order Book and Data Analysis.
- Order Book: Introduction and Main Statistical Evidence.
- Zero Intelligence Model for the Order Book Dynamics.
- Evidences of strategic placements of orders.
- Quantitative Analysis of Technical Trading.
- Universal Relation between Skewness and Kurtosis.
- Web Queries Can Predict Stock Market Volumes.

Fields of interest
Socio- and Econophysics, Population and Evolutionary Models; Economic Theory; Data Mining and Knowledge Discovery

Target groups
Research

Product category
Monograph
Dai buchi neri all’adroterapia
Un viaggio nella Fisica Moderna
Tutto quello che avresti voluto sapere sulla fisica moderna ma non avevate nessuno a cui chiedervelo! Questo libro vi conduce in un viaggio affascinante attraverso i misteri della fisica moderna e delle sue tantissime ricadute nella società, presentando anche le ricerche attualissime, le strade che si aprono davanti a noi: a volte ampi viali illuminati a giorno, altre volte sentieri appena accennati. Dove ci porteranno? La grande forza della scienza, nonché il suo motore, è la curiosità che ci ha spinto a guardare in alto, in profondità ma anche dentro noi stessi. Indagando abbiamo trovato veri tesori. La fisica ci spiega cosa succede nell’atomo ma anche nell’Universo, un mondo che va dal miliardesimo di miliardesimo di metro a una decina di miliardi di anni luce! Abbiamo una spiegazione dell’esistenza e del mondo? Dove ci porteranno? La grande forza della scienza, nonché il suo motore, è la curiosità che ci ha spinto a guardare in alto, in profondità ma anche dentro noi stessi. Indagando abbiamo trovato veri tesori. La fisica ci spiega cosa succede nell’atomo ma anche nell’Universo, un mondo che va dal miliardesimo di miliardesimo di metro a una decina di miliardi di anni luce! Abbiamo una spiegazione dell’esistenza e del mondo?

Features
➤ Una presentazione accessibile dei concetti della Fisica Moderna: meccanica quantistica, relatività, modello standard, neutrini, antimateria, buchi neri ➤ Una sezione dedicata alle ricadute della Fisica Moderna nella società, es. terapia dei tumori con gli acceleratori di particelle (adroterapia) ➤ Presentazione di esperimenti attuali: ricerche della "particella di Dio", buchi neri o extra-dimensioni, con un linguaggio accessibile

Contents

Fields of interest
Applied and Technical Physics; Popular Science, general; Science, general

Target groups
Popular/general

Product category
Monografia

PhD thesis of the Young Researchers in Physics Prize awarded to C. O. Curceanu, Istituto Nazionale di Fisica Nucleare, Frascati, Italy

Particle and Astroparticle Physics
The early history of particle physics cannot be distinguished from the history of cosmic rays. With the advent of accelerators, however, cosmic rays lost their importance in particle physics. This situation persisted until the 1990s, when novel techniques allowed breakthrough discoveries, and exploration of new physics scales now requires going back to cosmic rays. The new profile of scientists in fundamental physics ideally involves the merging of knowledge in astroparticle and particle physics, but the duration of modern experiments is such that people cannot simultaneously be practitioners in both.

Features
➤ Introduces both particle physics and astroparticle physics in an elementary and balanced way at the university level ➤ Up-to-date, with discussion of the most recent discoveries ➤ Provides background information on the latest cosmic ray detectors and observational implications of new concepts in cosmology ➤ “Lighter” than comparable books on the subject ➤ Written by experimentalists actively working in the field

Contents

Fields of interest
Astrophysics and Astroparticles; Particle and Nuclear Physics; Astronomy, Astrophysics and Cosmology

Target groups
Upper undergraduate

Product category
Undergraduate textbook

Pubblicazione prevista per il mese di June 2013
2013. X. 340 pagg. (blu) Brossura
➤ approx. * € (D) 25,72 | € (A) 26,44 | sFr 32,00
➤ approx. € 24,04 | £ 19.99

Due July 2013
2013. Approx. 300 p. 51 illus., 1 in color. (Undergraduate Lecture Notes in Physics, 7) Softcover
➤ approx. * € (D) 64,15 | € (A) 65,95 | sFr 80,00
➤ approx. € 59,95 | £ 53.99

Beyond Standard Model Phenomenology at the LHC
This thesis provides an introduction to the physics of the Standard Model and beyond, and to the methods used to analyse Large Hadron Collider (LHC) data. The 'hierarchy problem', astrophysical data and experiments on neutrinos indicate that new physics can be expected at the now accessible TeV scale. This work investigates extensions of the Standard Model with gravitons and gravitinos (in the context of supergravity). The production of these particles in association with jets is studied as one of the most promising avenues for researching new physics at the LHC.

Features
➤ Nominated as an outstanding Ph.D. thesis by the Catholic University of Leuven, Belgium ➤ Describes theoretical aspects of spin-2 particles, including their propagator and refers to the famous "van Dam-Veltman discontinuity" ➤ Presents a full phenomenological search for graviton emission, in the context of different BSM theories, in a multi-jet final state ➤ Includes a phenomenological study of gravitino emission in a multi-jet final state in the context of supersymmetric theories

Contents
Introduction. - The Standard Model. - Gravitation in Beyond Standard Model theories. - The LHC and collision simulations. - Phenomenology of graviton production. - Gravitino production at the LHC. - Epilogue. - Massless graviton implementation. - New routines for ADD theories in MadGraph. - ALOHA.

Fields of interest
Elementary Particles, Quantum Field Theory; Quantum Field Theories, String Theory; Cosmology

Target groups
Research

Product category
Monografia

Pubblicazione prevista per il mese di June 2013
2013. XIII, 165 p. 50 illus., 25 in color. (Springer Theses) Hardcover
➤ * € (D) 106,99 | € (A) 109,99 | sFr 133,50
➤ * € 99,99 | £ 90.00
ISBN 978-3-319-00761-8

Due June 2013
2013. XIII, 165 p. 50 illus., 25 in color. (Springer Theses) Hardcover
➤ * € (D) 106,99 | € (A) 109,99 | sFr 133,50
➤ * € 99,99 | £ 90.00
ISBN 978-3-319-00761-8

A. De Angelis, University of Udine/INFN, Italy;
M. J. Pimenta, Instituto Superior Tecnico and LIP Lisboa, Portugal
K. Fischer, Tokuyama College of Technology, Shunan-Shi, Japan

**Relativity for Everyone**

**How Space-Time Bends**

This book explains the theory of special and general relativity in detail, without digressions such as information on Einstein’s life or the historical background. However, lengthy calculations are replaced with figures and thought experiments, the text being formulated in such a way that the reader will be able to understand the gist even if he or she cannot follow all the calculations. The first part of the book focuses on the essentials of special relativity. Explanations are provided of the famous equivalence between mass and energy and of why Einstein was able to use the theory of electrodynamics as a template for his “electrodynamics of moving bodies”, simply because electric charge itself is absolute, leading to the relativity of other physical quantities. General relativity is then introduced, mainly with the help of thought experiments.

**Features**

► Only book to explain both special and general relativity exactly, using only elementary math  ► Replaces lengthy calculations with figures and thought experiments  ► Comes quickly to the point, focusing on the physical principle

**Contents**

Light, matter, and energy.- Light, time, mass, and length.- Light, electricity, and magnetism.- Acceleration and inertia.- Inertia and gravity.- Equivalence principle in action.- How mass creates gravity.- Solving the Einstein equation of gravity.- General Relativity in action.- Epilogue.- Appendices.

**Fields of interest**

Classical and Quantum Gravitation, Relativity Theory; Popular Science in Astronomy; Cosmol-

**Target groups**

Popular/general

**Product category**

Monograph

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F. Frémont, Caen University, France

**Young-Type Interferences with Electrons**

**Basics and Theoretical Challenges in Molecular Collision Systems**

Since the discovery that atomic-size particles can be described as waves, many interference experiments have been realized with electrons to demonstrate their wave behavior. In this book, after describing the different steps that led to the present knowledge, we focus on the strong link existing between photon and electron interferences, highlighting the similarities and the differences. For example, the atomic centers of a hydrogen molecule are used to mimic the slits in the Young’s famous interference experiment with light.

**Features**

► First modern treatment of this topic after Debye’s classic book of 1931  ► Starts at an elementary level suitable for undergraduates but also addresses interesting research problems  ► Profits from the authors’ deep knowledge and expertise in atom interferometry

**Contents**


**Fields of interest**

Quantum Physics; Atomic, Molecular, Optical and Plasma Physics; Optics, Optoelectronics, Plasmonics and Optical Devices

**Target groups**

Research

**Product category**

Monograph

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H. Friedrich, TU München, Germany

**Scattering Theory**

This book presents a concise and modern coverage of scattering theory. It is motivated by the fact that experimental advances have shifted and broadened the scope of applications where concepts from scattering theory are used, e.g. to the field of ultracold atoms and molecules, which has been experiencing enormous growth in recent years, largely triggered by the successful realization of Bose-Einstein condensates of dilute atomic gases in 1995. In the present treatment, special attention is given to the role played by the long-range behaviour of the projectile-target interaction, and a theory is developed, which is well suited to describe near-threshold bound and continuum states in realistic binary systems such as diatomic molecules or molecular ions. The level of abstraction is kept as low as at all possible, and deeper questions related to mathematical foundations of scattering theory are passed by. The book should be understandable for anyone with a basic knowledge of nonrelativistic quantum mechanics. It is intended for advanced students and researchers, and it is hoped that it will be useful for theorists and experimentalists alike.

**Features**

► Written by the author of the widely acclaimed textbook  ► Theoretical Atomic Physics Includes sections on quantum reflection, tunable Feshbach resonances and Efimov states  ► Useful for advanced students and researchers

**Contents**


**Fields of interest**

Theoretical, Mathematical and Computational Physics; Low Temperature Physics

**Target groups**

Research

**Product category**

Monograph

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Due July 2013

2013. 300 p. 190 illus., 20 in color. (Springer Series on Atomic, Optical, and Plasma Physics, Volume 77) Hardcover

► * € (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. * € 99.95 | £90.00

ISBN 978-3-642-38478-3

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Due June 2013

2013. XII, 284 p. 68 illus., 47 in color. (Lecture Notes in Physics, Volume 872) Softcover

► * € (D) 48,14 | € (A) 49,49 | sFr 60,00
► € 44,99 | £40.99

ISBN 978-3-642-38281-9
R. Gendler, Rob Gendler Astropics, Avon, CT, USA (Ed)

Lessons from the Masters

Current Concepts in Astronomical Image Processing

There are currently thousands of amateur astronomers around the world engaged in astrophotography at a sophisticated level.

Features

► Written by a brilliant body of recognized leaders ► Contains the most current, sophisticated, and useful information on astrophotography ► Covers all types of astronomical image processing, including processing of events such as eclipses, using DSLRs, and deep sky, planetary, widefield, and high resolution astronomical image processing ► About 150 illustrations (75 in color) exemplify the challenges and accomplishments of the processing of astronomical images by enthusiasts

Contents


Fields of interest

Astronomy, Observations and Techniques; Popular Science in Astronomy; Image Processing and Computer Vision

Target groups

Popular/general

Product category

Popular science

G. Ghisellini, The Astronomical Observatory of Brera, Merate, Italy

Radiative Processes in High Energy Astrophysics

This book grew out of the author’s notes from his course on Radiative Processes in High Energy Astrophysics. The course provides fundamental definitions of radiative processes and serves as a brief introduction to Bremsstrahlung and black body emission, relativistic beaming, synchrotron emission and absorption, Compton scattering, synchrotron self-compton emission, pair creation and emission. The final chapter discusses the observed features of Active Galactic Nuclei and their interpretation based on the radiative processes presented in the book. Written in an informal style, this book will guide students through their first encounter with high-energy astrophysics.

Features

► Offers a compact introduction to the radiative processes relevant in high-energy astrophysics ► Course-tested lecture notes ► Includes an overview of the observed components of Active Galactic Nuclei

Contents


Fields of interest

Astrophysics and Astrophotoparticles; Plasma Physics; Particle Acceleration and Detection, Beam Physics

Target groups

Research

Product category

Monograph

F. Großmann, Dresden University of Technology, Germany

Theoretical Femtosecond Physics

Atoms and Molecules in Strong Laser Fields

Theoretical investigations of atoms and molecules interacting with pulsed or continuous wave lasers up to atomic field strengths on the order of 10^16 W/cm² are leading to an understanding of many challenging experimental discoveries. This book deals with the basics of femtosecond physics and goes up to the latest applications of new phenomena. The book presents an introduction to laser physics with mode-locking and pulsed laser operation. The solution of the time-dependent Schrödinger equation is discussed both analytically and numerically. The basis for the non-perturbative treatment of laser-matter interaction in the book is the numerical solution of the time-dependent Schrödinger equation. The light field is treated classically, and different possible gauges are discussed.

Features

► Gives a tutorial-like complete presentation of theoretical femtosecond physics ► Represents the state of the art of theoretical femtosecond physics ► Includes more than 30 exercises with worked-out solutions ► Contains a tutorial chapter on numerical solution methods of the time-dependent Schrödinger equation

Contents


Fields of interest

Atoms and Molecules in Strong Fields, Laser Matter Interaction; Quantum Physics; Optics and Electrodynamics

Target groups

Upper undergraduate

Product category

Graduate/Advanced undergraduate textbook

Due July 2013


Due July 2013

2013. X, 162 p. 65 illus., 43 in color. (Lecture Notes in Physics, Volume 873) Softcover ► * € (D) 37,44 | € (A) 38,49 | sFr 47,00 ► € 34,99 | £31.99 ISBN 978-3-319-00611-6

Due August 2013


2nd ed. 2013. 281 p. 100 illus. (Graduate Texts in Physics) Hardcover ► * € (D) 53,49 | € (A) 54,99 | sFr 67,00 ► € 49,99 | £44.99 ISBN 978-3-319-00605-5
**Handbook of Spintronics**
Editors-in-chief: Y. Xu, York University, UK; D. D. Awschalom, University of California at Santa Barbara, CA, USA; J. Nitta, Tohoku University, Japan

**Contents**
Vol. 1 - Physical Principles (Lead Editor: D. Awschalom) 1.1 Spin Fundamentals, 1.2 Spin transport at nanoscale, 1.3 Spin injection and detection, 1.4 Spin generation and coherence, 1.5 Spin reversal and spin dynamics. Vol 2 - Materials (Lead Editor: Y. Xu) 2.1 Metallic thin films and recording media, 2.2 Magnetic tunneling structures, 2.3 Hybrid materials, 2.4 Magnetic semiconductors 2.5 Patterned and self-assembled materials. Vol 3 - Devices and Applications (Lead Editor: J. Nitta) 3.1 Spin valves and GMR heads, 3.2 MagRAM, 3.3 Spin transistors and spin logic devices, [...]
Elements of Solid State Physics and of Crystalline Nanostructures

The book regards the properties of crystals and nanostructures treating their structure, cohesion energy, electronic states, optical and transport properties and calculation procedures with particular emphasis on the density functional method.

Features
- Each chapter is organized to start from simple physical situations and then consider more complicated models and experimental situations.
- The book contains exercises integrating the text, that make more simple the reading.
- It is required that the reader know the basis of the quantum mechanics.

Fields of interest
- Physics, general; Materials Science, general
- Chemistry/Food Science, general

Target groups
- Upper undergraduate

Product category
- Undergraduate textbook

Observer's Guide to Star Clusters

Amateur astronomers of all expertise from beginner to experienced will find this a thorough star cluster atlas perfect for easy use at the telescope or through binoculars. It enables practical observers to locate the approximate positions of objects in the sky, organized by constellation. This book was specifically designed as an atlas and written for easy use in field conditions. The maps are in black-and-white so that they can be read by the light of a red LED observer's reading light. The clusters and their names/numbers are printed in bold black, against a "grayed-out" background of stars and constellation figures. To be used as a self-contained reference, the book provides the reader with detailed and up-to-date coverage of objects visible with small-, medium-, and large-aperture telescopes, and is equally useful for simple and computer-controlled telescopes.

Features
- Provides a comprehensive coverage for identifying and locating star clusters in all relevant constellations in the northern and southern hemispheres.
- Affords a simple yet detailed means of locating star clusters quickly for any time or locations, without having to read through an index.
- Easy to use at the telescope.

Contents
- Introduction to Star Clusters.
- How to observe and image star clusters.
- How to use the star maps.
- Constellations A-Z.

Fields of interest
- Astronomy, Observations and Techniques; Popular Science in Astronomy

Target groups
- Popular/general

Product category
- Popular science

Portrait of Gunnar Källén

A Physics Shooting Star and Poet of Early Quantum Field Theory

Wolfgang Pauli referred to him as 'my discovery,' Robert Oppenheimer described him as 'one of the most gifted theorists' and Niels Bohr found him enormously stimulating. Who was the man in question, Gunnar Källén (1926-1968)? His appearance in the physics sky was like a shooting star. His contributions to the scientific debate caused excitement among young and old. Similar to his friend and mentor, Wolfgang Pauli, he demanded honesty and rigor in physics - a distinct dividing line between fact and speculation. In his obituary, Arthur S. Wightman would write: 'Gunnar Källén was a proud continuers of the tradition in quantum field theory established by Wolfgang Pauli.

Features
- First personal and scientific biography of Gunnar Källén.
- With short invited contributions by people personally acquainted with Källén.
- Includes commented reprints of some of his scientific papers.

Contents
- Part I Youth, Career, Personality, Legacy, Family and Fatal Accident.
- Part II Correspondence With Pauli, Heisenberg and Dirac; Källén in Action.
- Part III Promotion of Science in His Honor.
- Part IV On Källén’s Scientific Work.
- Part V Publications, Selected Papers and Commentaries.
- Additional Commentaries.

Fields of interest
- Elementary Particles, Quantum Field Theory; Mathematical Physics

Target groups
- Research

Product category
- Biography
A. Kamal, Murphy, TX, USA

Nuclear Physics

This textbook explains the experimental basics, effects and theory of nuclear physics. It supports learning and teaching with numerous worked examples, questions and problems with answers. Numerous tables and diagrams help to better understand the explanations. A better feeling to the subject of the book is given with sketches about the historical development of nuclear physics. The main topics of this book include the phenomena associated with passage of charged particles and radiation through matter which are related to nuclear resonance fluorescence and the Moessbauer effect., Gamov’s theory of alpha decay, Fermi theory of beta decay, electron capture and gamma decay. The discussion of general properties of nuclei covers nuclear sizes and nuclear force, nuclear spin, magnetic dipole moment and electric quadrupole moment. Nuclear instability against various modes of decay and Yukawa theory are explained. Nuclear models such as Fermi Gas Model, Shell Model, Liquid Drop Model, Collective Model and Optical Model are outlined to explain various experimental facts related to nuclear structure.

Features
- Explains the concepts in detail and in depth
- Provides step-by-step derivations
- Contains numerous tables and diagrams
- Supports learning and teaching with numerous worked examples, questions and problems with answers
- Sketches also the historical development of the subject

Contents

Fields of interest
Nuclear Physics, Heavy Ions, Hadrons; Elementary Particles, Quantum Field Theory

Target groups
Upper undergraduate

Product category
Graduate/Advanced undergraduate textbook

Due August 2013

A. Kamal, Murphy, TX, USA

Particle Physics

This textbook teaches particle physics very didactically. It supports learning and teaching with numerous worked examples, questions and problems with answers. Numerous tables and diagrams lead to a better understanding of the explanations. The content of the book covers all important topics of particle physics: Elementary particles are classified from the point of view of the four fundamental interactions. The nomenclature used in particle physics is explained. The discoveries and properties of known elementary particles and resonances are given. The particles considered are positrons, muon, pions, anti-protons, strange particles, neutrino and hadrons. The conservation laws governing the interactions of elementary particles are given. The concepts of parity, spin, charge conjugation, time reversal and gauge invariance are explained. The quark theory is introduced to explain the hadron structure and strong interactions. The solar neutrino problem is considered. Weak interactions are classified into various types, and the selection rules are stated.

Features
- Provides step-by-step derivations
- Contains numerous tables and diagrams
- Supports learning and teaching with numerous worked examples, questions and problems with answers
- Sketches also the historical development of the subject

Contents

Fields of interest
Elementary Particles, Quantum Field Theory; Nuclear Physics, Heavy Ions, Hadrons; Particle and Nuclear Physics

Target groups
Upper undergraduate

Product category
Graduate/Advanced undergraduate textbook

Due August 2013
Solar System Maps
From Antiquity to the Space Age

This book focuses on the conceptualization of the solar system from ancient times, when diagrams largely represented the universe as perceived by the naked eye, to the modern age, with powerful telescopes and space probes giving us new insights into organization of the solar system and into the topographical features of the planets and other celestial bodies. This book traces the development of people’s view of their place in the cosmos from ancient to modern times, with particular emphasis on the solar system.

Features
► Recounts the evolving conceptualization of the solar system from ancient to modern times
► Provides examples of the artistry of antiquarian celestial maps from books and atlases
► Includes a large section on solar system mapping in the Space Age, highlighting large telescope and space probe images
► Presents each illustration with a legend explaining the relevant astronomical and cartographical features

Contents
Introduction.- Ancient Models of the Universe/Solar System from several non-European cultures.- Earth-centered universe/Solar System model of the Classical Greeks through the Roman and Middle Ages.- Sun-centered universe/Solar System model of the pre-telescope era.- Sun-centered universe/Solar System in the early telescope era.- More powerful telescopes and associated advances leading to a separation of our solar system from ancient to modern times, with particular emphasis on the solar system.

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy; Planetology

Target groups
Popular/general

Product category
Popular science

E. Landi Degl’Innocenti, University of Florence, Italy

Atomic spectroscopy and radiative processes

The book builds upon the lecture notes of an undergraduate course in Astronomical Spectroscopy, but contains significant material for post-graduate courses. It describes the basic physical principles of atomic spectroscopy and the absorption and emission of radiation in astrophysical and laboratory plasmas. It summarizes the basics of Electromagnetism and Thermodynamics, then describes in detail the theory of atomic spectra for complex atoms, with emphasis on astrophysical applications. Equilibrium and non-equilibrium phenomena in plasmas are considered. The interaction between radiation and matter is described, together with various types of radiation (e.g. cyclotron, synchrotron, bremsstrahlung, Compton). The basic theory of polarization is provided, as well as the theory of radiative transfer for astrophysical applications.

Features
► Is unique in its description of astrophysical spectroscopy obtained from basic physical principles
► Is unique in bridging the gap between basic books on atomic spectroscopy and the few very specialised ones for the advanced researcher
► Provides an in-depth description of theoretical aspects, but always provides practical examples of the various applications

Fields of interest
Astrophysics and Astroparticles; Atomic/Molecular Structure and Spectra; Particle Acceleration and Detection, Beam Physics

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook
Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series

Editor-in-chief: W. Martienssen

Condensed Matter
Subvolume 34A
C. F. Klingshirn, Karlsruher Institut für Technologie, Karlsruhe, Germany (Ed)

Semiconductor Quantum Structures - Growth and Structuring
With contrib. by: A. Forchel, Würzburg; C. Schneider, Universität Würzburg, Germany; C. F. Klingshirn, Karlsruher Institut für Technologie, Karlsruhe, Germany; P. Gilliot, Strasbourg; S. Höfling, Würzburg; F. Henneberger, Humboldt-Universität Berlin, Germany; E. Kasper, Stuttgart; B. Hönerlage, IPCMS-GONLO, Strasbourg, France; G. Bauer, Universität Linz, Austria; G. Springholz, Johannes Kepler Universität, Linz, Austria

Volume III/34 of Landolt-Börnstein summarizes our current knowledge of semiconductor quantum structures, a topic in applied condensed matter physics with steadily growing technological importance.

Features
- Standard reference book with selected and easily retrievable data from the fields of physics and chemistry collected by acknowledged international scientists
- Also available on SpringerMaterials.com

Fields of interest
Physics, general; Optical and Electronic Materials

Target groups
Research

Product category
Reference work

Due July 2013
2013. 650 p. / Condensed Matter, Subvolume 34A
Hardcover
► * € (D) 5767,30 | € (A) 5929,00 | sFr 7175,50
► € 5390,00 | £4851.00
ISBN 978-3-540-63347-1

Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series

Editor-in-chief: W. Martienssen

Physical Chemistry
Subvolume 12C
F. Predel, MPI f. Metallforschung, Stuttgart, Germany
B. Predel (Ed)

Systems from Dy-Er...Ir-Y
Volume 12: Phase Equilibria, Crystallographic and Thermodynamic Data of Binary Alloys, Subvol. C

Volume 12 of group IV presents phase diagrams, crystallographic and thermodynamic data of binary alloy systems. The subvolume C contains systems from Dy-Er...Ir-Y. Volume 12 forms a supplement to volume 5.

Fields of interest
Physics, general; Physical Chemistry; Thermodynamics

Target groups
Research

Product category
Reference work

Due August 2013
2013. 210 p. 1 illus. in color. / Physical Chemistry, Subvolume 12C
Hardcover
► * € (D) 1915,30 | € (A) 1969,00 | sFr 2383,00
► € 1790,00 | £1611.00
ISBN 978-3-642-24777-4

I. Licata, D. Fiscaletti, Institute for Scientific Methodology, Palermo, Italy

Quantum potential: Physics, Geometry and Algebra

Recently the interest in Bohm realist interpretation of quantum mechanics has grown. The important advantage of this approach lies in the possibility to introduce non-locality ab initio, and not as an "unexpected host". In this book the authors give a detailed analysis of quantum potential, the non-locality term and its role in quantum cosmology and information. The different approaches to the quantum potential are analysed, starting from the original attempt to introduce a realism of particles trajectories (influenced by de Broglie's pilot wave) to the recent dynamic interpretation provided by Goldstein, Dürr, Tumulka and Zanghì, and the geometrodynamical picture, with suggestion about quantum gravity. Finally we focus on the algebraic reading of Hiley and Birbeck school, that analyse the meaning of the non-local structure of the world, bringing important consequences for the space, time and information concepts.

Contents

Fields of interest
History and Philosophical Foundations of Physics; Quantum Physics; Quantum Information Technology; Spintronics

Target groups
Research

Product category
Brief

Due August 2013
2013. 125 p. 10 illus. (SpringerBriefs in Physics)
Softcover
► approx. * € (D) 53,49 | € (A) 54,99 | sFr 67,00
► approx. € 49,99 | £44.99
ISBN 978-3-319-00332-0
S. Littlejohn, University of Bath, UK

Electric Properties of Graphite Nanoparticles in Silicone

Flexible Oscillators and Electromechanical Sensing

This thesis examines a novel class of flexible electronic material with great potential for use in the construction of stretchable amplifiers and memory elements. Most remarkably the composite material produces spontaneous oscillations that increase in frequency when pressure is applied to it. In this way, the material mimics the excitatory response of pressure-sensing neurons in the human skin. The composites, formed of silicone and graphitic nanoparticles, were prepared in several allotropic forms and functionalized with naphthalene diimide molecules.

Features

- Nominated as an outstanding Ph.D. thesis by the University of Bath, UK
- Reports on the discovery of a broad negative differential resistance region in a flexible composite
- Demonstrates strain-tuned flexible oscillators
- Describes a pressure-sensitive material suitable for state-of-the-art bio-electronic applications

Contents

Background Theory.- Fabrication and Measurement.- Tunneling Negative Differential Resistance in a GSC.- Electromechanical Properties and Sensing.- Electronic Amplification in the NDR Region.- Conclusions and Future Work.-

Fields of interest

Nanoscale Science and Technology; Optical and Electronic Materials; Surfaces and Interfaces, Thin Films

Target groups

Research

Product category

Monograph

T. Mahoney, IAC, La Laguna - Tenerife, Spain

Mercury

The purpose of this Gazetteer and Atlas of Astronomy (GAA) is to list, define and illustrate, for the first time, every named (as opposed to merely catalogued) object in the sky within a single reference work for use by the general reader, writers and editors dealing with astronomical themes, and those astronomers concerned with any aspect of astronomical nomenclature.

Features

- Lists, defines and illustrates every named object and term as related to Mercury
- Contains an atlas comprising maps and images with coordinate grids and labels identifying features listed in the gazetteer
- Provides British and American pronunciations for the entries based on the broad phonetic principles of both systems
- Traces names to their languages and scripts of origin

Contents


Fields of interest

Astronomy, Observations and Techniques; Astrophysics and Astroparticles; Astronomy, Astrophysics and Cosmology

Target groups

Research

Product category

Dictionary

H. G. Merkus, Pijnacker, The Netherlands; G. Meesters, DSM, Delft, The Netherlands (Eds)

Particle Characteristics and Product Development

Particulate products have a major share in the market of chemical products. These products show up in a wide variety. Examples given in this book include the constructive materials fine ceramics and concrete, the delicacies chocolate and ice cream, pharmaceutical powders and medical inhalers, sun screen and liquid and powder paints. Size distribution and shape of the particles have different functionalities in these products. Some functions are general, others specific. General functions are powder flow and – at the typical particulate concentrations of these products – that the particles cause adequate rheological behavior during processing and/or for product performance.

Features

- Covers particle materials of topical import in many industries
- Links specific particle characteristics to the critical performance factors relevant to industrial applications
- Edited by experts acknowledged in both academia and industry

Contents

Basic Information for Design of Particulate Products.- Measurement of Particle Size, Shape, Porosity and Zeta-potential.- Assessment and Control of Fire and Explosion Hazards and Risks of Particulates.- Potential Toxicological Effects of Particles.- Ceramics.- Concrete, from a centuries-old construction material to modern particle-based composite concepts.- Chocolate.- Propellants.- Dry powder inhalers.- Powder coatings.- Paint dispersions.- Pharma powders.- Sunscreen.

Fields of interest

Soft and Granular Matter, Complex Fluids and Microfluidics; Characterization and Evaluation of Materials; Nanoscale Science and Technology

Target groups

Research

Product category

Monograph

Due October 2013

2014. 197 p. 32 illus., 22 in color. (Springer Theses) Hardcover

- * € (D) 106,99 | € (A) 109,99 | sFr 133,50
- 99,99 | £90.00

ISBN 978-3-319-00740-3

Due July 2013

2013. XXXVI, 318 p. 15 illus., 5 in color. Hardcover

- * € (D) 139,09 | € (A) 142,99 | sFr 173,50
- 129,99 | £117.00

ISBN 978-1-4614-7207-0

Due August 2013

2013. XII, 300 p. (Particle Technology Series, Volume 19) Hardcover

- approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
- approx. 99,95 | £90.00

ISBN 978-3-319-00713-7
A. Modinos, National Technical University of Athens, Greece

From Aristotle to Schrödinger

The Curiosity of Physics

From Aristotle to Schrödinger: The Curiosity of Physics offers a novel historical approach to the core subjects encountered in physics at the undergraduate level. It provides physics students with a grounding in the history and conceptual development of the subject. It provides a useful supplement to standard texts on general physics. It introduces the required mathematical concepts in an accessible way.

Features
- Offers a novel historical approach to the core subjects encountered in physics at the undergraduate level.
- Provides physics students with a grounding in the history and conceptual development of the subject.
- Provides a useful supplement to standard texts on general physics.
- Introduces the required mathematical concepts in an accessible way.

Contents
- The Language of Physics.
- The Dawn of Science.
- Astronomy Paves the Way.
- Galileo: His Life and Work.
- The 17th Century: The Bloom of Science.
- Isaacs Newton.
- Classical Mechanics.
- The Beginnings of Chemistry.
- Thermodynamics and Statistical Mechanics.
- Electromagnetism.
- Cathode Rays and X-Rays.
- Einstein’s Theory of Relativity.
- Quantum Mechanics.
- Atoms, Molecules and Solids.
- The Very Small and The Very Large.
- Appendix A: Notes on Mathematics.
- Appendix B: Physical Constants.

Fields of interest
- History and Philosophical Foundations of Physics
- History of Science
- Quantum Physics

Target groups
- Lower undergraduate

Product category
- Undergraduate textbook

M. Mohan, University of Delhi, India (Ed)

New Trends in Atomic and Molecular Physics

Advanced Technological Applications

The field of Atomic and Molecular Physics (AMP) has reached significant advances in high-precision experimental measurement techniques. The area covers a wide spectrum ranging from conventional to new emerging multi-disciplinary areas like physics of highly charged ions (HCI), molecular physics, optical science, ultrafast laser technology etc. This book includes the important topics of atomic structure, physics of atomic collision, photoexcitation, photoionization processes, laser cooling and trapping, Bose Einstein condensation and advanced technology applications of AMP in the fields of astronomy, astrophysics, fusion, biology and nanotechnology. This book is useful for researchers, professors, graduate, postgraduate and PhD students dealing with atomic and molecular physics.

Features
- Represents an up-to-date scientific status report on new trends in atomic and molecular physics.
- Multi-disciplinary approach.
- Also of interest to researchers in astrophysics and fusion plasma physics.
- Contains material important for nano- and laser technology.

Contents
- From the Contents: Recent Investigations of Radiative Lifetimes and Transition Probabilities in Heavy Elements.
- Atomic Structure calculations useful for Astrophysics and Fusion Plasma.
- Highly Charged Ions in Rare Earth Permanent Magnet Penning Traps.
- Dominance of Higher-Order Contributions to Electronic Recombination.

Fields of interest
- Atomic, Molecular, Optical and Plasma Physics
- Characterization and Evaluation of Materials
- Spectroscopy and Microscopy

Target groups
- Research

Product category
- Monograph
J. Novakova, Charles University in Prague, Czech Republic

**Standard Model Measurements with the ATLAS Detector**

**Monte Carlo Simulations of the Tile Calorimeter and Measurement of the Z \( \rightarrow \tau \tau \) Cross Section**

This thesis deals with two main procedures performed with the ATLAS detector at the Large Hadron Collider (LHC). The noise description in the hadronic calorimeter TileCal represents a very valuable technical job. The second part presents a fruitful physics analysis - the cross section measurement of the process p+p \( \rightarrow Z_0 \rightarrow \tau + \tau \). The Monte Carlo simulations of the TileCal are described in the first part of the thesis, including a detailed treatment of the electronic noise and multiple interactions (so-called pile-up). An accurate description of both is crucial for the reconstruction of e.g. jets or hadronic tau-jets.

**Features**
- Nominated as an outstanding Ph.D. thesis by the Charles University in Prague, Czech Republic
- Reports on the dominant background in the search for Higgs bosons decaying into tau lepton pairs
- A valuable contribution to understanding noise in the hadronic calorimeter TileCal

**Contents**
Overview of the ATLAS experiment at the LHC.
- Monte Carlo simulations of the Tile calorimeter.
- Electron efficiency measurement.
- \( Z_0 \rightarrow \tau + \tau \) cross section measurement.

**Fields of interest**
Elementary Particles, Quantum Field Theory; Measurement Science and Instrumentation; Quantum Field Theories, String Theory

**Target groups**
Research

**Product category**
Monograph

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**J. Pade, University of Oldenburg, Germany**

**Quantum Mechanics for Pedestrians 1: Fundamentals**

This book provides an introduction into the fundamentals of non-relativistic quantum mechanics. In Part 1, the essential principles are developed.

**Features**
- Provides fresh access to quantum mechanics through the combination of standard topics with new understanding
- Gives a reasonably easy and modern introduction into quantum mechanics
- Contains many additional explanations which are not contained in other textbooks
- Addresses recent developments and applications of quantum mechanics
- Discusses further leading topics and additional basic knowledge in the appendix
- Displays in parallel the analytic and algebraic formulation of quantum mechanics
- Supports learning with exercises and problems with solutions

**Contents**
Towards the Schrödinger Equation.
- Polarization.
- More on the Schrödinger Equation.
- Complex Vector Spaces and Quantum Mechanics.
- Two Simple Solutions of the Schrödinger Equation.
- Interaction-Free Measurement.
- Position Probability.
- Neutrino Oscillations.
- Expectation Value.
- Mean Value.
- Measured Value.
- Stopover - Quantum Cryptography.
- Abstract Notation.
- Continuous Spectra.
- Operators.
- Postulates of Quantum Mechanics.

**Fields of interest**
Quantum Physics; Quantum Field Theories, String Theory; Mathematical Applications in the Physical Sciences

**Target groups**
Upper undergraduate

**Product category**
Undergraduate textbook

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**Due August 2013**

Original German edition Quantenmechanik zu Fuß 1
published by Springer-Verlag, 2012

2013. 400 p. 60 illus., 30 in color. (Undergraduate Lecture Notes in Physics) Softcover
- *€ (D) 74,89 | € (A) 76,99 | sFr 93,50
- *€ 69,99 | £62.99
ISBN 978-3-319-00797-7

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**J. Pade, University of Oldenburg, Germany**

**Quantum Mechanics for Pedestrians 2: Applications and Extensions**

The two-volume textbook Quantum Mechanics for Pedestrians provides an introduction to the basics of non relativistic quantum mechanics. Originally written as a course for students of science education, the book addresses all those science students and others who are looking for a reasonably simple, fresh and modern introduction to the field. The basic principles of quantum mechanics are presented in the first volume. This second volume discusses applications and extensions to more complex problems.

**Features**
- Written by an experienced lecturer with a great insight into and understanding of quantum mechanics, and a gift for explaining it
- Combines the standard topics with new knowledge and developments, such as quantum information and neutrino oscillation
- Discusses further advanced topics in the appendix, including many exercises with solutions

**Contents**
One-Dimensional Piecewise Constant Potentials.
- Angular Momentum.
- The Hydrogen Atom.
- Harmonic Oscillator.
- Perturbation Theory.
- Entanglement.
- EPR.
- Symmetries and Conservation Laws.
- Density Operator.
- Identical Particles.
- decoherence.
- Scattering.
- Quantum Information.
- Is Quantum Mechanics Complete?.
- Discussion and Interpretations of Quantum Mechanics.

**Fields of interest**
Quantum Physics; Quantum Field Theories, String Theory; Mathematical Applications in the Physical Sciences

**Target groups**
Upper undergraduate

**Product category**
Undergraduate textbook

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**Due August 2013**

Original German edition Quantenmechanik zu Fuß 2
published by Springer-Verlag, 2012

2013. 400 p. 60 illus., 30 in color. (Undergraduate Lecture Notes in Physics) Softcover
- *€ (D) 74,89 | € (A) 76,99 | sFr 93,50
- *€ 69,99 | £62.99
ISBN 978-3-319-00812-7
Choosing and Using Astronomical Eyepieces

A valuable reference that fills a number of niches including that of a buyer’s guide, technical desk reference and observer’s field guide. It documents the past market and its evolution, right up to the present day. In addition to appealing to practical astronomers - and potentially saving them money - it is useful both as a historical reference and as a detailed review of the current market place for this bustling astronomical consumer product.

Contents

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy; Microwaves, RF and Optical Engineering

Target groups
Popular/general

Product category
Popular science

Due July 2013

2013. XIV, 410 p. 268 illus., 217 in color. (The Patrick Moore Practical Astronomy Series) Softcover
➤ * € (D) 48,14 | € (A) 49,49 | sFr 60,00
➤ € 44,99 | £40.99
ISBN 978-1-4614-7722-8
G. Privett, Fovant, UK

The Constellation Observing Atlas
Illustrations by: K. Jones, Calne, UK

Designed for anyone who wishes to learn the constellations or observe the best and brightest deep sky objects and double stars, this book contains an alphabetical list of constellations complete with star maps, historical background, and highlights of deep sky objects. Each entry contains positional and physical information on enough stars to support astronomers in star-hopping, swinging the telescope from star to star to arrive at a faint target. It provides a carefully selected list of accessible and rewarding deep sky objects. Full-color maps show the constellations, with star types (spectral and physical) indicated by the colors used on the map. Extended objects such as galaxies and nebulae are shown with the approximate apparent size in the sky. With unmatched thoroughness and accessibility, this is a constellation atlas that makes the ideal companion to a night’s telescope viewing, for novices and expert amateur astronomers alike.

Features
► Visualizes relevant physical information of stars and extended objects in an attractive and comprehensive way with different colors, symbol types, and sizes ► Covers the entire sky, both the Northern and Southern Hemisphere ► Contains position (and physical) information on enough stars to support star-hopping

Contents
Introduction: Background and How to Use This Book. - Constellation Maps. - Additional information. - Appendix 1. - Index.

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy

Target groups
Popular/general

Product category
Popular science

Due August 2013

2013. CLX, 10 p. 121 illus., 108 in color. (The Patrick Moore Practical Astronomy Series) Softcover
► * € (D) 32,09 | € (A) 32,99 | sFr 40,00
► € 29,99 | £26.99
ISBN 978-1-4614-7647-4

E. Radmaneshfar, University of Aberdeen, UK

Mathematical Modelling of the Cell Cycle Stress Response

The cell cycle is a sequence of biochemical events that are controlled by complex but robust molecular machinery. This enables cells to achieve accurate self-reproduction under a broad range of conditions. Environmental changes are transmitted by molecular signaling networks, which coordinate their actions with the cell cycle. This work presents the first description of two complementary computational models describing the influence of osmotic stress on the entire cell cycle of S. cerevisiae. Our models condense a vast amount of experimental evidence on the interaction of the cell cycle network components with the osmotic stress pathway.

Features
► Nominated as an outstanding Ph.D. thesis by the University of Aberdeen, UK. ► Includes the first computational model of the entire cell cycle and its interaction with the osmotic stress response network. ► Presents a comprehensive model that yields a set of novel predictions to guide further experiments. ► Also applies the model’s predictions to higher eukaryotes

Contents
A biological overview of the cell cycle and its response to osmotic stress and the α-factor. - ODE model of the cell cycle response to osmotic stress. - Boolean model of the cell cycle response to stress. - Conclusion. - List of equations, parameters and initial conditions. - Effect of methods of update on existence of fixed points.

Fields of interest
Physics of the Cell; Cell Cycle Analysis; Physiological, Cellular and Medical Topics

Target groups
Research

Product category
Monograph

Due October 2013

2013. 133 p. 36 illus., 26 in color. (Springer Theses) Hardcover
► approx. * € (D) 106,99 | € (A) 109,99 | sFr 133,50
► approx. € 99,99 | £90.00
ISBN 978-3-319-00743-4

G. Rhee, University of Nevada, Las Vegas, Nevada, USA

Cosmic Dawn

The Search for the First Stars and Galaxies

This book takes the reader on an exploration of the structure and evolution of our universe. The basis for our knowledge is the Big Bang theory of the expanding universe. This book then tells the story of our search for the first stars and galaxies using current and planned telescopes. These telescopes are marvels of technology far removed from Galileo’s first telescope but continuing astronomy in his ground breaking spirit. We show the reader how these first stars and galaxies shaped the universe we see today. This story is one of the great scientific adventures of all time.

Features
► Teaches the reader what the first stars and galaxies actually look like and how they could form. ► Provides the latest observational findings on the search for the first stars and galaxies. ► Explains the aims and goals of next-generation telescopes for astronomy

Contents

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy; Cultural Heritage

Target groups
Popular/general

Product category
Monograph

Due July 2013

2013. XV, 287 p. 96 illus., 79 in color. (Astronomers’ Universe) Softcover
► * € (D) 42,79 | € (A) 43,99 | sFr 53,50
► € 39,99 | £35.99
ISBN 978-1-4614-7712-6
Balances

Instruments, Manufacturers, History

The book deals mainly with direct mass determination by means of a conventional balances. It covers the history of the balance from the beginnings in Egypt earlier than 3000 BC to recent developments. All balance types are described with emphasis on scientific balances. Methods of indirect mass determination, which are applied to very light objects like molecules and the basic particles of matter and celestial bodies, are included. As additional guidance, today’s manufacturers are listed and the profile of important companies is reviewed. Several hundred photographs, reproductions and drawings show instruments and their uses.

Features
- Displays measuring weight in all ways possible
- Reviews the reliability of the various methods to measure weight
- Gives a historical survey of the development of scales
- Richly illustrated with several hundred rare photographs, reproductions and drawings of the instruments and their uses
- Presents indirect mass determination
- Gives advice to researchers and engineers about choosing the weight system

Contents
Mass and gravity.- Weights.- Weighing.- Balances.- Balances for special applications.- Balance as symbol and art object.- Documentation and archiving.- Weighing scales manufacturers.

Fields of interest
Measurement Science and Instrumentation; Characterization and Evaluation of Materials; History and Philosophical Foundations of Physics

Target groups
Research

Product category
Reference work

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Time-Dependent CP Violation Measurements

Analyses of Neutral B Meson to Double-Charm Decays at the Japanese Belle Experiment

This thesis describes a high-quality, high-precision method for the data analysis of an interesting elementary particle reaction. The data was collected at the Japanese B-meson factory KEKB with the Belle detector, one of the most successful large-scale experiments worldwide. CP violation is a subtle quantum effect that makes the world look different when simultaneously left and right and matter and antimatter are exchanged. This being a prerequisite for our own world to have developed from the big bang, there are only a few experimental indications of such effects, and their detection requires very intricate techniques.

Features
- Nominated as an outstanding Ph.D. thesis by the Karlsruhe Institute of Technology, Germany
- Offers a comprehensive introduction to the field of flavor physics and CP violating phenomena
- Provides a detailed reference work on and explanatory examples of time-dependent measurements in particle physics

Contents

Fields of interest
Elementary Particles, Quantum Field Theory; Theoretical, Mathematical and Computational Physics; Measurement Science and Instrumentation

Target groups
Research

Product category
Monograph

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Lecture Notes on Newtonian Mechanics

Lessons from Modern Concepts

Features
- Provides a concise and compact introductory text to Newtonian Mechanics at an advanced level
- Uses modern concepts such as the equivalence principle to simplify solving basic mechanics problems which makes the solutions more understandable
- Fits the need for a one-semester course in Classical Mechanics, before introducing advanced concepts such as action, Lagrange and Hamilton equations

Contents

Fields of interest
Mechanics; Theoretical and Applied Mechanics; Applications of Mathematics

Target groups
Upper undergraduate

Product category
Undergraduate textbook
Galactic Encounters
Our Majestic and Evolving Star-System, From the Big Bang to Time's End

The book is intended as a rich introduction to the wonders of the Galaxy. It is intended for anyone interested in the geography, beauty, and significance of our home star-system which is perhaps (along with the human brain itself) the grandest single structure the human mind can comprehend. Though scientifically informed and up-to-date (Dr. Conselice is a leading researcher) the text can be appreciated by the general reader (Dr. Sheehan is an accomplished writer and historian of astronomy and Julian Baum an award-winning illustrator).

Features
- An original text; no competing literature on the subject
- This book will fill a niche that has not been occupied by any books since Timothy Ferris's Galaxies (1980) and Henbest and Couper's Guide to the Galaxy (1994), both of which were very successful
- The best space-telescope images of galaxies will be complemented by Julian Baum's maps especially created for this book

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy; Astronomy, Astrophysics

Target groups
Popular/general

Product category
Popular science

Metrology for Fire Experiments in Outdoor Conditions

Natural fires can be considered as scale-dependant, non-linear processes of mass, momentum and heat transport, resulting from a turbulent reactive and radiative fluid medium flowing over a complex medium, the vegetal fuel. In natural outdoor conditions, the experimental study of natural fires at real scale needs the development of an original metrology, one able to capture the large range of time and length scales involved in its dynamic nature and also able to resist the thermal, mechanical and chemical aggression of flames on devices. Robust, accurate and poorly intrusive tools must be carefully set-up and used for gaining very fluctuating data over long periods. These signals also need the development of original post-processing tools that take into account the non-steady nature of their stochastic components. Metrology for Fire Experiments in Outdoor Conditions closely analyzes these features, and also describes measurements techniques, the thermal insulation of fragile electronic systems, data acquisition, measurement errors and optimal post-processing algorithms. This book is intended for practitioners as a reference guide for optimizing measurements techniques in an outdoor environment. Advanced-level students and researchers will also find the book invaluable.

Contents
Nomenclature.- Introduction.- Measurement systems.- Beyond measurement devices.- Conclusion.

Fields of interest
Measurement Science and Instrumentation; Engineering Thermodynamics, Heat and Mass Transfer; Engineering Fluid Dynamics

Target groups
Professional/practitioner

Product category
Research

Biophysics of the Failing Heart

Features
- Consideration of heart failure with an emphasis on biophysics
- Authors are clinicians who see patients and do research
- A didactic approach of use in focused courses or sections of courses for advanced students

Contents
Chapter 1 Introduction to the Biophysics of the Failing Heart.- Chapter 2 Sarcoplasmic Reticulum Ca homeostasis and Heart Failure.- Chapter 3 Ca-homeostasis and Heart Failure: Focus on the Biophysics of Surface Membrane Ca-Fluxes.- Chapter 4 Biophysics of Membrane Currents in Heart Failure.- Chapter 5 Biophysical Mechanisms for the Metabolic Component of Impaired Heart Function.- Chapter 6 Cytoskeletal Nuclear Links in the Cardiomyocyte.- Chapter 7 Biophysical Forces Modulate the Costamere and Z-Disc.- Chapter 8 Heart failure: the final frontier for biophysics in cardiovascular medicine?.- Chapter 9 Arrhythmogenesis, Heart Failure, and the Biophysics of Z-band Protein Networks.- Chapter 10 Biophysics of Titin in Cardiac Health and Disease.- Chapter 11 Sarcomeres and the Biophysics of Heart Failure.- Index.

Fields of interest
Biophysics and Biological Physics; Cardiology; Medical and Radiative Physics

Target groups
Research

Product category
Monograph

Due July 2013
2013. VIII, 61 p. 18 illus. (SpringerBriefs in Fire) Softcover
- € (D) 53,49 | € (A) 54,99 | sFr 67,00
- £ 49,99 | £44.99
ISBN 978-1-4614-7961-1
Ultra-Short Pulsed Laser Engineered Metal-Glass Nanocomposites

Glasses containing metallic nanoparticles exhibit very promising linear and nonlinear optical properties, mainly due to the surface plasmon resonances (SPRs) of the nanoparticles. The spectral position in the visible and near-infrared range and polarization dependence of the SPR are characterized by the nanoparticles’ shapes. The focus of Ultra-Short Pulsed Laser Engineered Metal-Glass Nanocomposites is the interaction of intense ultra-short laser pulses with glass containing silver nanoparticles embedded in soda-lime glass, and nanostructural modifications in metal-glass nanocomposites induced by such laser pulses.

Contents

Fields of interest
Optics, Optoelectronics, Plasmonics and Optical Devices; Optical and Electronic Materials; Laser Technology, Photonics

Target groups
Research

Product category
Brief

T. Stankovski, Lancaster University, UK
Tackling the Inverse Problem for Non-Autonomous Systems
Application to the Life Sciences

This thesis presents a new method for following evolving interactions between coupled oscillatory systems of the kind that abound in nature. Examples range from the subcellular level, to ecosystems, through climate dynamics, to the movements of planets and stars. Such systems mutually interact, adjusting their internal clocks, and may correspondingly move between synchronized and non-synchronized states. The thesis describes a way of using Bayesian inference to exploit the presence of random fluctuations, thus analyzing these processes in unprecedented detail. It first develops the basic theory of interacting oscillators whose frequencies are non-constant, and then applies it to the human heart and lungs as an example.

Features
Nominated as an outstanding Ph.D. thesis by the University of Lancaster, UK
Describes a new inference technique for time-evolving coupled systems in the presence of noise
Includes the first reconstruction of a time-evolving coupling function between open (biological) systems

Contents
Theoretical background: non-autonomous systems and synchronization.- Inference of time-evolving coupled dynamical systems in the presence of noise.- Application to life sciences.- Analogue simulation and synchronization analysis of non-autonomous oscillators.

Fields of interest
Statistical Physics, Dynamical Systems and Complexity; Probability Theory and Stochastic Processes; Theoretical, Mathematical and Computational Physics

Target groups
Research

Product category
Monograph

S. Thutupalli, Princeton University, NJ, USA
Towards Autonomous Soft Matter Systems
Experiments on Membranes and Active Emulsions

This book focuses on the assembly, organization and resultant collective dynamics of soft matter systems maintained away from equilibrium by an energy flux. Living matter is the ultimate example of such systems, which are comprised of different constituents on very different scales (ions, nucleic acids, proteins, cells). The result of their diverse interactions, maintained using the energy from physiological processes, is a fantastically well-organized and dynamic whole.

Features
Nominated as an outstanding Ph.D. thesis by the Max Planck Institute for Dynamics and Self-Organisation, Germany
Develops novel experimental systems and techniques aimed at building futuristic soft functional matter
A cross-disciplinary work that is broadly applicable to research and development in physics, chemistry, biology and engineering

Contents

Fields of interest
Soft and Granular Matter, Complex Fluids and Microfluidics; Physical Chemistry; Membranes

Target groups
Research

Product category
Monograph

Due June 2013
2013. XII, 70 p. 38 illus., 36 in color. (SpringerBriefs in Physics) Softcover
> * (D) 53,49  |  (A) 54,99  |  sFr 67,00
> 49,99  |  44,99
ISBN 978-3-319-00436-5

Due July 2013
2013. 168 p. 47 illus., 23 in color. (Springer Theses) Hardcover
> * (D) 106,99  |  (A) 109,99  |  sFr 133,50
> 99,99  |  90,00
ISBN 978-3-319-00752-6

Due September 2013
2013. 160 p. 81 illus., 26 in color. (Springer Theses) Hardcover
> approx. * (D) 106,99  |  (A) 109,99  |  sFr 133,50
> approx. 99,99  |  90,00
ISBN 978-3-319-00734-2
Quantifying the Martian Geochemical Reservoirs

Features
- Presents a compilation of the latest NASA and ESA space mission exploration data of the Martian surface
- Provides one of the rare, truly interdisciplinary looks at Mars by bringing together a wide range of different data types
- Gives critical background reviews and current assessments for use in planning future Mars missions

Contents

Fields of interest
Extraterrestrial Physics, Space Sciences; Geochemistry; Mineralogy

Target groups
Research

Product category
Monograph

Due July 2013


2013, X, 380 p. 101 illus., 58 in color. (Space Sciences Series of ISSI, Volume 44) Hardcover
- approx. € (D) 139.09 | € (A) 142.99 | sFr 177.00
- approx. € 129.99 | £119.50
ISBN 978-1-4614-7773-0

Hadronic Transport Coefficients from Effective Field Theories

J. M. Torres-Rincón, Autonomous University of Barcelona-CSIC, Spain

This dissertation focuses on the calculation of transport coefficients in the matter created in a relativistic heavy-ion collision after chemical freeze-out. This matter can be well approximated using a pion gas out of equilibrium. We describe the theoretical framework needed to obtain the shear and bulk viscosities, the thermal and electrical conductivities and the flavor diffusion coefficients of a meson gas at low temperatures. To describe the interactions of the degrees of freedom, we use effective field theories with chiral and heavy quark symmetries.

Features
- Nominated as an outstanding Ph.D. thesis by the Universidad Complutense de Madrid
- Presents a unified description of non-equilibrium phenomena in a hadronic gas
- Applies unitarized effective theories to the calculation of transport coefficients in mesons

Contents

Fields of interest
Nuclear Physics, Heavy Ions, Hadrons; Thermodynamics; Theoretical, Mathematical and Computational Physics

Target groups
Research

Product category
Monograph

Due September 2013

2014, 220 p. 62 illus., 42 in color. (Springer Theses) Hardcover
- approx. € (D) 106.99 | € (A) 109.99 | sFr 133.50
- approx. € 99.99 | £90.00
ISBN 978-3-319-00424-2

Optically Active Charge Traps and Chemical Defects in Semiconducting Nanocrystals Probed by Pulsed Optically Detected Magnetic Resonance

K. van Schooten, University of Utah, Salt Lake City, UT, USA

Colloidal nanocrystals show much promise as an optoelectronics architecture due to facile control over electronic properties afforded by chemical control of size, shape, and heterostructure. Unfortunately, realizing practical devices has been forestalled by the ubiquitous presence of charge “trap” states which compete with band-edge excitons and result in limited device efficiencies. Little is known about the defining characteristics of these traps, making engineered strategies for their removal difficult.

Features
- Nominated by the University of Utah, USA, as an outstanding Ph.D. thesis
- Lays the groundwork for further use of Electron Spin Echo Envelop Modulation (ESEEM) and opens the possibility of highly precise chemical fingerprinting
- Reveals an astonishingly long memory of spin coherence in semiconductor particles

Contents

Fields of interest
Semiconductors; Nanotechnology; Spectroscopy and Microscopy

Target groups
Research

Product category
Monograph

Due July 2013

2013, X, 117 p. 28 illus. in color. (Springer Theses) Hardcover
- € (D) 106.99 | € (A) 109.99 | sFr 133.50
- € 99.99 | £90.00
ISBN 978-3-319-00389-8
Charge Multiplicity Asymmetry Correlation Study Searching for Local Parity Violation at RHIC for STAR Collaboration

It has been suggested that local parity violation (LPV) in Quantum Chromodynamics (QCD) would lead to charge separation of quarks by the Chiral Magnetic Effect (CME) in heavy ion collisions. Charge Multiplicity Asymmetry Correlation Study Searching for Local Parity Violation at RHIC for STAR Collaboration presents the detailed study of charge separation with respect to the event plane. Results on charge multiplicity asymmetry in Au+Au and d+Au collisions at 200 GeV by the STAR experiment are reported. It was found that the correlation results could not be explained by CME alone. Additionally, the charge separation signal as a function of the measured azimuthal angle range as well as the event-by-event anisotropy parameter are studied. These results indicate that the charge separation effect appears to be in-plane rather than out-of-plane.

Features

- Nominated by Purdue University, USA, as an outstanding Ph.D. thesis
- Devises a new method of studying charge separation versus the event structure in heavy-ion collisions
- Discovers that charge separation is proportional to the event structure, indicating the observed signal is dominated by an event-structure-related background

Contents

Introduction.- Experiment.- Data Analysis.- Results and Discussions.- Appendix.

Fields of interest

Nuclear Physics, Heavy Ions, Hadrons; Particle Acceleration and Detection, Beam Physics; Elementary Particles, Quantum Field Theory

Target groups

Research

Product category

Monograph

Historical Evolution toward Achieving Ultrahigh Vacuum in JEOL Electron Microscopes

This book describes the course of history of the vacuum system of the transmission electron microscope of JEOL (JEM series), from its birth to today's microscopes. Present author and co-workers engaged in developing vacuum technology for electron microscopes in JEOL (Japan Electron Optics Laboratory Co., Ltd.) for many years. This book presents you the vacuum technology in electron microscopes of JEOL (JEM), approaching clean ultrahigh vacuum. The users of TEM are high-level researchers, frontiers for new materials or new biological specimens. They often use the TEM at the extremely severe conditions, occurring problem on the vacuum system of the user's TEM.

Features

- Provides a diffusion pump (DP) evacuation system for clean vacuum
- Presents in detail the development of vibration-free DP, sputter ion pump for extreme high-vacuum evacuation and sputter ion pump for inert gases such as Ar and Xe
- Describes how to prevent contamination build-up due to electron beam irradiation

Contents

Introduction of the electron microscope.- History of JEOL electron microscopes.- Accidents and information, instructing us to improve the vacuum systems of JEMs.- Development of the evacuation systems for JEMs.- Development of JEOL SIPS.- Ultrahigh vacuum electron microscopes.

Fields of interest

Spectroscopy and Microscopy; Nanotechnology and Microengineering; Machinery and Machine Elements

Target groups

Research

Product category

Brief
P. Zhang, CERN, Geneva 23, Switzerland

**Beam Diagnostics in Superconducting Accelerating Cavities**

**The Extraction of Transverse Beam Position from Beam-Excited Higher Order Modes**

An energetic charged particle beam introduced to an rf cavity excites a wakefield therein. This wakefield can be decomposed into a series of higher order modes and multipoles, which for sufficiently small beam offsets are dominated by the dipole component. This work focuses on using these dipole modes to detect the beam position in third harmonic superconducting S-band cavities for light source applications. A rigorous examination of several means of analysing the beam position based on signals radiated to higher order modes ports is presented.

**Features**

- Nominated as an outstanding Ph.D. thesis by the Deutsches Elektronen-Synchrotron (DESY), Hamburg, Germany
- The author is the winner of the 2011 European Accelerator Prize for promising young researchers
- A valuable didactic introduction for students and scientists new to the field of rf diagnostics
- Provides a detailed survey of various dimension reduction methods applicable for rf diagnostics

**Contents**

- Electromagnetic Eigenmode Simulations of the Third Harmonic Cavity.
- Measurements of HOM Spectra.
- Analysis Methods for Beam Position Extraction from HOM.
- Dependencies of HOM on Transverse Beam Offsets.
- HOM-Based Beam Position Diagnostics.

**Fields of interest**

Particle Acceleration and Detection, Beam Physics; Optics and Electrodynamics; Numerical and Computational Physics

**Target groups**

Research

**Product category**

Monograph

Due October 2013

2013. 170 p. 170 illus., 38 in color. (Springer Theses)

Hardcover

- € (D) 106.99 | € (A) 109.99 | sFr 133,50
- € 99.99 | £90.00

ISBN 978-3-319-00758-8
Smart Biomaterials

This book provides comprehensive coverage of smart biomaterials and their potential applications, a field that is developing at a very rapid pace. Because smart biomaterials are an emerging class of biomaterials that respond to small changes in external stimuli with large discontinuous changes in their physical properties, they have been designed to act as an "on-off" switch for, among others, bioseparation, immunoanalysis, drug delivery technologies, gene therapy, diagnostics, biosensors, and artificial muscles. After an introduction to the topic and the history of smart biomaterials, the author gives the reader an in-depth look at the properties, mechanics, and characterization of smart biomaterials including hydrogels, particles, assemblies, surfaces, fibers, and conjugates. Information on the wide range of applications for these materials follows, including drug delivery, tissue engineering, and bioseparation. In addition, recent advances in shape memory biomaterials as active components of medical devices are also presented.

Features

- Provides comprehensive coverage of the principles and applications of all classes of smart biomaterials
- Introduces key new topics including shape memory materials
- Serves as a catalyst for new research to lead the field in the coming decade

Contents

Introductory Guide to Smart Biomaterials.
- Hydrogels.
- Nanoparticles.
- Nanoassemblies.
- Surfaces.
- Nanofibers.
- Conjugates.
- Shape Memory Materials.

Fields of interest

Biomaterials; Gene Therapy; Polymer Sciences

Target groups

Research

Product category

Monograph

C. Bergmann, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil; A. Stumpf, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

Dental Ceramics

Microstructure, Properties and Degradation

This book gives an introduction to the mechanical behavior and degradation of dental ceramics and guides the reader through their performance under the field of oral environments. It addresses the different kinds of dental ceramics, their properties, degradation and mechanical aspects with less emphasis on the physics and chemistry involved, which makes the reading interesting for beginners in the field. In each chapter, the reader will learn about the mechanical behavior of dental ceramics and each phenomenon involved in their application, besides finding some practical examples of their use in dental clinics, their manufacturing procedures and types of degradation.

Features

- Treats the strengths and weaknesses of ceramics as dental materials
- Takes into account the aggressive intraoral environment
- Stresses the imperative of proper manufacturing for mechanical strength and reduction of degradation

Contents

INTRODUCTION. - BIOMATERIALS. - CERAMIC MATERIALS FOR PROSTHETIC AND RESTORATION USE. - CERAMIC MATERIALS FOR ORTHODONTIC USE. - MICROSTRUCTURE OF CERAMIC MATERIALS. - MECHANICAL BEHAVIOR OF CERAMIC MATERIALS. - DENTAL ALUMINA: MICROSTRUCTURE AND PROPERTIES. - DEGRADATION OF DENTAL CERAMICS.

Fields of interest

Biomaterials; Dentistry; Ceramics, Glass, Composites, Natural Materials

Target groups

Research

Product category

Brief

Materials that Change Color

Smart Materials, Intelligent Design

This book presents a design-driven investigation into smart materials developed by chemists, physicists, materials and chemical engineers, and applied by designers to consumer products. Introducing a class of smart materials, that change colors, the book presents their characteristics, advantages, potentialities and difficulties of applications of this to help understanding what they are, how they work, how they are applied. The books also present a number of case studies: products, projects, concepts and experiments using smart materials, thus mapping out new design territories for these innovative materials. These case studies involve different fields of design, including product, interior, fashion and communication design.

Features

- Detailed and up-to-date coverage of chromogenic materials
- Case studies discussing significant design-lead applications of chromogenic materials
- Easy to read and understand by design professionals, engineers, scientists and students

Contents

Introduction to smart materials. - Chromogenic materials. - Types of chromogenic materials. - Manufacturing and processes related to chromogenic materials and applications. - Applications of chromogenic materials (products, projects, concepts).

Fields of interest

Surfaces and Interfaces, Thin Films; Industrial Chemistry/Chemical Engineering; Physical Chemistry

Target groups

Research

Product category

Brief

Due July 2013

2013. Approx. 300 p. 150 illus., 50 in color. (NIMS Monographs) Softcover

- Approx. *€ (D) 106.95 | € (A) 109.95 | sFr 133.50
- Approx. *€ 99.95 | £90.00

ISBN 978-4-431-54399-2

Due June 2013

2013. VI, 95 p. 50 illus., 37 in color. (Topics in Mining, Metallurgy and Materials Engineering) Hardcover

- *€ (D) 53.45 | € (A) 54.95 | sFr 66.50
- *€ 49.95 | £44.99

ISBN 978-3-642-38223-9

Due September 2013

2014. 100 p. 90 illus., 30 in color. (SpringerBriefs in Applied Sciences and Technology / PoliMi SpringerBriefs) Softcover

- Approx. *€ (D) 53.49 | € (A) 54.99 | sFr 67.00
- Approx. *€ 49.99 | £44.99

ISBN 978-3-319-00289-7
**Materials Science**

A. S. Kurlov, A. I. Gusev, Ural Division of the Russian Academy of Sciences, Ekaterinburg, Russia

**Tungsten Carbides**

Structure, Properties and Application in Hardmetals

This book embraces the entire range of problems associated with phase equilibria in “tungsten – carbon” binary system and related ternary systems, nonstoichiometry, disorder and order in different tungsten carbides, electronic and crystal structure of these carbides. The main application of tungsten carbides is constituent in hardmetals for cutting tools. In the last 20 years, the most active efforts were made in synthesis and application of nanocrystalline tungsten carbide for the production of nanostructured hardmetals. The present book describes in detail different methods for production of nanocrystalline tungsten carbide. The peculiarities of sintering of Co hardmetals from nanocrystalline powders having different particle sizes are discussed.

**Features**

- Provides a survey of structure and properties of tungsten carbides
- Contains detailed description of different applied methods for production of nanocrystalline tungsten carbide powders and nanostructured hardmetals
- Analyses the effect of particle size of tungsten carbide powders on the peculiarities of sintering nanopowders, thermal stability, phase and chemical composition

**Contents**

Introduction.- Phases and Equilibria in the W – C and W – Co – C Systems.- Ordering of Tungsten Carbides.- Nanocrystalline Tungsten Carbide.- Hardmetals WC – Co Based on Nanocrystalline Powders of Tungsten Carbide WC.

**Fields of interest**

Ceramics, Glass, Composites, Natural Materials; Physical Chemistry; Applied and Technical Physics

**Target groups**

Research

**Product category**

Monograph

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K. A. Padmanabhan, University of Hyderabad, India; R. R. Mulyukov, Director IMSP, Ufa, Russia; S. G. Chowdhury, National Metallurgical Laboratory, Jamshedpur, India

**Superplasticity**

Common Basis for an Ubiquitous Phenomenon

This book combines the perspectives of materials science of Superplasticity, on the one hand, and those of design and mechanics, on the other, in order to provide a holistic view of materials, design, mechanics and performance which will lead to useful solutions of societal benefits, in addition to providing great intellectual challenges. After considering the experimental evidence for superplasticity in different classes of materials, the book discusses the physics-based models, along with their advantages and limitations. Then, the analyses for superplastic forming available in the framework of continuum mechanics, finite element analysis and numerical simulations are presented.

**Features**

- Combines the perspectives of materials science of Superplasticity with those of design and mechanics
- Highlights successful industrial applications
- Addresses superplasticity from a universal physical origin

**Contents**

Historical Introduction.- Mechanics of Superplastic Deformation and Assessment of Superplastic Performance.- Structural Superplasticity in Different Classes of Materials.- Environmental Superplasticity.- Theories of Superplasticity.- Industrial Applications of Superplasticity.

**Fields of interest**

Characterization and Evaluation of Materials; Continuum Mechanics and Mechanics of Materials; Soft and Granular Matter, Complex Fluids and Microfluidics

**Target groups**

Research

**Product category**

Monograph

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Thermal and Mineral Waters

Origin, Properties and Applications

This is a compilation of manuscripts on mineral and thermal waters of different areas of the world. This special volume is devoted to the 41st Meeting of the World Health Organization (WHO) Expert Committee on Terrestrial Mineral and Thermal Waters. It presents an overview of the state-of-the-art in the matter to the water scientists eager to add Radial Altimetry to their toolkit. It describes experience in application of satellite altimetry to the different inland seas, lakes and rivers in the World. It presents the principal problems related to the altimetry derived products in inland seas, lakes and rivers and ways of their improvement. This publication is based on numerous satellite and observational data collected and analyzed by the authors of the various chapters in the framework of a set of international projects, performed in Europe, Russia, USA, and China. The book will contribute both to the ongoing International Altimeter Service effort and to the building of a sustained Continental Water observation system in the perspective of GMES and GEOFIS initiatives, supplied with satellite data from the series of Sentinel-3 satellites, the Jason series and further on the revolutionary SWOT Satellite Mission. This book is aimed at specialists concerned with research in the various fields of satellite altimetry and remote sensing of Continental Waters. The book will also be interesting for lecturers, students and postgraduate students.

Contents


Features

► Provides practical experience combined with scientific interpretation ► Invaluable as a reference work in this field

Fields of interest

Hydrogeology; Renewable and Green Energy; Geoenvironment, Foundations, Hydraulics

Target groups

Research

Product category

Monograph

Inland Water Altimetry

This book will bring an integrated view of the state-of-the-art in the matter to the water scientists eager to add Radial Altimetry to their toolkit. It describes experience in application of satellite altimetry to the different inland seas, lakes and rivers in the World. It presents the principal problems related to the altimetry derived products in inland seas, lakes and rivers and ways of their improvement. This publication is based on numerous satellite and observational data collected and analyzed by the authors of the various chapters in the framework of a set of international projects, performed in Europe, Russia, USA, and China. The book will contribute both to the ongoing International Altimeter Service effort and to the building of a sustained Continental Water observation system in the perspective of GMES and GEOFIS initiatives, supplied with satellite data from the series of Sentinel-3 satellites, the Jason series and further on the revolutionary SWOT Satellite Mission. This book is aimed at specialists concerned with research in the various fields of satellite altimetry and remote sensing of Continental Waters. The book will also be interesting for lecturers, students and postgraduate students.

Features

► For specialists in the field of satellite altimetry and remote sensing of continental waters ► Contributing to a sustained continental water observing system ► Written by outstanding specialists in this field

Fields of interest

Remote Sensing/Photogrammetry; Hydrology/Water Resources

Target groups

Research

Product category

Monograph

Origin, Evolution and Biogeographic History of South American Turtles

The extended continental South American turtle record (Norian to Lujanian) allows us to follow the evolution of this reptile clade from its origins. Several significant stem turtle taxa such as: Palaeocheris talampayensis and Condorchelys antiqua provide information on the first steps of turtle evolution. Others such as: Chubutemys copeloi or Patagoniameys gasparinae provide clues to the origin of the bizarre horned tortoises of the clade Meiolanidae. The panteleurodiran species such as Notoemys laticentralis or Notoemys zapatocaensis shed light on the origin of modern pleurodiran turtles.

Features

► Fast access to relevant information about extant and extinct species of South American turtles ► Distribution maps of extant and extinct species of South American turtle species ► Life reconstruction of peculiar extinct South American species

Contents


Fields of interest

Paleontology; Evolutionary Biology; Plant Systematics/Taxonomy/ Biogeography

Target groups

Research

Product category

Monograph
Sediment Transport and Scour Phenomena

The state-of-the-art in fluvial hydrodynamics can be examined only through a careful exploration of the theoretical development and applied engineering technology. The book will be primarily focused, since most up-to-date research findings in the field will be presented, on the research aspects that involves a comprehensive knowledge of sediment dynamics in turbulent flows. It begins with the fundamentals of hydrodynamics and particle motion followed by turbulence characteristics related to sediment motion. Then, the sediment dynamics will be described from a classical perspective by applying the mean bed shear approach and additionally incorporating a statistical description for the role of turbulence. The book will finally describe the local scour problems at hydraulic structures and scale models. It is intended to design as a course textbook in graduate / research level and a guide for the field engineers as well, keeping up with modern technological developments. Therefore, as a simple prerequisite, the background of the readers should have a basic knowledge in hydraulics in undergraduate level and an understanding of fundamentals of calculus.

Features

- Contains all the latest research developments in sediment transport and scour
- Provides selective numerical examples related to the practical field problems
- Can be used as a textbook for graduate/advanced undergraduate level courses

Fields of interest

Sedimentology; Physical Geography; Geophysics and Environmental Physics

Target groups

Research

Product category

Monograph

Due August 2013

2012. 400 p. 70 illus., 20 in color. (GeoPlanet: Earth and Planetary Sciences) Hardcover

- approx. * € (D) 139,05 | € (A) 142,94 | sFr 186,50
- approx. € 129,95 | £117.00
ISBN 978-3-642-19061-2

M. Fort, University Diderot-Sorbonne-Paris-Cite, France; M.-F. André, Blaise Pascal University, Clermont-Ferrand, France (Eds)

Our Beautiful Moon and its Mysterious Magnetism

A Long Voyage of Discovery

This book is a summary of the history of discovering the moon. The author has been involved in the Apollo program, working with its samples and this book covers these efforts. It describes the analysis methods of lunar samples and their interpretation to understand lunar paleomagnetism. The book has adopted an historical approach throughout, tracing the development of the ideas of the Earth-moon system, of the birth of the space age, of paleomagnetism and finally of lunar magnetism and its evidence for an early lunar dynamo.

Features

- Summary of over 40 years of paleomagnetism research on the moon
- Provides earth-moon-system background in an easy understandable way

Contents


Fields of interest

Planetology; Geophysics/Geodesy; Popular Science, general

Target groups

Research

Product category

Brief

Due September 2013

2014. 120 p. 70 illus., 35 in color. (SpringerBriefs in Earth Sciences) Softcover

- approx. * € (D) 33,49 | € (A) 54,99 | sFr 67,00
- approx. € 49,99 | £44.99
ISBN 978-3-319-00277-4

M. Fuller, University of Hawaii at Manoa, Honolulu, HI, USA

Provides earth-moon-system background in an easy understandable way

Summary of over 40 years of paleomagnetism research on the moon

Our Beautiful Moon and its Mysterious Magnetism

A Long Voyage of Discovery

This book is a summary of the history of discovering the moon. The author has been involved in the Apollo program, working with its samples and this book covers these efforts. It describes the analysis methods of lunar samples and their interpretation to understand lunar paleomagnetism. The book has adopted an historical approach throughout, tracing the development of the ideas of the Earth-moon system, of the birth of the space age, of paleomagnetism and finally of lunar magnetism and its evidence for an early lunar dynamo.

Features

- Summary of over 40 years of paleomagnetism research on the moon
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Contents


Fields of interest

Planetology; Geophysics/Geodesy; Popular Science, general

Target groups

Research

Product category

Brief

Due July 2013

2014. XII, 222 p. 235 illus., 219 in color. (World Geomorphological Landscapes) Hardcover

- * € (D) 106,99 | € (A) 109,99 | sFr 133,50
- * € 99,99 | £90.00
ISBN 978-3-319-00278-1

M. Fort, University Diderot-Sorbonne-Paris-Cite, France; M.-F. André, Blaise Pascal University, Clermont-Ferrand, France (Eds)
Information Technology in Environmental Technology

Selected Contributions to the Sixth International Conference on Information Technologies in Environmental Engineering (ITEE2013)

Information technologies have evolved to an enabling science for natural resource management and conservation, environmental engineering, scientific simulation and integrated assessment studies. Computing plays a significant role in the every day practices of environmental engineers, natural scientists, economists, and social scientists. The complexity of natural phenomena requires interdisciplinary approaches, where computing science offers the infrastructure for environmental data collection and management, scientific simulations, decision support, documentation and reporting.

Features
  ► Interdisciplinary approach  ► Offers a collection of papers presented at the 6th International Conference on Environmental Engineering, held in July 2013, in Lüneburg, Germany  ► Provides state-of-the-art findings in ecoinformatics

Contents
Information Systems.- Formal methods and data processing.- Geographics information & earth observation systems.- Environmental policy & management.- Modelling and simulation.- Tools and measurement techniques.- Practical applications and experiences.

Fields of interest
Environmental Science and Engineering; Monitoring/Environmental Analysis; Information Systems and Communication Service

Target groups
Research

Product category
Monograph

Due October 2013

B. Funk, P. Niemeyer, Institute of Electronic Business Process, Lüneburg, Germany; J. M. Gómez, Universität Oldenburg, Germany (Eds)

Human Environment Interactions - Volume 2
Reconstructing the Natural and Anthropogenic Landscape

The Holocene is unique when compared to earlier geological time in that humans begin to alter and manipulate the natural environment to their own needs. Domestication of crops and animals and the resultant intensification of agriculture lead to profound changes in the impact humans have on the environment. Conversely, as human populations began to increase geologic and climatic factors begin to have a greater impact on civilizations. To understand and reconstruct the complex interplay between humans and the environment over the past ten thousand years requires examination of multiple differing but interconnected aspects of the environment and involves geomorphology, paleoecology, geoarchaeology and paleoclimatology.

Features
  ► Cutting edge research in the field of human environment interactions  ► Broad geographic appeal

Contents
Foreword by Michelle Goman.- Climatic controls on human development during the Neolithic: new palaeoecological data from the Carrowkeel/Keshcorran area, Western Ireland.- Prehistoric land use in the Mt Trumbull region, NW Arozona.- Geoarchaeology of the floodplain surrounding Tell Qarqur.

Fields of interest
Earth System Sciences; Agriculture; Climate Change

Target groups
Research

Product category
Brief

Due August 2013

M. Goman, Sonoma State University, Rohnert Park, CA, USA (Ed)

Seismic Events in Glaciers

Seismic Events in Glaciers

The occurrence of seismic events in glaciers has been an issue in the scientific literature since the early 1950s, following the report about icequakes in Baffin Island. Targeted seismological studies were undertaken by the Polish Expedition to Spitsbergen in 1962 and then continued at various glaciers in the Arctic, Antarctic and the Alps. The author of the book has been engaged in the project since 1970; he designed the layout of observations and instrumentation. The quakes he observed were categorized into two groups: typical seismic events called icequakes, and relatively long-period events named ice vibrations. In the case of icequakes, the space-time distributions and focal parameters were determined. In the case of ice vibrations, a spectral analysis was made. The present book is a synthesis of the results obtained. There are reports that the number of seismic events in glaciers has recently grown, which may be related to changing geometry of glaciers due to changing thermal conditions.

Features
  ► Presents seismic events in glaciers  ► Describes two groups of quakes: typical icequakes and ice vibrations Discusses the problem of climate change

Fields of interest
Geophysics/Geodesy; Geology; Earth System Sciences

Target groups
Research

Product category
Monograph

Due August 2013

M. Górski, Polish Academy of Sciences, Warsaw, Poland

ISBN 978-3-642-31850-4

Seismic Events in Glaciers

Due August 2013

  ► approx.  * € (D) 106.95 | € (A) 109.95 | sFr 133.50
  ► approx.  € 99,95 | £90.00
ISBN 978-3-642-31850-4

2014. 50 p. 10 illus. in color. (SpringerBriefs in Earth System Sciences) Softcover
  ► approx.  * € (D) 53,45 | € (A) 54,95 | sFr 66,50
  ► approx.  € 49,95 | £44.99
ISBN 978-3-642-36879-0

  ► approx.  * € (D) 181,85 | € (A) 186,94 | sFr 226,50
  ► approx.  € 169,95 | £153.00
ISBN 978-3-642-36010-7

News 6/2013

Earth Sciences

163
Calcium and Magnesium Stable Isotope Chemistry

Calcium and Mg isotope geochemistry is currently becoming a more mature field than even a few years ago. In that regard, our new book will include fundamental advances in Ca and Mg isotope geochemistry including recent developments on biological fractionation and biochemical applications. It also offers a more intimate link between the method and applications chapters as it was possible in the above volume that includes very diverse "non-traditional stable isotope" systems. Furthermore, a thorough combined discussion of Mg and Ca isotope fractionation has not yet been presented, even though the applications of the two systems have much in common. In particular, the chapter on Mg isotope geochemistry and cosmochronology in the above mentioned volume.

Feature

- Invaluable introduction to expanding field of isotope chemistry, providing detailed methodology for practical use.

Fields of interest

- Geochemistry
- Biochemical Engineering
- Geological Engineering & Applied Earth Sciences

Target groups

- Research

Product category

- Monograph

Historical Variability of Rainfall in the African East Sahel of Sudan

Implications for Development

The northward migration of the African monsoon rains in summer, associated with the seasonal march of the Intertropical Convergence Zone (ITCZ) across the plains south of the Sahara, is the most critical asset for the livelihoods of indigenous peoples and local economies of the Sahel. It is essential that climate science (and its publicly available database) play a key role in characterizing the variabilities of these rainfall patterns in space and time if sustainable life styles are to accommodate the expanding populations of the region. This study turns to the East Sahel of Sudan by analyzing over 100 years of historical rainfall data from three of the few long term standard WMO rain gauge stations in substantially different rainfall settings. From north to south, transecting the Sahel, the stations with their annual rainfall are Khartoum (130 mm); Kassala (280 mm); and Gedaref (600 mm). The conclusions challenge a popular notion that changing climate, drought and desertification in the East Sahel may have already accelerated the deterioration of its water resources. However, any evidence of a persistent and coherent regional trend of diminishing rainfall is obscure.

Contents

- Introduction
- Analysis of Long Term (100 yr) Patterns of Rainfall Variability
- Interannual and Interseasonal Variations in Monthly Rainfall
- Intra-Seasonal Patterns of Rainfall from Daily Values
- Analysis of Storm Events and Interstorm Dry Periods
- Overview and Conclusions

Fields of interest

- Earth System Sciences
- Meteorology
- Climate Change

Target groups

- Research

Product category

- Monograph

Seismic Evaluation and Rehabilitation of Structures

Contents

- Preface
- Surrealism in Facing the Earthquake Risk
- Rapid Seismic Assessment Procedures for the Turkish Building Stock
- Post-Earthquake Risk-Based Decision Making Methodology for Turkish School Buildings
- Proposed Vulnerability Functions to Estimate the Real Damage State of RC Buildings after Major Turkish Earthquakes
- Probabilistic Path Finding Method for Post-Disaster Risk Estimation
- Seismic Behaviour of Thin-Bed Layered Unreinforced Clay Masonry Shear Walls Including Soundproofing Elements
- Assessing Seismic Vulnerability of Unreinforced Masonry Walls Using Elasto-Plastic Damage Model
- Implementation of Experimentally Developed Methodology for Seismic Strengthening and Repair of Historic Monuments
- Shaking Table Tests of a Full-scale Two-Storey Predamaged Natural Stone Building Retriffed with the Multi-Axial Hybrid Textile System "Eq-grid"
- Application of Mesh Reinforced Mortar for Performance Enhancement of Hollow Clay Tile Infill Walls
- Shake Table Tests on Deficient RC Buildings Strengthened Using Post-Tensioned Metal Straps
- Bond Strength of Lap Splices in FRP and TRM Confined Concrete: Behaviour and Design
- Finite Element Modeling of Seismic Performance of Low Strength Concrete Exterior Beam-Column Joints
- Experimental Behavior of Non-Conforming Full Scale RC Beam-Column Joints Retrofitted with FRP
- Seismic Rehabilitation of Concrete Buildings by Converting Frame Bays into RC Walls
- Pseudo-Dynamic Tests of 4-Storey Non-Ductile Frames with RC Infilling of the Bay

Fields of interest

- Geotechnical Engineering & Applied Earth Sciences
- Structural Mechanics
- Civil Engineering

Target groups

- Research

Product category

- Monograph
**Geoecology of the Western Arctic Shelf of Russia**

Lithological and Ecogeochemical Aspects

Environmental bottom investigations of the Arctic Shelf are to determine the anthropogenic component and the degree of its impact to biota in the course of the sedimentation process. Hereby, the main focus is on analysis of sources of supply, pathways of migration, mechanisms of transformation and accumulation of pollutants as well as on the selection of the criteria of assessment of the bottom environment at different levels.

**Features**
- New research direction for geoenvironmental studies  
- Contains maps of the distribution of all types of pollutants in water and bottom sediments of the most important parts of the Barents and Kara Seas (Shoktman, Prirazlomnaya NM, Pechora Sea, St. Anna Trough, the dumping place of radioactive waste)  
- Background concentrations of all types of pollutants in water and sediments for different levels - trans-regional (Barents and Kara Seas), regional (Pechora Sea, St. Anna Trough), polygonal (Shoktman GCF and Prirazlomnaya OF, Chernenaya Bay), and pointal (the dumping place of radioactive waste)

**Contents**
- Sources of Pollution (Description and Classification).- Migration Paths and Accumulation Mechanisms of Pollutants (Barriers).- Work Methodology.- Barents Sea.- Pechora Sea.- St. Anna Trough.- Shoktmanovsky GCF (Barents Sea).- Specialized Radiological Research.- Assessment of the Status of the Environment.

**Fields of interest**
- Geology; Geocology/Natural Processes; Environmental Chemistry

**Target groups**
- Research

**Product category**
- Monograph

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**Due July 2013**

2013. XIX, 664 p. 128 illus., 114 in color. (Vertebrate Paleobiology and Palaeoanthropology) Hardcover  
- *€ (D) 106,99 | € (A) 109,99 | sFr 133,50  
- € 99,99 | £90,00  
ISBN 978-94-007-6840-6

**Due September 2013**

- *€ (D) 139,09 | € (A) 142,99 | sFr 173,50  
- € 129,99 | £117.00  
ISBN 978-3-319-00055-8

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**Due June 2013**

2013. Approx. 500 p. 290 illus., 8 in color. Hardcover  
- *€ (D) 96,25 | € (A) 98,95 | sFr 129,00  
- € 89,95 | £81.50  
ISBN 978-3-540-23209-4

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**Early Evolutionary History of the Synapsida**

Non-mammalian synapsids were the dominant terrestrial vertebrates from the Late Carboniferous to the Middle Triassic and play a key role in understanding the origin and evolution of mammals. Despite these facts and the outstanding fossil record of the group, early synapsids remain obscure. This book showcases the full breadth of contemporary research on non-mammalian synapsids, ranging from taxonomy and phylogenetics to functional morphology, biogeography, paleoecology, and patterns of diversity. It also underscores the importance and potential of studying non-mammalian synapsid paleobiology in its own right, not just in the context of mammalian evolution.

**Features**
- Focuses on the full breadth of non-mammalian synapsid paleontology  
- Reflects the increased interest in the group over the past decade Includes strong component of morphological description, taxonomy, and phylogenetics  
- Explores synapsid functional morphology, paleoecology, biogeography, biostatigraphy, diversity patterns, and the effects of the end-Permian mass extinction  
- Features descriptions of new species (i.e. ‘Pelycosaur’) Provides broad overview of current research into synapsids in the Permo-Triassic

**Contents**

**Fields of interest**
- Paleontology; Evolutionary Biology; Zoology

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**Meteorite Impact Structures**

An Introduction to Impact Crater Studies

This book provides an introduction to the study of impact craters and their structures. It will, thus, place emphasis of the variety of different characteristics associated to impact cratering as observed in the field and in the laboratory. A detailed discussion of how to recognize impact structures is followed by a description of impact-diagnostic mineralogical and geochemical characteristics allowing confirmation of an impact structure. The authors show the environmental effects of impact events as well as possible associations with geological boundaries and provide extensive references.

**Features**
- Includes most recent data through the program IMPACT  
- First monograph concentrating on the geological aspects of meteorite impacts  
- Provides extensive and most recent literature

**Contents**

**Fields of interest**
- Geology; Geophysics/Geodesy; Mineralogy

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**Reference work**
Risk and Management of Current and Future Storm Surges

Coeditors: B. M. Ratter, University of Hamburg, Germany; R. Weisse, Helmholtz-Zentrum Geesthacht, Germany

Storm surges represent a major hazard for many coastal regions worldwide. The 1953 and 1962 catastrophes are well remembered in Europe, and recent incidents in Bangladesh and Myanmar caused over 100,000 casualties. Developing innovative responses and overcoming the frequently fragmented discussion about this global phenomenon and its regional implications call for improved knowledge of present risks and future conditions based on sound interdisciplinary approaches. This selection of articles presents multiple scientific and management oriented perspectives on current and future storm surges, covering the fields of observing, modelling and forecasting, risk and vulnerability analysis, planning and innovative coastal protection concepts. It originates from the international ‘2010 Storm Surges Congress - Risk and Management of Current and Future Storm Surges,’ initiated and organized by the Institute of Coastal Research, Helmholtz-Zentrum Geesthacht (formerly the GKSS-Research Centre) in collaboration with the KlimaCampus (CliSAP) of the University of Hamburg, Germany. The Land-Ocean Interactions in the Coastal Zone (LOICZ) co-sponsored the event and its international project office (IPO) provided the necessary organizational support. The congress was generously supported by international and national partners.

Fields of interest
Coastal Sciences; Natural Hazards; Climate Change Management and Policy

Target groups
Research

Product category
Monograph

Due July 2013

Previously published in Natural Hazards, Volume 66, No. 3, 2013

Only available in print

2013. VI, 225 p. 100 illus., 60 in color. Hardcover
► € (D) 106,99 | € (A) 109,99 | sFr 133,50
► € 99,99 | £90.00
ISBN 978-3-642-29080-0

Freezing of Lakes and Evolution of their Ice Cover

M. Leppäranta, University of Helsinki, Finland

A large number of boreal lakes are ice-covered in winter. However, research and literature of these lakes concerns by far only the open water season. In particular, no textbook on physics of ice-covered lakes exists, and now it would be a proper time to prepare such. Winter limnology has become an increasing active field of research recently. A series of winter limnology symposia was started in 2008 in Finland with nearly 100 participants. The second symposium was held in Berlin in 2010 and the third one is coming in 2012 in Norway. Winter limnologists need strongly a textbook on lake ice physics since the ice acts as their boundary condition.

Features
► Unique book on physics of lake ice ► Invaluable for hydrologists and limnologists alike ► Provides students and researchers with vital background information

Fields of interest
Earth System Sciences; Monitoring/Environmental Analysis; Ecosystems

Target groups
Research

Product category
Monograph

Due September 2013

2014. Approx. 300 p. 140 illus., 20 in color. (Springer Earth System Sciences) Hardcover
► € (D) 106,95 | € (A) 109,95 | sFr 133,50
► € 99,95 | £90.00
ISBN 978-3-642-29080-0

Diversity, Biomineralization and Rock Magnetism of Magnetotactic Bacteria

W. Lin, Chinese Academy of Sciences, Beijing, China

Magnetotactic bacteria (MTB) synthesize intracellular nano-sized minerals of magnetite and/or greigite magnetosomes for magnetic orientation. They play important roles in global iron cycling and sedimentary magnetism, and have a broad range of potential applications in both biotechnological and biomedical fields. However, because the majority of MTB in nature remain unculturable, our understanding of these specific bacteria remains fairly limited. This thesis describes the development of a novel approach for effectively collecting, purifying and characterizing uncultivated magnetotactic bacteria.

Features
► Nominated by the Chinese Academy of Sciences as an outstanding thesis ► Develops a new approach for effectively collecting, purifying and characterizing uncultivated magnetotactic bacteria ► Investigates the diversity, biomineralization and rock magnetic properties of magnetotactic bacteria, and evaluates their contributions to environmental reconstruction and sedimentary magnetism through interdisciplinary approaches

Contents

Fields of interest
Geophysics/Geodesy; Biogeosciences; Microbiology

Target groups
Research

Product category
Monograph

Due June 2013

2013. XI, 109 p. 27 illus., 18 in color. (Springer Theses) Hardcover
► € (D) 106,99 | € (A) 109,99 | sFr 133,50
► € 99,99 | £90.00
ISBN 978-3-642-38261-1
Ocean-Atmosphere Interactions of Gases and Particles

The oceans and atmosphere interact in a myriad of ways including the exchange of energy including heat, chemicals and biological organisms across the interface between the two media. In this book the leading experts in this field internationally provide a state of the art account of these exchanges particularly concentrating on the exchange of chemicals. They examine how gases and particles formed in the oceans affect the chemistry and physics of the atmosphere when they move from ocean to atmosphere. They also demonstrate how material deposited into the oceans from the atmosphere affects the biogeochemistry of the oceans.

Contents

Chapter 1: Short-lived trace gases in the surface ocean and the atmosphere.
Chapter 2: Transfer across the air-sea interface.
Chapter 3: Air-sea interactions of natural long-lived greenhouse gases (CO2, N2O, CH4) in a changing climate.
Chapter 4: Ocean-Atmosphere interactions of particles.
Chapter 5: Perspectives and Integration in SOLAS science.

Features

- Arguably the only book dealing with exchange of energy including heat, chemicals and biological organisms across the interface between ocean and atmosphere
- First synthesis of a set of disparate topics into a coherent treatment of the exchange of matter across the sea surface
- Deals with a very important topic required for an understanding of how the earth system operates

Fluvial Depositional Systems

The book summarizes methods of mapping and interpretation of fluvial depositional systems, with a detailed treatment of the tectonic, climatic and eustatic controls on fluvial depositional processes. It focuses on the preserved, ancient depositional record and emphasizes large-scale (basin-scale) depositional processes. Tectonic and climatic controls of fluvial sedimentation and the effects of base-level change on sequence architecture are discussed. Profusely illustrated and with an extensive reference to the recent literature, this book will be welcomed by the student and professional geologist alike.

Features

- Applies modern sequence-stratigraphic methods and concepts to the nonmarine environment
- Demonstrates and explains integrated stratigraphic-sedimentologic methods for analysis and interpretation
- Discusses the information regarding basin-scale tectonic, climatic, eustatic and paleogeographic history that may be derived from the study of the ancient fluvial record

Contents

Introduction.
- The faces and architecture of fluvial systems.
- Allogenic sedimentary controls.
- Sequence stratigraphy.
- Modern depositional systems.
- Ancient depositional systems.

Fields of interest

Sedimentology; Historical Geology

Target groups

Research

Product category

Monograph

Due July 2013

2014. 300 p. 80 illus., 30 in color. (Springer Earth System Sciences) Hardcover
- *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
- approx. € 49,95 | £44.99
ISBN 978-3-642-25642-4

Climatic and Environmental History of Isla de los Estados, Argentina

This book is the result of ten years’ of scientific research carried out by the authors on Isla de los Estados. The research includes their doctoral thesis and many published scientific papers related to the island. The book is divided into two principal parts. The first part covers different social and natural aspects of this remote island and includes chapters on the scientific and historical background, physiography with topographical and hydrographical descriptions, climate and oceanographic circulation, vegetation and geology (including stratigraphy, structural geology and geological history).

Features

- Reviews the geological history of the island de los Estados in Tierra del Fuego
- Presents a complete new reconstruction of the paleoenvironmental, paleoclimatic and palaeogeographic history of the island since the Last Maximum Glacial to the present

Contents

History, Previous Works and Physiography.
- Climate.
- Vegetation.
- Geology.
- Glacial Geomorphology.
- Paleoecology.
- Palaeeceanology.
- Paleoceanographic analysis.
- Reconstruction of paleoenvironmental conditions during Late Glacial and Holocene times in Isla de los Estados and their correlation with the Beagle Channel and Southern Patagonia.
- Archaeology.

Fields of interest

Paleontology; Climatology; Geomorphology

Target groups

Research

Product category

Monograph

Due July 2013

2014. X, 192 p. 67 illus., 60 in color. (SpringerBriefs in Earth System Sciences) Softcover
- *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
- € 49,99 | £44.99
**Mineral Resource Estimation**

Mineral resource estimation has changed considerably in the past 25 years: geostatistical techniques have become commonplace and continue to evolve; computational horsepower has revolutionized all facets of numerical modeling, mining and processing operations are often larger; and uncertainty quantification is becoming standard practice. Recent books focus on historical methods or details of geostatistical theory. So there is a growing need to collect and synthesize the practice of modern mineral resource estimation into a book for undergraduate students, beginning graduate students, and young geologists and engineers. It is especially fruitful that this book is written by authors with years of relevant experience performing mineral resource estimation and with years of relevant teaching experience. This comprehensive textbook and reference fills this need.

**Features**
- Comprehensive text covers modern practice of mineral resource estimation
- Theory and practice are explained in sufficient detail for practitioners
- Case studies demonstrate best practices

**Contents**
- Statistical Tools and Concepts
  - Earth Sciences
  - General Mineral Resources
  - Mineral Resources: Simulation
- Estimation Domains
  - Data
  - Spatial Continuity
  - Mining Dilution
- Recoverable Resources: Estimation
  - Recoverable Resources: Simulation
  - Model Validations and Reconciliations
- Uncertainty and Risk
  - Short Term Models
  - Case Studies
  - Conclusions

**Fields of interest**
- Mineral Resources, Geotechnical Engineering & Applied Earth Sciences
- Earth Sciences, general

**Target groups**
- Graduate

**Product category**
- Graduate/Advanced undergraduate textbook

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**Dynamics of Vortex Structures in a Stratified Rotating Fluid**

This book presents an extensive analysis of the dynamics of discrete and distributed baroclinic vortices in a multi-layer fluid that characterizes the main features of the large and mesoscales dynamics of the atmosphere and the ocean. It widely covers the case of hetonic situations as well as the case of intrathermocline vortices that are familiar in oceanographic and of recognized importance for heat and mass transfers. Extensive typography of such baroclinic eddies is made and analysed with the help of theoretical development and numerical computations. As a whole it gives an overview and synthesis of all the many situations that can be encountered based on the long history of the theory of vortex motion and on many new situations. It gives a renewed insight on the extraordinary richness of vortex dynamics and open the way for new theoretical, observational and experimental advances.

**Features**
- Extensive mathematical derivation of geostrophic baroclinic eddy theory
- Comprehensive analysis of hetonic dynamics and intrathermocline lens dynamics
- Unique description (including many figures) of the typology of baroclinic eddies
- Synthesis of the literature on the eddy dynamics theory and state of the art theoretical developments

**Contents**
- The Introductory Chapter
- Dynamics of Discrete Vortices
- Dynamics of Finite-core Vortices
- The Concluding Chapter

**Fields of interest**
- Oceanography
- Atmospheric Sciences
- Fluid- and Aerodynamics

**Target groups**
- Research

**Product category**
- Monograph

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**Asymmetric Continuum**

**Extreme Processes in Solids and Fluids**

This book deals with a class of basic deformations in Asymmetric Continuum Theory. It describes molecular deformations and transport velocities in fluids, strain deformations in solids as well as the molecular transport, important in fracture processes. In solids, a separate problem relates to the displacements; their recording, e.g., by means of the seismometers, proves only the existence of the displacement derivatives and not a real displacement. However, the molecular displacements and new fracture criterion including the defect distributions and induced strains are defined in the book too. In fluids, the transport velocities and molecular strains describe the motion processes.

**Features**
- Presents new fundamentals for solid and fluid continua, including fractures, vorticity and turbulence
- Helps to understand better the processes in fluids and solids
- Comprehensive in scope

**Contents**
- Introduction: independent strain and transport motions
- Asymmetric Continuum: basic motions and equations
- Transport and float transport motions
- Vortices and molecular fracture transport
- Defect densities
- Structural and fracture anisotropy
- Induced strains
- Thermodynamic relations
- Mutual interactions: electric / magnetic fields and strains
- Quantum analogies
- Extreme processes
- Release-Resbound Processes and Motions

**Fields of interest**
- Geophysics/Geodesy
- Classical Continuum Physics

**Target groups**
- Research

**Product category**
- Monograph
The Greenhouse Gas Balance of Italy
An Insight on Managed and Natural Terrestrial Ecosystems

The book addresses in a comprehensive way the full greenhouse gases budget of the Italian landscape, focusing on land use and terrestrial ecosystems.

Features
Comprehensively addresses the full greenhouse gases budget of the Italian landscape. Presents the results of the national project CARBOITALY. Provides new data and analyses in the framework of climate policies.

Contents

Fields of interest
Environmental Science and Engineering; Climate Change Management and Policy; Environmental Law/Policy/Ecojustice

Target groups
Research

Product category
Monograph

Due December 2013

B. D. Velde, A. Bauer (Eds)
Minor Element Geochemistry at the Earth's Surface
Factors of distribution, transport, soil interactions and their environmental significance

The importance of clay minerals for soil functioning is well recognized.

Features
Provides basic tools to understand relations between plants and soil. Provides basic methods to interpret x-ray diffraction spectra used to identify clay minerals. The book could serve as a basis for innovative research as well as for existing lectures for students.

Field of interest
Biogeosciences

Target groups
Research

Product category
Monograph

Due June 2013

E. Wolanski, James Cook University, Townsville, QLD, Australia (Ed)
Estuaries of Australia in 2050 and beyond

Contents

Fields of interest
Coastal Sciences; Freshwater & Marine Ecology; Environmental Management

Target groups
Research

Product category
Contributed volume

Due August 2013
GIS Landslide

Landslide studies using the geographic information system (GIS) is a new field, which includes not only the science of GIS and remote sensing, but also technical innovations, such as detailed light detection and ranging (LIDAR) profiles, among others. To date, most of the research on landslides has been found in journals on geology, geotechnology, landslides, and GIS, and is limited to specific scientific aspects.

Features
- Unique compilation of research data on landslides
- Latest measuring and visualization methods for landslides using GIS
- How to deal with landslides using GIS extensional analyses (programming)

Contents

Fields of interest
Earth Sciences, general; Geographical Information Systems/Cartography; Natural Hazards

Target groups
Research

Product category
Monograph

Due August 2013
- € (D) 106.95 | € (A) 109.95 | sFr 133,50
- € 99,95 | £90.00
ISBN 978-3-642-19299-9

Due September 2013
2014. 300 p. 200 illus., 100 in color. Hardcover
- approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
- approx. € 99,95 | £90.00
ISBN 978-4-431-54390-9

Due July 2013
2014. 250 p. 45 illus., 5 in color. (Springer Geophysics) Hardcover
- approx. * € (D) 106,95 | € (A) 109,95 | sFr 143,50
- approx. € 99,95 | £90.00
ISBN 978-3-642-38429-5

Sediments and Sedimentation Regime in the Barents Sea

Changes of environmental conditions in the Arctic will result in significant alterations of the dynamics of sedimentation processes in the region. Pronounced changes are expected to occur at the sources with marked effects on biogenic elements and contaminants. The Barents Sea, a shallow sea with a complex bathymetry, is the most productive of the Arctic shelf seas. In many respects the Barents Sea can be looked upon as an indicator of changes that threaten the Arctic. Ecological processes and physical oceanography are well studied there. This book presents general knowledge on marine bottom sediments in the Barents Sea. It concentrates on recent sedimentary processes as well as the quantity and quality of deposited material. Moreover, the sediment regime for the Barents Sea, material sources and transport pathways (bio-production and terrestrial sources) are shown. The book discusses the problem of inorganic and organic contaminants in the Barents Sea since arctic marine sediments are the final sink for numerous pollutants.

Features
- Concentrates on Barents Sea Sediments
- Describes contamination by heavy metals and organic contaminants
- Provides information on organic and inorganic compounds regime

Fields of interest
Sedimentology; Marine & Freshwater Sciences; Freshwater & Marine Ecology

Target groups
Research

Product category
Monograph

Ionospheric Prediction and Forecasting

This book describes how to predict and forecast the state of planet Earth’s ionosphere under quiet and disturbed conditions in terms of dynamical processes in the weakly ionized plasma media of the upper atmosphere and their relation to available modern measurements and modelling techniques. It explains the close relationship between the state of the media and the radio wave propagation conditions via this media. The prediction and forecasting algorithms, methods and models are oriented towards providing a practical approach to ionospherically dependent systems design and engineering.

Features
- It is a rapid guide to predicting the state of the terrestrial ionosphere
- Provides a practical approach to ionospheric dependent systems design and engineering
- Presents aspects of ionospheric prediction and forecasting relevant for space weather phenomena and their effects on new technologies

Contents
Ionospheric Structure.- Ionospheric measurements for prediction and forecasting. Ionospheric prediction for radio propagation purposes.- Total electron content modelling and mapping.- Ionospheric forecasting.- Prediction and forecasting user manual.

Fields of interest
Geophysics/Geodesy; Extraterrestrial Physics, Space Sciences

Target groups
Research

Product category
Monograph
**Historical Land Use/Land Cover Classification Using Remote Sensing**

A Case Study of the Euphrates River Basin in Syria

W. Al-Fares, University of Jena, Germany

Although the development of remote sensing techniques focuses greatly on construction of new sensors with higher spatial and spectral resolution, it is advisable to also use data of older sensors (especially, the LANDSAT-mission) when the historical mapping of land use/land cover and monitoring of their dynamics are needed. Using data from LANDSAT missions as well as from Terra (ASTER) Sensors, the authors shows in his book maps of historical land cover changes with a focus on agricultural irrigation projects.

**Fields of interest**
Geographical Information Systems/Cartography; Landscape/Regional and Urban Planning; Agricultural irrigation projects

**Target groups**
Agriculture

**Product category**
Research

**Contents**
Overview of study area.- Data and tools.- Theoretical background and literature review / state of the art.- Overview of study area.- Data and tools.- Research methodology.- Results, analysis and discussions.- Summary, concluding remarks and recommendations.

**Features**
- Presents an experimental case study with a step-by-step methodology and clear and simple illustrations and tables
- Deals with a politically important area (Syria and Euphrates-River-Basin)
- Important scientific advance: work regarding covered period, geographical location and the used data is currently underrepresented in the literature

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**Cartography from Pole to Pole, Volume 1**

Selected Contributions to the XXVIth International Conference of the ICA, Dresden 2013

The International Cartographic Association (ICA) was founded in 1959 and organizes biannual conferences, which usually attract more than 1000 attendees. No other publication or scientific series gives readers an equally comprehensive overview of the latest cartographic research and activities than the proceedings of these conferences.

**Features**
- Spans the whole scientific discipline from questions of appropriate geo-data sources over various forms of processing the geo-data, to an appropriate cartographic design and answers related to the user-interaction and perception of the cartographic products
- Gives a comprehensive account of topic geographic issues
- Publication of the International Cartographic Association (ICA)

**Contents**

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**Cartography from Pole to Pole, Volume 2**

Selected Contributions to the XXVIth International Conference of the ICA, Dresden 2013

The International Cartographic Association (ICA) was founded in 1959 and organizes biannual conferences, which usually attract more than 1000 attendees. No other publication or scientific series gives readers an equally comprehensive overview of the latest cartographic research and activities than the proceedings of these conferences.

**Features**
- Spans the whole scientific discipline from questions of appropriate geo-data sources over various forms of processing the geo-data, to an appropriate cartographic design and answers related to the user-interaction and perception of the cartographic products
- Gives a comprehensive account of topic geographic issues
- Publication of the International Cartographic Association (ICA)

**Contents**

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**Due September 2013**

2014. Approx. 600 p. 400 illus., 100 in color. (Lecture Notes in Geoinformation and Cartography / Publications of the International Cartographic Association (ICA), Volume 9) Hardcover

**Features**
- Spans the whole scientific discipline from questions of appropriate geo-data sources over various forms of processing the geo-data, to an appropriate cartographic design and answers related to the user-interaction and perception of the cartographic products
- Gives a comprehensive account of topic geographic issues
- Publication of the International Cartographic Association (ICA)

**Contents**
Geographical Information Systems/Cartography; Pragmatism; Information Systems and Communication Service

**Target groups**
Research

**Product category**
Monograph
Physical Processes

Whereas conventional maps can be expressed as outward-expanding formulae with well-defined central features and relatively poorly defined edges, Constant Scale Natural Boundary (CSNB) maps have well-defined boundaries that result from natural processes and thus allow spatial and dynamic relationships to be observed in a new way useful to understanding these processes. CSNB mapping presents a new approach to visualization that produces maps markedly different from those produced by conventional cartographic methods. In this approach, any body can be represented by a 3D coordinate system.

Feature
► Book provides new insights into the physical processes on regular and irregular planetary bodies and both explains and demonstrates the technique for getting those insights

Contents

Fields of interest
Geographical Information Systems/Cartography; Planetology; Astronomy, Observations and Techniques

Target groups
Research

Product category
Brief

Due September 2013

2013. 100 p. 25 illus. in color. (SpringerBriefs in Astronomy) Softcover
► approx. *€ (D) 42,75 | € (A) 43,95 | sFr 49,50
► approx. *€ 39,95 | £33.99
ISBN 978-1-4614-7761-7

Due June 2013

2013. XVI, 93 p. 45 illus. (SpringerBriefs in Earth Sciences) Softcover
► *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
► *€ 49,99 | £44.99
ISBN 978-3-319-00620-8

Due July 2013

2014. 300 p. (International Perspectives in Geography) Hardcover
► approx. *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
► approx. *€ 99,99 | £90.00
ISBN 978-4-431-54405-0
H. Shimizu, A. Murayama, Nagoya University, Japan (Eds)

**Basic and Clinical Environmental Approaches in Landscape Planning**

Our societies need to solve difficult issues to attain sustainability. The main challenges include, among others, global warming, demographic change, an energy crisis and loss of biodiversity. In tackling these issues, a holistic understanding of our living space is important. The field of landscape planning and design is at the core the holistic concept and it has several contributions to achieving sustainability.

**Features**
- Introduces a combination of theory and practice
- Includes German and Japanese contexts and comparison
- Written by authors from interdisciplinary fields

**Contents**

**Fields of interest**
- Landscape/Regional and Urban Planning; Sustainable Development; Monitoring/Environmental Analysis

**Target groups**
- Research

**Product category**
- Monograph

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K. Skala, Rudjer Boškovic Institute, Zagreb, Croatia (Ed)

**Applied Meteorology on the Grid**

**Complex Problem Solving with Virtual Organisation Resource Sharing**

Complex problem solving and their visualization in the Earth sciences is carried out exclusively on the HPC and grid computing platforms today. This issue deals with scientific community in the form of resource sharing in the thematic virtual organization (VO). New Technology Platform (Grid) and forms of organization (VO) increase efficiency and perspective in scientific research and development of new applications. This book contains the most popular and useful articles that have been presented at various topic-related scientific projects and conferences. It presents a collection of the state-of-the-art applications and their implementations on the grid infrastructure platform, like various prediction models and simulations in meteorology, prediction of waves and storms on sea, etc.

**Features**
- Contains the most popular and useful articles presented at various topic-related scientific projects and conferences
- Presents the state-of-the-art applications and their implementations on the grid infrastructure platform
- Deals with scientific community in the form of resource sharing in the thematic virtual organization (VO)

**Fields of interest**
- Geographical Information Systems/Cartography; Meteorology, Atmospheric Sciences

**Target groups**
- Research

**Product category**
- Monograph

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J.-C. Thill, University of North Carolina at Charlotte, NC, USA (Ed)

**Spatial Analysis and Location Modeling in Urban and Regional Systems**

The contributed volume collects cutting-edge research in Geographic Information Science & Technologies, Location Modeling, and Spatial Analysis of Urban and Regional Systems. The contributions emphasize methodological innovations or substantive breakthroughs on many facets of the socio-economic and environmental reality of urban and regional contexts.

**Features**
- Cutting-edge research in geospatial analysis, most notably spatial analysis and location modeling
- Contributions from several internationally renowned researchers
- Richly illustrated research papers
- International and cross-disciplinary contributions
- There is no similar book on the market

**Field of interest**
- Geographical Information Systems/Cartography

**Target groups**
- Research

**Product category**
- Monograph

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**Due September 2013**

2014. 200 p. (Urban and Landscape Perspectives) Hardcover
- approx. *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- approx. *€ 99,99 | £90.00

**Due June 2013**

2013. 300 p. Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 143,50
- approx. *€ 99,95 | £90.00
ISBN 978-3-642-19904-2

**Due August 2013**

2014. 340 p. (Advances in Geographic Information Science) Hardcover
- approx. *€ (D) 139,05 | € (A) 142,94 | sFr 173,00
- approx. *€ 129,95 | £117.00
ISBN 978-3-642-37895-9
Geographic Information Science at the Heart of Europe

For the seventh consecutive year, the AGILE promotes the publication of a book collecting high-level scientific papers from unpublished fundamental scientific research in the field of Geographic Information Science. As the agenda for Europe 2020 is currently being set, this book demonstrates how geographic information science is at the heart of Europe.

Features
- Presents the state-of-the-art of research anno 2013 in the GI Science field
- Continues a series that started in 2006 and has made a name for itself worldwide
- Especially focuses on GI applications in the European policy context

Contents
User generated data, social network data.- What You See Is What You Map: Geometry-preserving Micro-mapping for Smaller Geographic Objects with mapIT.- Trust as a Proxy Measure for the Quality of Volunteered Geographic Information in the Case of OpenStreetMap.- A Thematic Approach to User Similarity Built on Geosocial Check-ins.- Using Data from Location Based Social Networks for Urban Activity Clustering.- Remote Sensing.- Automatic extraction of complex objects from land cover maps.- Automatic extraction of forests from historical maps based on unsupervised classification in the CIELab color space.

Field of interest
Geographical Information Systems/Cartography

Target groups
Research

Product category
Monograph

Network GIS

The first GIS book on how to prototype and develop Network GIS, this book supplies readers with both the principles behind, and hands-on experiences with, how to design and implement Network GIS. To meet this goal, this book is organized in four parts: 1) Introduction gives an overview of Network GIS, 2) Fundamental Knowledge provides basic network developing knowledge, 3) Inside-Out deals with the details of how to build a Network GIS, and 4) Advanced Topics introduces advanced techniques as well as research frontiers. If you are a GISer, software developer, graduate/undergraduate in GIS/Information System, this book is for you.

Fields of interest
Geographical Information Systems/Cartography; Earth Sciences, general; Monitoring/Environmental Analysis

Target groups
Research

Product category
Monograph
**Municipal Solid Waste Management in Asia and the Pacific Islands**

**Challenges and Strategic Solutions**

**Contents**
- Sustainable Society and Municipal Solid Waste Management.
- Sustainable 3R Practice in the Asia and Pacific Regions: The Challenges and Issues.
- Formalization of Informal Recycling in Low-Income Countries.
- 3R (Reduce, Reuse and Recycle) in Bangladesh.
- Municipal Solid Waste Management in Cambodia.
- Municipal Solid Waste Management in China.
- Management of Municipal Solid Waste (MSW) in Korea.
- MSW Management in Malaysia: Changes for Sustainability.
- Municipal Solid Waste Management in Nepal.
- Solid Waste Management in Pacific Island Countries and Territories.
- Municipal Solid Waste Management in the Philippines.
- Solid Waste Management in Sri Lanka.
- Municipal Solid Waste Management in Taiwan: From Solid Waste to Sustainable Material Management.
- Municipal Solid Waste Management in Thailand: Challenges and Strategic Solution.
- Municipal Solid Waste Management in Vietnam: Challenges and Solutions.

**Fields of interest**
- Waste Management/Waste Technology; Environmental Engineering/Biotechnology; Environmental Management

**Target groups**
- Professional/practitioner

**Product category**
- Professional book

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**Factor X**

**Policy, Strategies and Instruments for a Sustainable Resource Use**

The book gives an insight into the issue of sustainable resource use. It delivers comprehensive knowledge about the current discussion on sustainable resource use, resource efficiency and dematerialisation. The book covers the topic in a broad range, beginning from a description and analysis of the current situation and the constraints of resource availability over targets and strategies to reach a sustainable resource use. It will close with proposals and ideas for concrete actions and instruments. The book highlights the environmental needs, the economical and the political relevance of a sustainable resource use. It gives scientific based arguments why we need an increase in resource productivity. Most of the arguments will be drawn from empirical evidence and observations but the book will also contain theoretical considerations based on economic modelling and on natural science.

**Features**
- Closes knowledge gaps on the topic of sustainable resource use
- Identifies needs and areas for action in the field of resource use
- Describes measures and instruments to increase resource efficiency
- Gives practical recommendations and develops proposals to improve resource efficiency
- Benefits researchers, policy makers and politicians who work in the field of resource efficiency and sustainable resource use
- Meets the increasing interest of the scientific community and of decision makers on the topic of resource efficiency and a sustainable land use

**Fields of interest**
- Sustainable Development; Environment, general; Economic Policy

**Target groups**
- Professional/practitioner

**Product category**
- Contributed volume

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**Governments’ Responses to Climate Change: Selected Examples From Asia-Pacific**

This multidisciplinary volume articulates the current and potential public policy discourse between energy security and climate change in the Asia-Pacific region, and the efforts taken to address global warming. This volume is unique as it analyses two important issues climate change and energy security through the lens of geopolitics at the intersection of energy security. It elaborates on the current and potential steps taken by state and non-state actors, as well as the policy innovations and diplomatic efforts (bilateral and multilateral, including regional) that states are pursuing. This Brief stems from the assumption that its audience is aware of the consequences of climate change, and will therefore, only look at the issues identified. It provides a useful read and reference for a wide-range of scholars, policymakers, researchers and post-graduate students.

**Contents**
- Climate Change and Energy Security Post-Cancún: Indonesia Perspective.
- Engaging Emerging Countries: Implications of China’s Major Shifts in Climate Policy.
- Korea’s New Vision of Low Carbon Green Growth.
- Singapore’s Policy Response to Climate Change: Towards A Sustainable City.

**Fields of interest**
- Climate Change; Climate Change Management and Policy; Energy Policy, Economics and Management

**Target groups**
- Professional/practitioner

**Product category**
- Brief
Environmental Sciences

J. Brils, Deltares, Utrecht, The Netherlands; W. Brack, UFZ Helmholtz Centre for Environmental Research, Leipzig, Germany; D. Müller, Environment Agency Austria, Vienna, Austria; P. Négrel, BRGM, Orleans, France; J. E. Vermaat, Free University of Amsterdam, The Netherlands (Eds)

Risk-Informed Management of European River Basins

Contents

Fields of interest
Environmental Management; Water Policy/Water Governance/Water Management; Hydrogeology

Target groups
Research

Product category
Reviews

Due August 2013

► € (D) 266,43 | £ (A) 273,90 | sFr 331,50
► € 249.00 | £224.50
ISBN 978-3-642-38597-1

Due May 2013

2013. X, 110 p. 20 illus., 5 in color. Hardcover
► € (D) 106,99 | £ (A) 109,99 | sFr 133,50
► € 99,99 | £90.00

Due June 2013

2013. XI, 522 p. 186 illus., 18 in color. (Lecture Notes in Geoinformation and Cartography, Volume 195) Hardcover
► € (D) 181,89 | £ (A) 186,99 | sFr 226,50
► € 169,99 | £153.00
ISBN 978-3-642-37532-3

S. Geertman, University of Utrecht, The Netherlands; F. Toppen, Utrecht University, Netherlands; J. Stillwell, University of Leeds, UK (Eds)

Planning Support Systems for Sustainable Urban Development

This book collects a selection of the best articles presented at the CUPUM (Computers in Urban Planning and Urban Management) conference, held in the second week of July 2013 in Utrecht, the Netherlands. The articles included were selected by external reviewers using a double blind process.

Features
► Provides a state-of-the-art overview of the availability and application of Planning Support Systems (PSS) for Sustainable Urban Development
► Contains the best papers of the CUPUM-2013 conference
► Provides insights into the specifics of availability and application of Planning Support Systems (PSS) for Sustainable Urban Development

Fields of interest
Geographical Information Systems/Cartography; Sustainable Development; Landscape/Regional and Urban Planning

Target groups
Research

Product category
Monograph

B. Dhir, University of Delhi, India

Phytoremediation: Role of Aquatic Plants in Environmental Clean-Up

Contamination of the different components of environment through industrial and anthropogenic activities have guided new eras of research.

Features
► The book provides natural and environment-friendly solutions to deal with the problem of pollution, which is most relevant in the present time
► The various plant species with the potential of removing contaminants have been discussed individually
► Offers potential to apply the process of phytoremediation on a large scale
► Will be of use not only to researchers but also to professionals working in the field of environmental pollution

Contents

Fields of interest
Ecotoxicology; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Pollution, general

Target groups
Research

Product category
Monograph
Corporate Social Responsibility in the Manufacturing and Services Sectors

Corporate Social Responsibility (CSR) is an important element in creating competitive advantages for enterprises in different sectors. The authors guide readers through the different cases studies in order to present the benchmarking of international standards and CSR initiatives, as well as CSR performance evaluation practices. This book aims to identify current problems that can arise during CSR implementation in manufacturing and services companies. Moreover some best practice examples suitable for the introduction of CSR in the small and medium size companies will be described. The authors show how different stakeholders can benefit from sustainable resource management and pro-social behaviors. This book will be a valuable resource for both academics and practitioners who want to deepen their knowledge of CSR.

Features
- Includes case studies from different sectors
- Gives tips on the introduction of CSR in small and medium size companies (benchmarks)
- Highlights the main problems that can arise during CSR introduction in these companies

Fields of interest
- Environmental Engineering/Biotechnology
- Manufacturing, Machines, Tools
- Production/Logistics/Supply Chain Management

Target groups
- Research

Product category
- Monograph

Is Local Beautiful?

Peacebuilding between International Interventions and Locally Led Initiatives

Based on the swisspeace annual conference 2012, the proposed publication examines the delicate balance between external interventions and locally-led initiatives. It addresses the question of what “local” means in the peacebuilding and development context; which actors on the ground actually represent the local level and how external actors choose their partners from amongst them.

Features
- Provides unique insights on how to balance local ownership and international interventions
- Gives voice to a multitude of authors with different perspectives (local/international; researchers/practitioners; etc.)
- A helpful compilation of lessons learnt and best practices on how to tackle the challenging demand of implementing local ownership

Contents

Fields of interest
- Environmental Law/Policy/Ecojustice
- Anthropology
- Political Science, general

Target groups
- Research

Product category
- Brief
Soil Security for Ecosystem Management

Mediterranean Soil Ecosystems 1

The term “Soil Security” is used in the context of maintaining the quality and quantity of soil needed in order to ensure continuous supplies of food and fresh water for our society. Topics in this unique book on the management of soil sustainability in the Mediterranean region include: soil information, land degradation, land desertification, pedoenvironments, and the carbon cycle and sequestration.

Features

- Offers the reader an integrated and holistic view on sustainable ecosystem management, focusing on soil security
- Significant contribution to research about the Mediterranean soil ecosystems
- Linking our knowledge about traditional Mediterranean land use technology with modern approaches of land management

Contents


Fields of interest

Environmental Law/Policy/Ecojustice; Environmental Management; Soil Science & Conservation

Target groups

Research

Product category

Brief

Experimental Approaches in Foraminifera

Collection, Maintenance and Experiments

Foraminiferal cultures now serve as tools for researching biological, environmental and geological topics. However, the biological backgrounds, in particular the natural histories of foraminifera, largely remain unclear. It is also true that the different techniques used in different cultures are a setback to fully understanding the subject. Taken together, these factors prevent progress in experimental approaches to foraminiferal studies. This book aims to share and exchange knowledge between researchers from different cultures, and the book should interest not only foraminiferal researchers but also scientists who are working with marine organisms to explore questions in relation to biology, geology and oceanography.

Features

- Introduces basic knowledge of natural history of foraminifera
- Teaches techniques of culture experiments using foraminifera both in the field and laboratory
- Gives clear directions of experimental approaches of foraminifera for solving questions on biological, geological and environmental sciences

Contents


Fields of interest

Monitoring/Environmental Analysis; Biogeosciences; Freshwater & Marine Ecology

Target groups

Research

Product category

Monograph

Oil Pollution in the Baltic Sea

This thorough review is based on observational satellite, airborne and in-situ data, scientific literature and technical reports, as well as the substantial experience of the authors, who hail from several Baltic Sea countries. They pay special attention to national practices, HELCOM and EMSA CleanSeaNet activities in oil pollution monitoring, and show different applications of the Seatrack Web model for oil spill drift prediction and the identification of illegal polluters, as well as for environmental risk assessment. Furthermore, some of the results on satellite monitoring of the Nord Stream gas pipeline construction in the Gulf of Finland are presented.

Features

- A comprehensive review
- Written by experts

Contents


Fields of interest

Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Geochemistry; Water Quality/Water Pollution

Target groups

Research

Product category

Reviews

Due July 2013


- **€ (D) 53,49 | € (A) 54,99 | sf 67,00**
- **€ 49,99 | £44.99**

ISBN 978-3-319-00698-7

Due August 2013

2014. 300 p. (Environmental Science and Engineering / Environmental Science) Hardcover

- **€ (D) 106,95 | € (A) 109,95 | sFr 133,50**
- **€ 99,95 | £90.00**

ISBN 978-4-431-54387-9

Due June 2013


- **€ (D) 245,03 | € (A) 251,90 | sFr 305,00**
- **€ 229,00 | £266.50**

ISBN 978-3-642-38475-2
L. Mammino (Ed)

**Chemical Issues in Biomass Burning in Sub-Saharan Africa**

Chemical Issues in Biomass Burning in Sub-Saharan Africa explores all the aspects relevant to biomass burning in Sub-Saharan Africa, with special focus on chemistry aspects. Biomass burning implies emission of combustion products into the air (including greenhouse gases) and the waste/loss of biomass that could be utilized as valuable material resource. The extent of biomass burning in Sub-Saharan Africa, and the complexity of the aspects involved, constitutes an important motivation to view it as a problem deserving priority.

**Fields of interest**
Chemistry/Chemical Engineering

**Target groups**
Graduates, and policy makers working in chemistry, environmental science, and science education.

**Features**
- Provides a comprehensive picture of the biomass-burning problem in Sub-Saharan Africa
- Contains contributions from specific countries or groups of neighboring countries in Sub-Saharan Africa

**Product category**
Contributed volume

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M. Nüsner, University of Heidelberg, Germany (Ed)

**Large Dams in Asia**

**Contested Environments between Hydro-Power and Resistance**

This book explores the multi-dimensional asymmetries of scale, time, and directions in the large dam controversy with a regional focus on Asia, especially India and China. Whereas the concept of large-scale transformation of fluvial environments into technological hydro-scapes originated in the West, widespread construction of large dams started in the countries of the South immediately after decolonization.

**Features**
- Explores the topic of construction and operation of large dams, with a regional focus on Asia
- Discusses the complex relationships between physical landscapes, natural resources, and their modification by human land use

**Contents**
Large dams and dimensions of socio-hydrology in Asia: contested environments between hydropower and resistance.- Large dams, development and the question of modernity in India.- The anti-dam movement as part of the Indian civil society.- A spatio-temporal analysis of resistance and conflict solving.- Modernity as Tradition? The transmission of the idea of large dams in China. Through time.- Authoritative constructions of the environment: discourses on dams in schoolbooks and encyclopedias.- Gori Valley.- Hydropower and climate change: the revaluation of dams and their promotion through the Clean Development Mechanism.- Actor based modelling to understand the dynamics of large dam conflicts.

**Fields of interest**
Environmental Management; Physical Geography; Human Geography

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R. Sanghi, LNM Institute of Information Technology, Jaipur, India (Ed)

**Our National River Ganga**

**Lifeline of Millions**

There is a plethora of information available on the river Ganga in the form of books, blogs, articles, websites, videos. Unfortunately, most of the information about this famous river is in a scattered form and reproduced from unverified sources. This contributed volume is the first multi-author volume publication on this subject. The River Ganga includes a vast array of topics written by several authors of distinction. Topics include: hydrology, tributaries, water uses, and environmental features such as river water quality, aquatic and terrestrial flora/fauna, natural resources, ecological characteristics, sensitive environmental components and more. Part I gives a basic introduction of the Ganga river. The existing data and available information from various sources has been compiled in a pictorial fashion in the form of cmaps. Its cultural importance with changing times is also discussed.

**Features**
- Written by eminent experts from academia, government, and NGOs
- The first comprehensive, edited book to feature the River Ganga
- Includes several illustrations
- An accessible volume aimed at laymen and researchers alike

**Contents**

**Fields of interest**
Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Industrial Chemistry/Chemical Engineering; Freshwater & Marine Ecology

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Due September 2013

2014. Approx. 250 p. 30 illus. (Advances in Asian Human-Environmental Research) Hardcover
- € (D) 106,95 | € (A) 109,95 | sFr 143,50
- € 99,95 | £90.00
ISBN 978-94-007-2797-7

Due July 2013

2013. 250 p. 50 illus. Hardcover
- * € (D) 106,95 | € (A) 109,95 | sFr 143,50
- € 99,95 | £90.00

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Due July 2013

2014. XII, 360 p. 74 illus., 67 in color. Hardcover
- * € (D) 139,09 | € (A) 142,99 | sFr 173,50
- € 129,99 | £117.00
ISBN 978-3-319-00529-4
G. M. Selim, Port Said University, Egypt

**Global and Regional Approaches to Arms Control in the Middle East**

A Critical Assessment from the Arab World

Since the end of the Cold War, the Middle East has been the focus of various projects for the establishment of arms control (including CBMs) regimes. Whereas some of these projects were initiated at the global level, others were discussed and debated at the regional level. This book analyses the global and regional dynamics of arms control in the Middle East in the post-Cold War era. It examines American and European arms control projects, the contexts in which they were presented, the reactions of major regional actors, and their impacts on arms control efforts in the region. It assesses Arab perceptions of the motivations for and constraints on establishing arms control regimes.

**Features**
- Provides an up-to-date review of the literature on the theoretical approaches to arms control.
- An evaluation of Arab perceptions of arms control distinguishes this volume from other related works on the region, which focus mainly on Western accounts.
- Offers recommendations on the conditions for successful arms control regimes in the Middle East.

**Contents**

**Fields of interest**
Environmental Law/Policy/Ecojustice; Security Science and Technology

**Target groups**
Research

**Product category**
Brief

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V. Shukla, Babasaheb Bhimrao Ambedkar University, Lucknow, India; U. D.K., R. Bajpai, CSIR-National Botanical Research Institute, Lucknow, India

**Lichens to Biomonitor the Environment**

The book embodies the detailed account about unique symbionts i.e. LICHENS in ecosystem monitoring. The first chapter deals with unique characteristics features of lichens which facilitate their survival in extreme climates and makes them an ideal organism for ecosystem monitoring. Biosynthesis of secondary metabolites are known to protect lichens against increasing environmental stresses therefore second chapter provides insight into various chromatographic and modern spectroscopic techniques involved in separation and characterization of lichen substances. The third chapter elaborates the criteria for selection of biomonitoring species and characters of host plant that influences lichen diversity and details about different lichen species utilized for biomonitoring.

**Features**
- The book is visually rich with many coloured photographs and line diagrams of the lichens supporting the text.
- The book gives the key for identification of various lichen species.
- Role of lichens in monitoring pollution, a significant problem of recent times, is discussed in detail.
- The book focuses on the specific role of lichens in air quality management and sustainable development.

**Contents**

**Fields of interest**
Monitoring/Environmental Analysis; Pollution, general; Ecology

**Target groups**
Research

**Product category**
Brief

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A. Vaseashta, Institute for Advanced Sciences Convergence, Herndon, VA, USA; S. Khudaverdyan, State Engineering University of Armenia, Yerevan, Republic of Armenia (Eds)

**Advanced Sensors for Safety and Security**

**Contents**

**Fields of interest**
Monitoring/Environmental Analysis; Security Science and Technology; Nanotechnology and Microengineering

**Target groups**
Graduate

**Product category**
Proceedings

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Due July 2013

2013. XIV, 372 p. 171 illus., 82 in color. (NATO Science for Peace and Security Series B: Physics and Biophysics)

Hardcover
- * (D) £181.89 | (A) £186.99 | sFr 226.50
- * £169.99 | £153.00
ISBN 978-94-007-7002-7

Softcover
- * (D) £99.99 | (A) £90.00
- * £99.99 | £81.00
ISBN 978-94-007-7017-1

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Due May 2013

2013. XVI, 190 p. 43 illus., 35 in color. Hardcover

- * (D) £106.99 | (A) £109.99 | sFr 133.50
- * £99.99 | £90.00
ISBN 978-81-322-1502-8

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Due June 2013

2013. VI, 113 p. 3 illus. in color. (SpringerBriefs in Environment, Security, Development and Peace / Mediterranean Studies, 4) Softcover

- * (D) £53.49 | (A) £54.99 | sFr 67.00
- * £49.99 | £44.99
ISBN 978-3-642-29313-9

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G. M. Selim, Port Said University, Egypt

**Global and Regional Approaches to Arms Control in the Middle East**

A Critical Assessment from the Arab World

Since the end of the Cold War, the Middle East has been the focus of various projects for the establishment of arms control (including CBMs) regimes. Whereas some of these projects were initiated at the global level, others were discussed and debated at the regional level. This book analyses the global and regional dynamics of arms control in the Middle East in the post-Cold War era. It examines American and European arms control projects, the contexts in which they were presented, the reactions of major regional actors, and their impacts on arms control efforts in the region. It assesses Arab perceptions of the motivations for and constraints on establishing arms control regimes.

**Features**
- Provides an up-to-date review of the literature on the theoretical approaches to arms control.
- An evaluation of Arab perceptions of arms control distinguishes this volume from other related works on the region, which focus mainly on Western accounts.
- Offers recommendations on the conditions for successful arms control regimes in the Middle East.

**Contents**

**Fields of interest**
Environmental Law/Policy/Ecojustice; Security Science and Technology

**Target groups**
Research

**Product category**
Brief
M. Viana, Spanish Research Council - CSIC, Barcelona, Spain (Ed)

Urban Air Quality in Europe

This book provides an overview of air quality in urban environments in Europe, focusing on air pollutant emission sources and formation mechanisms, measurement and modeling strategies, and future perspectives.

Features
► A comprehensive review  ► Written by experts  ► Richly illustrated

Contents

Fields of interest
Atmospheric Protection/Air Quality Control/Air Pollution; Geochemistry; Analytical Chemistry

Target groups
Research

Product category
Reviews

Due June 2013

► * € (D) 266,43 | € (A) 273,90 | sFr 331,50
► € 249,00 | £224.50
ISBN 978-3-642-38450-9

J. S. Weis, Rutgers University, Newark, NJ, USA

Physiological, Developmental and Behavioral Effects of Marine Pollution

Synthesizing decades of work, but up-to-date, this book focuses on organism-level responses to pollutants by marine animals, mainly crustaceans, molluscs, and fishes. Emphasizing effects on physiological processes (feeding/digestion, respiration, osmoregulation), life-cycle (reproduction including endocrine disruption), embryo development, larval development, developmental processes later in life (growth, regeneration, molting, calcification, cancer), and behaviour, the book also covers bioaccumulation and detoxification of contaminants, and the development of tolerance. The major pollutants covered are metals, organic compounds (oil, pesticides, industrial chemicals), nutrients and hypoxia, contaminants of emerging concern, and ocean acidification. Some attention is also devoted to marine debris and noise pollution.

Features
► Emphasizes organism level responses to marine pollutants including, in addition to traditional metal and organic pollutants, ocean acidification, hypoxia due to nutrient pollution, and contaminants of emerging concern  ► Gives attention to responses that have a logical connection to ecological effects

Contents

Fields of interest
Ecotoxicology; Freshwater & Marine Ecology; Urban Ecology

Target groups
Research

Product category
Monograph

Due July 2013

► * € (D) 106,99 | € (A) 109,99 | sFr 133,50
► € 99,99 | £90.00
ISBN 978-94-007-6948-9
Due June 2013

T. Younos, The Cabell Brand Center for Global Poverty and Resource Sustainability Studies, Salem, VA, USA; C. A. Grady, Purdue University, West Lafayette, IN, USA (Eds)

**Climate Change and Water Resources**

This volume presents nine chapters prepared by international authors and highlighting various aspects of climate change and water resources.

**Features**

- Written by experts
- Richly illustrated
- An invaluable source of information for researchers and students in water and environmental sciences, as well as for governmental agencies and policy makers

**Contents**


**Fields of interest**

- Environmental Chemistry
- Climate Change

**Target groups**

Research

**Product category**

Reviews

J. Zhou, Z. Luo, Y. Zhu, Y. Fang, Zhejiang University, Hangzhou, China

**Mercury Emission and its Control in Chinese Coal-Fired Power Plants**

“Mercury Emission and its Control in Chinese Coal-Fired Power Plants” focuses on investigating mercury emissions samplings and measurements in Chinese coal-fired power plants, mercury emission estimations and future trends, mercury speciation transformation during coal combustion, mercury control and mercury stability in byproducts. The book not only introduces mercury emissions from actual coal-fired power plants, but also presents studies on the mechanism of mercury emission and its control. This is a valuable reference for engineering thermal physicists, thermal engineers, and chemical engineers. Jinsong Zhou, Zhongyang Luo, and Mengxiang Fang are Professors in the College of Mechanical and Energy Engineering, Zhejiang University, China.

**Features**

- Summarizes mercury emission measurement results and evaluation of mercury emission from Chinese coal-fired boilers
- Presents the most recent research outcomes in the past decade, covering from fundamentals to technical developments
- The authors are widely recognized as the Chinese leading researchers in this subject

**Contents**

- Mercury Sampling and Measurement in Coal-fired Power Plants
- Mercury Emissions Estimation from Chinese Coal-fired Power Plants
- Mercury Speciation Transformation during Coal Combustion
- Mercury Control and Mercury Stability in Byproducts

**Fields of interest**

- Industrial Pollution Prevention
- Energy Technology
- Environmental Engineering/Biotechnology

**Target groups**

Research

**Product category**

Monograph

Due July 2013

Jointly published with Zhejiang University Press

Distribution rights in China: Zhejiang University Press

2014. Approx. 200 p. 80 illus. (Advanced Topics in Science and Technology in China) Hardcover

- Approx. **€ (D) 106,95** | **£ (A) 109,95** | sFr 143,50
- Approx. **€ 99,95** | **£90.00**

ISBN 978-3-642-37873-7
I. S. Zonn, Engineering Research Production
Center for Water Management, Moscow, Russia;
A. G. Kostianoy, Russian Academy of Sciences,
Moscow, Russia (Eds)

The Turkmen Lake Altyn Asyr and Water Resources in Turkmenistan

This book offers a concise description of the environment and water resources in Turkmenistan. The focus is on the water bodies of Turkmenistan – the Caspian Sea, Kara-Bogaz-Gol Bay, Sarykamysh Lake, Amu Darya River, and the Karakum Canal.

Features
 ► A comprehensive review  ► The first English book on the subject  ► Richly illustrated

Contents

Fields of interest
Environmental Chemistry; Hydrology/Water Resources; Hydrogeology

Target groups
Research

Product category
Reviews

Due July 2013

 ► approx. *€ (D) 266,43 | € (A) 273,90 | sFr 331,50
 ► approx. € 249,00 | £224.50
ISBN 978-3-642-38606-0
**Asiatic Honeybee Apis cerana**

**Biodiversity Conservation and Agricultural Production**

Despite its economic usefulness, biodiversity of Asian hive bee Apis cerana is suffering precipitous decline and is threatened with extinction in its entire native habitat. Although a number of publications have appeared on honeybees in the market no attempt has been made to approach the subject in systematically and in a comprehensive manner in case of Apis cerana. There is still not enough knowledge on different facets of biological conservation, agricultural production and role in improving food security and livelihoods.

**Features**
- Behavioural defense against diseases and enemies
- Ecological impacts of invasive alien species on bees
- Loss of genetic diversity
- Impact of climate change
- Livelihood security

**Contents**
1. Introduction.
2. Historical perspective.
4. Biogeography.
5. Genetics and breeding.
7. Pheromones.
9. Interactions with other bee species.
10. Dance language.
11. Foraging.
12. Floral resources.
15. Management problems.
17. Loss of genetic diversity.
18. Diseases and enemies.
19. Impact of climate changes.
20. Behavioural defense against diseases and enemies.
23. Livelihood security.

**Fields of interest**
- Entomology; Agriculture; Biodiversity

**Target groups**
- Research

**Product category**
- Monograph

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**Due June 2013**

2013. X, 340 p. 40 illus., 10 in color. Hardcover
- € (D) 160,49 | € (A) 164,99 | sFr 200,00
- € 149,99 | £135.00
ISBN 978-94-007-6927-4

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**Due July 2013**

- € (D) 160,49 | € (A) 164,99 | sFr 200,00
- € 149,99 | £135.00
ISBN 978-3-642-38504-9

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**Due August 2013**

2014. XIV, 438 p. 88 illus. in color. Softcover
- approx. € (D) 80,24 | € (A) 82,49 | sFr 100,00
- approx. £74,99 | £67.99
ISBN 978-94-007-6859-8
Wetlands serve many important functions and provide numerous ecological services such as clean water, wildlife habitat, nutrient reduction, and flood control. Wetland science is a relatively young discipline but is a rapidly growing field due to an enhanced understanding of the importance of wetlands and the numerous laws and policies that have been developed to protect these areas.

Features
- Only comprehensive book on the topic of wetland research and management techniques
- Chapters are authored by leading scientists in the field of wetlands
- Examples of classroom and field activities are provided to jump start non-specialists teaching specific topics

Contents

Fields of interest
Freshwater & Marine Ecology; Monitoring/Environmental Analysis; Fish & Wildlife Biology & Management

Target groups
Research

Product category
Contributed volume

Due August 2013
2014. XIV, 382 p. 36 illus. in color. Softcover
> approx. * € (D) 80,24 | € (A) 82,49 | sFr 100,00
> approx. € 74,99 | £67.99
ISBN 978-94-007-6930-4

J. T. Anderson, West Virginia University, Morgantown, WV, USA; C. A. Davis, Oklahoma State University, Stillwater, OK, USA (Eds)

Wetland Techniques
Volume 2: Organisms

Wetland Techniques
Volume 3: Applications and Management

Wetlands serve many important functions and provide numerous ecological services such as clean water, wildlife habitat, nutrient reduction, and flood control. Wetland science is a relatively young discipline but is a rapidly growing field due to an enhanced understanding of the importance of wetlands and the numerous laws and policies that have been developed to protect these areas.

Features
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- Chapters are authored by leading scientists in the field of wetlands
- Examples of classroom and field activities are provided to jump start non-specialists teaching specific topics

Contents

Fields of interest
Freshwater & Marine Ecology; Monitoring/Environmental Analysis; Fish & Wildlife Biology & Management

Target groups
Research

Product category
Contributed volume

Due August 2013
2014. XIV, 282 p. 36 illus. in color. Softcover
> approx. * € (D) 74,89 | € (A) 76,99 | sFr 93,50
> approx. € 69,99 | £62.99
ISBN 978-94-007-6906-9

J. T. Anderson, West Virginia University, Morgantown, WV, USA; C. A. Davis, Oklahoma State University, Stillwater, OK, USA (Eds)
Progress and Opportunities of Doubled Haploid Production

M. Asif, University of Alberta, Edmonton, AB, Canada

Features
- Describes in detail the results of molecular and genomic studies conducted to investigate the underlying principles of this spectacular technique
- Updates the current status of knowledge on various types and methods of doubled haploid production
- Discusses the practical implications of haploidy in basic and applied research along with various other important aspects of haploidy

Contents

Fields of interest
Plant Breeding/Biotechnology; Plant Genetics & Genomics

Target groups
Research

Product category
Brief

Yarrowia lipolytica

G. Barth, Technische Universität Dresden, Germany (ed)

Genetics, Genomics, and Physiology
Due to various special physiological features and a genome that greatly differs in structure, gene content and organization from other yeasts, Y. lipolytica is widely used as a model organism.

Features
- With contributions by international scientists
- Provides the latest research results of this interesting yeast species
- Integrates basic and applied topics

Contents
Claude Gaillardin, Meriem Mekouar and Cécile-Neuvéglise: Comparative genetics of Yarrowia lipolytica.
- Stephan Kercher and Ulrich Brandt: Mitochondrial genomics and proteomics of Yarrowia lipolytica.
- Serge Casaregola & Gerold Barth: Transposable elements and their activities in Yarrowia lipolytica.
- Sylvie Blanchin-Roland: Ambient pH signalling in Yarrowia lipolytica.
- Yves Waché: Utilization of hydrophobic substrates by Yarrowia lipolytica.
- Patrick Fickers and Jean Marc Nicaud: The GPR1/FUN34/yaaH protein family in the non-conventional yeast Yarrowia lipolytica and the conventional yeast Saccharomyces cerevisiae.

Fields of interest
Eukaryotic Microbiology; Biotechnology; Biochemistry, general

Target groups
Research

Product category
Monograph

Yarrowia lipolytica

Biotechnological Applications
Due to various special physiological features and a genome that greatly differs in structure, gene content and organization from other yeasts, Y. lipolytica is widely used as a host system. With its characteristics, such as the ability to grow on lipids or grease, to accumulate oil and the high capacity for secretion of proteases and lipases, the yeast is of great interest for biotechnological applications.

Features
- With contributions by international scientists
- Provides the latest research results of this interesting yeast species
- Integrates basic and applied topics

Contents
Catherine Madzak and Jean Marie Beckerich: Heterologous protein expression and secretion in Yarrowia lipolytica.
- David Ogrydziak: Acid and alkaline extracellular proteases of Yarrowia lipolytica.
- Patrick Fickers, Vincent Soueuf and Jean Marc Nicaud: The lipases from Y. lipolytica: genetics, production, regulation and biochemical characterization.
- Patrick Fickers and Jean Marc Nicaud: Biotechnological applications of Yarrowia lipolytica lipases: an overview.
- Christina Otto, Martina Holz and Gerold Barth: Production of organic acids by Yarrowia lipolytica.
- Yves Waché: Production of dicarboxylic acids and fragrances by Yarrowia lipolytica.
- Vladimir Shkumatov et al.: Cytochrome P450 expression in Yarrowia lipolytica and its use in steroid biotransformation.

Fields of interest
Eukaryotic Microbiology; Biotechnology; Applied Microbiology

Target groups
Research

Product category
Monograph
**Protein Tyrosine Phosphatase Control of Metabolism**

Although phosphorylation of proteins on tyrosine is relatively rare compared to phosphorylation on serine or threonine residues, the past two decades of research into PTP function have led to a great appreciation of the critical role PTPs have in regulating basic cellular processes.

**Contents**
- Redox Regulation of PTPs in Metabolism: Focus on Assays
- Quantitative Modeling of PTPs and Implications for Studying Metabolic Signaling
- Protein-Tyrosine Phosphatase 1B Substrates and Control of Metabolism
- PTP1B and TCPTP in CNS Signaling and Energy Balance
- PTP1B in the Periphery: Regulating Insulin Sensitivity and ER Stress
- Role of Protein Tyrosine Phosphatase 1B in Hepatocyte-Specific Insulin and Growth Factor Signaling
- PTP1B in Obesity-Related Cardiovascular Function
- Role of SHP2 Protein Tyrosine Phosphatase in Cardiac Metabolism
- Metabolic Effects of Neural and Pancreatic SHP2
- Protein Tyrosine Phosphatase Epsilon as a Regulator of Body Weight and Glucose Metabolism
- The Role of LMPTP in the Metabolic Syndrome
- Mitogen-Activated Protein Kinase Phosphatases in Metabolism
- Glycogen Metabolism and Lafora Disease

**Fields of interest**
- Protein Science
- Endocrinology
- Biochemistry
- General

**Target groups**
- Research

**Product category**
- Contributed volume

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Salmonids have widespread economic and environmental importance. Correct identification and understanding of their diseases are therefore vital if valuable stocks are to be maintained. This volume provides a practical guide and an aid to disease recognition. This is an updated and extended version of the first publication in 1996 and contains around 400 high quality colour photomicrographs.

**Contents**
- Chapter 1. Introduction
- Chapter 2. Functional Anatomy
- Chapter 3. Post-mortem examination and the recognition of tissue abnormalities
- Chapter 4. Pathology and disease diagnosis
- Chapter 5. Viral diseases
- Chapter 6. Bacterial diseases
- Chapter 7. Fungal and related oomycete infection
- Chapter 8. Protozoa
- Chapter 9. Metazoan diseases
- Chapter 10. Production diseases and other disorders
- Chapter 11. Idiopathic diseases
- Chapter 12. Neoplasia

**Fields of interest**
- Fish & Wildlife Biology & Management
- Animal Anatomy / Morphology / Histology
- Veterinary Medicine

**Target groups**
- Professional/practitioner

**Product category**
- Professional book
The field of ecological economics emerged roughly two decades ago, and is rapidly growing both as a scientific endeavor and as a major guide to policy development. Since its founding in 1989, the journal Ecological Economics has published 70 volumes containing approximately 3,000 articles. Articles on ecological economics issues routinely appear in numerous other journals as well, including Science and Nature. Clearly, such interest indicates a maturing of the field. It is time for a publication providing reviews of key issues and subjects in a comprehensive, relevant, and timely fashion, creating a critical point of access to the field of ecological economics, and an opportunity to reflect on past progress and chart the direction forward. After two years of publishing Ecological Economics Reviews (EER) as a special issue of the 'Annals of the New York Academy of Sciences', we are pleased to announce a move to Springer and a slightly different name: Reviews in Ecological Economics (REE). We are confident that this move will strengthen the new REE and increase our exposure and recognition. Written by leading scientists and with a prominent transdisciplinary editorial board (listed below), this intelligent and up-to-date synthesis of the primary research will be an oft-cited benchmark in the field.

Features
- Explains the diversity of processes in a coherent manner
- Provides in-depth reviews on the theory, policy, and implementation of sustainability and sustainable development
- Focuses on the economic, social, and environmental challenges facing the world today

Fields of interest
- Applied Ecology; Environmental Economics; Sustainable Development

Target groups
- Upper undergraduate

Product category
- Reviews

A. S. Coutts, University of Oxford, UK (Ed)

Adhesion Protein Protocols

Contents
- Reconstructing Integrin Activation in vitro
- Quantifying Cellular Adhesion to Covalently Immobilized Extracellular Matrix Proteins by Single-Force Spectroscopy
- A Multimode-TIRFM & Microfluidic Technique to Examine Platelet Adhesion Dynamics
- Localization-Based Super-Resolution Imaging of Cellular Structures
- Use of Microarray Analysis to Investigate EMT Gene Signatures
- Podosome Reformation in Macrophages: Assays and Analysis
- Mobile and Three-Dimensional Presentation of Adhesion Proteins Within Microwells
- Basement Membrane Invasion Assays: Native Basement Membrane and Chemoinvasion Assay
- Cytoplasmic Actin: Purification and Single Molecule Assays
- Synthetic and Tissue-Derived Models for Studying RhoGTPase Activity
- Determining Rho GTPase Activity by an Affinity-Precipitation Assay
- Proteomic and Biochemical Methods to Study the Cytoskeleton
- Fabricating Surfaces with Distinct Geometries and Different Combinations of Cell Adhesion Proteins
- Purification of Native Arp2/3 Complex from Bovine Thymus
- Purification of Arp2/3 Complex from Saccharomyces Cerevisiae
- Measurement and Analysis of in vitro Actin Polymerization
- Use of the xCELLigence System for Real Time Analysis of changes in Cellular Motility and Adhesion in Physiological Conditions
- Measuring Chemotaxis Using Direct Visualisation Microscope Chambers
- In Vitro Microtubule Severeing Assays
- VE-Cadherin Status as an Indicator of Micravascular Permeability
- High-Resolution Live-Cell Imaging and Time-Lapse Microscopy of Invadopodium Dynamics and Tracking Analysis
- Live Cell Imaging of RhoGTPase Biosensors in Tumor Cells
- Using the RhoGTPase Activity of Native Arp2/3 for Studying Rho GTPase Activity in vivo

Fields of interest
- Protein Science; Cell Physiology

Target groups
- Professional/practitioner

Product category
- Contributed volume
**Planctomycetes: Cell Structure, Origins and Biology**

**Features**
- The first book on planctomycetes focused on their cell biology
- Provides details on the significant ecology and environmental significance of planctomycetes
- Valuable for those in the field of planctomycology and those entering for the first time

**Contents**
History, Classification and Cultivation of the Planctomycetes.
- Cell Compartmentalization and Endocytosis in Planctomycetes: Structure and Function in Complex Bacteria.
- Structural Aspects of MC Proteins of PVC Superphylum Members.
- Genomics and Bioinformatics of the PVC Superphylum.
- The Distribution and Evolution of C1 Transfer Enzymes and Evolution of the Planctomycetes.
- Unusual Members of the PVC Superphylum: The Methanotrophic Verrucomicrobia Genus "Methylacidiphilum".
- Phyla Related to Planctomycetes: Members of Phylum Chlamydiae and their Implications for Planctomycetes Cell Biology.

**Fields of interest**
Life Sciences, general; Cell Physiology; Microbiology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume

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**50 Years of Phytochemistry Research**

**Volume 43**

This 43rd volume of RAP includes a total of seven articles based on talks presented at the 50th Anniversary meeting of the PSNA, which was held at the Fairmont Orchid, in Waikoloa, Hawai‘i, USA.

**Features**
- Describes the integration of several different approaches to ask and then answer questions regarding the function of interesting plant metabolites
- An authoritative, up-to-date resource that helps to set the gold standard for thought and research in fields related to plant biochemistry
- Gives a very good picture of the breadth of plant (bio)chemistry research in North America, which is also indicative of the state of the field worldwide

**Contents**
- Metabolomics Reveals Hemiterpenoids as New Players in the Carbon-Nitrogen Economy.
- Electrospray ionization traveling wave ion mobility spectrometry mass spectrometry for the analysis of plant phenolics: An approach for separation of regioisomers.
- Camptothecin production and applications of immobilized enzymes.
- Biomedical Proteases for Catalysis in Low Water Containing Environments.
- Modification of Carbon Nanotube Electrodes with 1-pyrenebutanoic Acid, Succinimidyl Ester and Fe3O4 Nanoparticles for Biocatalysis in Low Water Media.
- Immobilization of Enzymes on Magnetic Beads through Affinity Interactions.
- Practical Protocols for Lipase Immobilization via Fe3O4 Nanoparticles for Biocatalysis in Low Water Media. Immunobilization of Enzymes in Magnetic Beads through Affinity Interactions.
- Practical Protocols for Lipase Immobilization via Fe3O4 Nanoparticles for Biocatalysis in Low Water Media.

**Fields of interest**
Plant Ecology; Plant Biochemistry; Ecology

**Target groups**
Research

**Product category**
Contributed volume

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**Immobilization of Enzymes and Cells**

**Contents**
- New Opportunities for Immobilization of Enzymes.
- Immobilization of Enzymes: A Literature Survey.
- Glutaraldehyde Mediated Protein Immobilization.
- Immobilization of Enzymes on Mono- and Hetero-Functional Epoxy-Activated Supports.
- Stabilization of Enzymes by Multipoint Covalent Immobilization on Supports Activated with Glyoxyl Groups.
- Oriented Covalent Immobilization of Enzymes on Heterofunctional-Glyoxyl Supports.
- Reversible Covalent Immobilization of Enzymes Via Disulfide Bonds.
- Immobilization of Candida rugosa Lipase on Superparamagnetic Fe3O4 Nanoparticles for Biocatalysis in Low Water Media.
- Immobilization of Enzymes by Bioaffinity Layering.
- Immobilization of Enzymes on Magnetic Beads through Affinity Interactions.
- Tips for the Functionalization of Nanoparticles with Antibodies.
- Immobilization of Enzymes on Ethynyl-modified Electrodes Via Click Chemistry.
- Modification of Carbon Nanotube Electrodes with 1-pyrenebutanoic Acid, Succinimidyl Ester and Fe3O4 Nanoparticles for Biocatalysis in Low Water Media.
- Immobilization of Enzymes on Magnetic Beads through Affinity Interactions.
- Practical Protocols for Lipase Immobilization via Fe3O4 Nanoparticles for Biocatalysis in Low Water Media.
- Immobilization of Enzymes in Magnetic Beads through Affinity Interactions.
- Practical Protocols for Lipase Immobilization via Fe3O4 Nanoparticles for Biocatalysis in Low Water Media.

**Fields of interest**
Cell Biology; Enzymology

**Target groups**
Professional/practitioner

**Product category**
Contributed volume
G. R. Guntenspergen, Natural Resources Research Institute, U.S. Geological Survey, Duluth, MN, USA; B. A. Middleton, National Wetlands Research Center, U.S. Geological Survey, Lafayette, LA, USA (Eds)

Wetlands Encyclopedia. Volume I. Wetlands Structure and Function

Editorial advisor: N. Davidson, Ramsar, Gland, Switzerland; Editor-in-chief: C. M. Finlayson, Charles Sturt University, Albury, NSW, Australia

Contents

Fields of interest
Freshwater & Marine Ecology; Environmental

Target groups
Research

Product category
Encyclopaedia

Due July 2014
Print
2014. Approx. 810 p. 60 illus. in color.
➤ * (D) 533,93 | (A) 548,90 | Fr 664,50
➤ € 499,00 | £449,50

eReference
2014.
➤ ** (D) 593,81 | (A) 598,80 | Fr 698,00
➤ € 499,00 | £449,50

Print + eReference
2014. Approx. 810 p. 60 illus. in color.
➤ * (D) 667,68 | (A) 686,40 | Fr 831,00
➤ € 624,00 | £562,00
ISBN 978-94-007-1471-7

S. K. Gupta, University of Agricultural Sciences & Technology of Jammu, India (Ed)

Biotechnology of Crucifers

Contents

Fields of interest
Plant Breeding/Biotechnology; Plant Sciences; Plant Genetics & Genomics

Target groups
Research

Product category
Contributed volume
Heavy Metal Stress in Plants

Plants possess a range of potential cellular mechanisms that may be involved in the detoxification of heavy metals and thus tolerance to metal stress. Metal toxicity causes multiple direct and indirect effects in plants that concern practically all physiological functions.

Features
- Brings very depth knowledge in the field of heavy metal toxicity in plants in recent years
- Presents comprehensive and concise information on recent advances in the field of metal transport and how genetic diversity affects heavy metal transport in plants
- Written by international experts

Contents

Fields of interest
Plant Physiology; Plant Biochemistry; Agriculture

Target groups
Research

Product category
Contributed volume

Due August 2013

2014. Approx. 500 p. 65 illus., 22 in color. (Advances in Photosynthesis and Respiration, Volume 37)

Hardcover
- € (D) 223,63 | € (A) 229,90 | sFr 278,50
- € 209,00 | £ 188,50
ISBN 978-94-007-6987-8

USDA Forest Service Experimental Forests and Ranges
Research for the Long-Term

USDA Forest Service Experimental Forests and Ranges (EFRs) are scientific treasures, providing secure, protected research sites where complex and diverse ecological processes are studied over the long term. This book offers several examples of the dynamic interactions among questions of public concern or policy, EFR research, and natural resource management practices and policies. Often, trends observed – or expected – in the early years of a program are contradicted or confounded as the research record extends over decades. The EFRs are among the few areas in the US where such long-term research has been carried out by teams of scientists. Changes in society’s needs and values can also redirect research programs. Each chapter of this book reflects the interplay between the ecological results that emerge from a long-term research project and the social forces that influence questions asked and resources invested in ecological research.

Features
- Offers several examples of the dynamic interactions among questions of public concern or policy, EFR research, and natural resource management practices and policies
- This book examines research trajectories emerging from the body of work conducted on EFRs over their first century of service
- Explores the continued promise of long-term research on EFRs and new ways of using the network of EFRs to answer today’s science questions

Fields of interest
Ecology; Forestry Management; Conservation Biology/Ecology

Target groups
Graduate

Product category
Contributed volume

Due October 2013

2014. 350 p. Hardcover
- approx. * € (D) 165,80 | € (A) 170,44 | sFr 222,00
- approx. * € 154,95 | £ 139,50
Endemism in Vascular Plants

The book is the first comprehensive analysis of the macroecology and geobotany of endemic vascular plants with case-studies and analyses from different regions in the world. Endemism is a pre-extinction phenomenon. Endemics are threatened with extinction. Due to international nature conservation policies and due to the perception of the public the concept's importance is increasing. Endemism can result from different biological and environmental processes. Depending on the process conservation measures should be adapted. Endemic vascular plant taxa, in the setting of their species composition and vegetation types are important features of landscapes and indicators of the quality of relating habitats. The book is an important basis for biologists, ecologists, geographers, planners and managers of nature reserves and national parks, and people generally interested in nature conservation and biogeography of vascular plants.

Features
- Increasing meaning of vascular plant endemism
- How to measure and monitor endemism in space
- Case studies from all over the world

Contents

Fields of interest
Biodiversity; Landscape Ecology; Plant Ecology

Target groups
Research

Product category
Contributed volume

Due July 2013
2013. XV, 257 p. 31 illus., 16 in color. (Plant and Vegetation, Volume 9) Hardcover
- € (D) 149,79 | € (A) 153,99 | sFr 186,50
- € 139,99 | £126.00
ISBN 978-94-007-6912-0

Le culture del cibo
Salute e nutrizione, tradizioni, emozioni

L'alimentazione, oltre a soddisfare un bisogno primario e a svolgere un ruolo chiave nella prevenzione delle malattie, ha importanti implicazioni culturali, sociali e psicologiche. Nutrirsi è un atto appreso e di natura cognitiva, ed è sempre influenzato dalle idee, dalla religione e dalla tradizione famigliare di un individuo. L'atto del mangiare assume un significato culturale ed è un elemento cruciale nella creazione di un senso di appartenenza; attorno al cibo si costruisce un linguaggio che chiama in causa anche ricordi, percezioni e stati d'animo connessi all'affettività e all'esperienza conviviale. Questo libro esamina sia il legame tra alimentazione e salute nei vari Paesi del mondo, con un preciso riferimento alle malattie dell'era moderna, sia le valenze più psicosociali ed emotive del mangiare. Particolare interesse è rivolto anche all'analisi nutrizionale di alcune ricette tipiche di altri Paesi, che le persone emigrate continuano a preparare per mantenere un legame con il luogo di provenienza e le tradizioni originarie. Per questo motivo, ogni ricetta è accompagnata dal racconto dell'esperienza vissuta dal soggetto, con un commento dello psicologo.

Fields of interest
Life Sciences, general; Behavioural Sciences; Chemistry/Food Science, general

Target groups
Popular/general

Product category
Monografia

Due July 2013
2013. XIV, 306 p. 48 illus., 2 in color. (Methods in Molecular Biology, Volume 1047) Hardcover
- € (D) 101,64 | € (A) 104,49 | sFr 126,50
- € 94,99 | £85.50
**Comparative Medicine**

**Anatomy and Physiology**

This new volume gives a concise overview covering the most basic and exciting chapters of comparative medicine with regards to physiology and function in healthy individuals.

**Features**

- Gives a detailed and easy to understand overview to the comparative anatomy and physiology of human and selected model animals
- Introduces new concepts in comparative medicine
- Focuses on selected topics of human and animal anatomy and physiology

**Contents**


**Fields of interest**

Animal Models; Anatomy; Animal Physiology

**Target groups**

Research

**Product category**

Contributed volume

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**Parasitic Orobanchaceae**

**Parasitic Mechanisms and Control Strategies**

**Contents**

Introduction: The parasitic syndrome in higher plants.- The haustorium and the life cycles of parasitic Orobanchaceae.- Functional structure of the mature haustorium.- Haustorium initiation and early development.- Haustorium invasion into host tissues.- The physiology of the established parasite-host association.- Host reaction to attack by root parasitic plants.- Seed production and dispersal in the Orobanchaceae.- The seed and the seedling.- Induction of germination.- Germination eco-physiology.- Are karrakin signalling mechanisms relevant to strigolactone perception?- Changing host specificities by mutational changes or epigenetic reprogramming?- Phylogenetic relationships and evolutionary trends in Orobanchaceae.- Genomic evolution in Orobanchaceae.- Ecology of hemi-parasitic Orobanchaceae with special reference to their interaction with plant communities.- Weedy Orobanchaceae – The problem.- The parasitic weeds of the Orobanchaceae.- Population diversity and dynamics of parasitic weeds.- Molecular diagnosis of parasite seed banks.- Marker-assisted and physiology-based breeding for resistance to Orobanchaceae.- Integrated agronomic management of parasitic weed seed banks.- Chemical control.- Biotechnologies for directly generating crops resistant to parasites.- Allelopathy.- Biocontrol.

**Fields of interest**

Plant Physiology; Agriculture; Plant Ecology

**Target groups**

Research

**Product category**

Contributed volume

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**The Demilitarized Zone (DMZ) of Korea**

**Protection, Conservation and Restoration of a Unique Ecosystem**

Untouched since 1953, the Korean DMZ (Demilitarized Zone) has transformed itself into one of the few ecologically pristine zones and a vital habitat for endangered species. Often cited as a potential “peace park”, it could one day be a common ground for reconciliation and harmony. A wealth of data and information has been produced over time, documenting significant aspects of the DMZ and its implications for human and ecological security, both in Korea and worldwide. However, there is no single book in English that brings together the findings on the mechanism of evolution, the ecology and biodiversity of the DMZ. "The DMZ of Korea", by Kwi-Gon Kim, is the first step in this direction.

**Features**

- Presents the reader a synthesis of the subject
- Approaches to the ecological problems in the DMZ are presented
- Serves also as a guideline for the approach and the documentation of protected areas for decision-makers, planners, managers and ecologists

**Contents**

History and Evolution of the DMZ Ecosystem.- Landscape Ecology of the DMZ.- Status and Ecological Resource Value of DMZ.- Habitats in the DMZ Area.- Species in the DMZ Area.- Biodiversity.- Wetland-Type Classification.- Biological Integrity-Assessing the Health of Wetland Ecosystems.- Threatening Factors in the DMZ.- Conservation and Management Strategies.

**Fields of interest**

Landscape Ecology; Biodiversity; Nature Conservation

**Target groups**

Research

**Product category**

Monograph

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Springer Wien New York

**Due October 2013**

2014. Approx. 170 p. 10 illus. in color. Hardcover
- approx. *€ (D) 149,75 | € (A) 153,94 | sFr 186,50
- approx. € 139,95 | £126.00
ISBN 978-3-7091-1558-9

**Due July 2013**

2013. X, 500 p. 81 illus., 34 in color. Hardcover
- *€ (D) 160,49 | € (A) 164,99 | sFr 200,00
- € 149,99 | £135.00
ISBN 978-3-642-38145-4

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**Due July 2013**

2013. XIV, 516 p. 846 illus., 774 in color. Hardcover
- *€ (D) 160,49 | € (A) 164,99 | sFr 200,00
- € 149,99 | £135.00
ISBN 978-3-642-38462-2
G. Kriska

**Freshwater Invertebrates in Central Europe**

**A Field Guide**

This up-to-date guidebook on freshwater invertebrates of the central European region is a richly illustrated work, providing an excellent source of systematic information on freshwater macroinvertebrates. Numerous colour photos and additional vector graphic figures allow readers to identify specific species at a higher taxonomic level (family). The book is supplemented by electronic material including pictures and short video sequences. Freshwater Invertebrates in Central Europe – A Field Guide is a must-have for all those interested in the freshwater animals of central Europe such as animal scientists and ecologists, as well as students attending classes on freshwater invertebrate.

**Features**
- Richly illustrated field guide
- Provides concise information on individual species
- Easy determination of species with the illustrations, pictures and descriptions

**Contents**
to be prepared

**Fields of interest**
Invertebrates; Animal Systematics/Taxonomy/ Biogeography; Animal Anatomy / Morphology / Histology

**Target groups**
Professional/practitioner

**Product category**
Monograph

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J. S. Latimer, U.S. EPA, Narragansett, RI, USA; P. E. Stacey, Great Bay National Estuarine Research Reserve, Durham, NH, USA; C. Yarish, University of Connecticut, Stamford, CT, USA; R. L. Swanson, Stony Brook University, NY, USA; C. Garza, California State University, Seaside, CA, USA; M. A. Tedesco, U.S. EPA Long Island Sound Office, Stamford, CT, USA (Eds)

**Long Island Sound**

**Prospects for an Urban Sea**

**Contents**

**Fields of interest**
Freshwater & Marine Ecology; Hydrology/Water Resources; Marine & Freshwater Sciences

**Target groups**
Research

**Product category**
Contributed volume

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G. E. Likens, Cary Institute of Ecosystem Studies, Millbrook, NY, USA

**Biogeochemistry of a Forested Ecosystem**

The goal of this Third Edition is to update long-term data presented in earlier editions and to generate new syntheses and conclusions about the biogeochemistry of the Hubbard Brook Valley based on these longer-term data. There have been many changes, revelations, and exciting new insights generated from the longer data records. For example, the impact of acid rain peaked during the period of the HBES and is now declining. The longer-term data also posed challenges in that very marked changes in fluxes occurred in some components, such as hydrogen ion and sulfate deposition, calcium and nitrate export in stream water and biomass accumulation, during the almost 50 years of record.

**Features**
- Describes the integration of several different approaches to ask and then answer questions regarding the function of interesting plant metabolites
- An authoritative, up-to-date resource that helps to set the gold standard for thought and research in fields related to plant biogeochemistry
- Gives a very good picture of the breadth of plant (bio)chemistry research in North America, which is also indicative of the state of the field worldwide

**Contents**

**Fields of interest**
Ecosystems; Forestry; Agriculture

**Target groups**
Research

**Product category**
Graduate/Advanced undergraduate textbook

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Due August 2013

Original German edition published by Weissdorn-Verlag, Jena

2013. Approx. 400 p. 500 illus. in color. With online files/update. Softcover
► approx. *€ (D) 74,85 | € (A) 76,95 | sFr 93,50
► approx. 69,95 | £62.99
ISBN 978-3-7091-1546-6

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Due September 2013

2014. Approx. 250 p. 120 illus. With 1 4-page color insert. (Springer Series on Environmental Management) Hardcover
► approx. *€ (D) 81,59 | € (A) 83,88 | sFr 127,00
► approx. € 76,25 | £66.99
ISBN 978-1-4614-6125-8

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Due July 2013

► *€ (D) 53,49 | € (A) 54,99 | sFr 76,00
► € 49,99 | £44.99
Life Sciences

G. Longo, Paris, France; M. Montévil, Tuft University, Boston, MA, USA

Biological Time, Symmetries and Singularities
Perspectives on Life

This authored monograph introduces a genuinely theoretical approach to biology. Starting point is the investigation of empirical biological scaling including their variability, which is found in the literature, e.g. allometric relationships, fractals, etc. The book then analyzes two different aspects of biological time: first, a supplementary temporal dimension to accommodate proper biological rhythms; secondly, the concept of pretension and retention as a means of local organization of time in living organisms. Moreover, the book investigates the role of symmetry in biology, in view of its ubiquitous importance in physics. In relation with the notion of extended critical transitions, the book proposes that organisms and their evolution can be characterized by continued symmetry changes, which accounts for the irreducibility of their historicity. The authors also introduce the concept of anti-entropy as a measure for the potential of variability, being equally understood as alterations in symmetry.

Features
- Provides a novel and genuinely theoretical approach to biology
- Includes a characterization of ‘physical’ versus ‘biological’
- Introduces the concept of anti-entropy as a measure for the potential of variability
- Presents numerous theoretical propositions
- Written by experts in the field

Fields of interest
Developmental Biology; Mathematical and Computational Biology; Biophysics and Biological Physics

Target groups
Research

Product category
Monograph

Due October 2013

2014. 330 p. 30 illus., 10 in color. (Lecture Notes in Morphogenesis) Hardcover
► approx. *€ (D) 139,05 | € (A) 142,94 | sFr 173,00
► approx. € 129,95 | £117.00
ISBN 978-3-642-35937-8

R. McInnes, Bioscan (UK) Ltd, Little Baldon, Oxon, UK; M. Everard (Eds)

Wetlands Encyclopedia. Volume II. Wetlands Management

Editorial advisor: N. Davidson, Ramsar, Gland, Switzerland; Editor-in-chief: C. M. Finlayson, Charles Sturt University, Albury, NSW, Australia

Contents
- a. Wetland Engineering. Water treatment/disposal
- c. Landscape Design.
- d. Human well-being.
- f. Institutional framework.
- g. Global change. Wetlands loss. Climate change. Land-use change.
- h. Water treatment.
- i. Urban wetlands.
- j. Historical ecology – use and management.

Fields of interest
Freshwater & Marine Ecology; Environmental Management; Coastal Sciences

Target groups
Research

Product category
Encyclop(a)edia

Due July 2013

Print + eReference

2014. Approx. 810 p. 60 illus. in color.
► *€ (D) 533,93 | € (A) 548,90 | sFr 664,50
► € 499,00 | £449.50
ISBN 978-94-007-4003-7

195
A. Mitra, University of Calcutta, West Bengal, India

Sensitivity of Mangrove Ecosystem to Changing Climate

Mangroves are basically salt tolerant forest ecosystems found mainly in tropical and sub-tropical inter-tidal regions. Till about 1960s, mangroves were largely viewed as “economically unproductive areas” and were therefore destroyed for reclaiming land for various economic and commercial activities. Gradually, with the passage of time, the economic and ecological benefits of mangroves have become visible and their importance is now well appreciated. Today, mangroves are observed in about 30 countries in tropical subtropical regions covering an area of about 99,300 Sq.Km.

Features
► The unique ecosystem of mangroves is elaborately described with special emphasis on the impact of climate change on it ► The text is replete with case studies from across the world for a comprehensive and interesting read ► The role of mangroves in mitigating natural disasters like cyclones, tidal surges, tsunamis, etc is described ► The work is the result of 30 years of painstaking research on mangrove biodiversity and continual change of the system, which is generally not documented

Contents
Climate change: A threat of the era.► Mangroves: A unique gift of nature.► How mangroves resist natural disaster?.► Impact of climate change on mangroves.► Climate change and plankton spectrum of mangrove ecosystem.► Climate change and its impact on brackish water fish and fishery.► Climate change and livelihood: Are we approaching towards an inevitable change?

Fields of interest
Plant Ecology; Plant Sciences; Coastal Sciences

Target groups
Research

Product category
Monograph

J. Müller, C. Kuttler, Technical University Munich, Germany

Mathematical Models in Biology

Deterministic and Stochastic Approaches

This book developed from classes in mathematical biology taught by the authors over several years at the Technische Universität München. The main themes are modeling principles, mathematical principles for the analysis of these models, and model-based analysis of data. The key topics of modern biomathematics are covered: ecology, epidemiology, biochemistry, regulatory networks, neuronal networks, and population genetics. A variety of mathematical methods are introduced, ranging from ordinary and partial differential equations to stochastic graph theory and branching processes. A special emphasis is placed on the interplay between stochastic and deterministic models.

Features
► The mathematical foundations are included ► This manuscript is intended to give a survey of the standard models ► This book includes current topics that are less present in the classical textbooks

Fields of interest
Life Sciences, general; Applications of Mathematics

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

K. E. Nelson, The J. Craig Venter Institute, Rockville, MD, USA (Ed)

Encyclopedia of Metagenomics

Metagenomics has taken off as one of the major cutting-edge fields of research. The field has broad implications for human health and disease, animal production, and environmental health. Metagenomics has opened up a wealth of data, tools, technologies and applications that allow us to access the majority of organisms that we still cannot access in pure culture (an estimated 99% of microbial life).

Features
► Includes seminal contributions from the leaders in the field ► Combines new and established information in the emerging field of Metagenomics

Field of interest
Animal Genetics and Genomics

Target groups
Research

Product category
Reference work

Due June 2013

Print
2014, 4000 p.
► approx. * € (D) 2140,00 | € (A) 2200,00 | sFr 2652,50
► approx. € 2000,00 | £1800.00

eReference
2014.
► approx. ** € (D) 2380,00 | € (A) 2400,00 | sFr 2798,00
► approx. € 2000,00 | £1800.00
ISBN 978-1-4614-4675-0

Due June 2013

Print + eReference
2014, 4000 p.
► approx. * € (D) 2675,00 | € (A) 2750,00 | sFr 3328,00
► approx. € 2500,00 | £2250.00

2013. Approx. 350 p. 73 illus., 43 in color. Hardcover
► * € (D) 160,49 | € (A) 164,99 | sFr 200,00
► € 149,99 | £135.00
ISBN 978-81-322-1508-0

2013. 480 p. (Lecture Notes on Mathematical Modelling in the Life Sciences) Hardcover
► approx. * € (D) 48,10 | € (A) 49,45 | sFr 60,00
► approx. € 44,95 | £40.99
ISBN 978-3-642-27250-9
Peptide Nucleic Acids
Methods and Protocols

Contents

Fields of interest
Biochemistry, general; Nucleic Acid Chemistry

Target groups
Professional/practitioner

Product category
Contributed volume

Plant Transposable Elements
Methods and Protocols

Contents
Jellyfish Blooms

Jellyfish are one of the most conspicuous animals in our oceans and are renowned for their propensity to form spectacular blooms.

Features

- A balanced and objective overview of the positive and negative ecological and societal impacts of jellyfish
- Written and critiqued by many of the world's leading experts on jellyfish
- Brings together case studies from around the world
- First book exploring the science behind jellyfish blooms

Contents

1. Introduction

Chapter 2. What are jellyfish and thaliaceans and why do they bloom?: Part I Ecology of jellyfish blooms.

Chapter 3. What are jellyfish and thaliaceans and why do they bloom?: Part II Case studies.

Chapter 7 Population fluctuations of jellyfish in the Bering Sea and their ecological role in this productive shelf ecosystem.

Chapter 8. The giant jellyfish Nemopilema nomurai in East marginal seas.


Chapter 10. Chrysaora oraplocamia: A poorly understood jellyfish from South America.

Chapter 11. Pelagianoctiluca in South America.

Chapter 12. The ecology of Box jellyfish (Cubozoa).

Fields of interest

Freshwater & Marine Ecology; Animal Ecology; Invertebrates

Target groups

Research

Product category

Contributed volume

Sustainability and Process Development

Environmental sustainability and development is of critical importance. Technological advances in the production of new energy sources are making their way into our lives in more and more depth every day. However, there is an urgent need to address the technological challenges and advancement of the various chemical and bio-processes to maintain the dynamic sustainability of our energy needs. Toward that end, an attempt is being made to look at recent advances, key issues still faced and where possible, offer suggestions on alternative technologies to optimize sustainable processes. Still considered a new area of science, energy sources themselves are still being ‘discovered’ meaning, what is financially viable in the current marketplace is changing.

Features

- Timely publication addressing accountability and sustainability in development
- Multiple topics concerning chemical and bio-process engineering covered
- Written for the academic setting, but can be a valuable tool for the public interested in sustainability

Contents

Advanced Product Design and Advanced MaterialChemical and Bioprocess Simulation and ModelingDevelopment of Recovery ProcessesFeedstock SupplyChainMembrane Process TechnologyNatural Products Engineering and TechnologyProcess Control and SafetySustainability in Chemical and Bioprocess EngineeringSustainable Energy

Fields of interest

Biochemistry, general; Renewable and Green Energy; Energy Technology

Target groups

Research

Product category

Contributed volume

Evolutionary Biology: Exobiology and Evolutionary Mechanisms

Contents

Contributes to: Research

**Phenology: An Integrative Environmental Science**

*M. D. Schwartz,* University of Wisconsin-Milwaukee, WI, USA (Ed)

Contents


**Features**

- In the presence of many outstanding papers and books on transport processes, this essential topic has been marginalized
- Emphasizes what an important role symplasmic communication performs in plants
- Contributions from renowned scientists around the world

**Contents**


**Fields of interest**

Plant Sciences; Plant Genetics & Genomics; Plant Physiology

**Target groups**

Research

**Product category**

Contributed volume

**Stem Cells Handbook**

*S. Sell,* New York State Health Department, Albany, NY, USA (Ed)

Contents

M. Tester, University of Adelaide, Australia; R. A. Jorgensen (Eds)

The Plant Sciences

This content is the world’s most comprehensive reference on the plant sciences. Composed of ten volumes, The Plant Sciences provides both background and essential information in plant biology, exploring such topics as genetics and genomics, molecular biology, biochemistry, growth and development, and ecology and the environment. Available through both print and online mediums, the online text will be continuously updated to enable the reference to remain a useful authoritative resource for decades to come.

Fields of interest
Plant Genetics & Genomics; Plant Biochemistry; Plant Sciences

Target groups
Research

Product category
Handbook

**A Comprehensive Treatise on Fungi as Agricultural Applications**

This volume covers the high relevance of fungi for agriculture.

Features
▶ A completely updated and revised new edition  ▶ Written by experts in the field  ▶ Richly illustrated

Contents

Fields of interest
Agriculture; Applied Microbiology; Microbial Genetics and Genomics

Target groups
Research

Product category
Handbook

Due August 2013

2nd ed. 2013. X, 340 p. 49 illus., 20 in color. Hardcover
▶ e (D) 213,99 | e (A) 219,99 | sFr 266,50
▶ 199,99 | £180.00

Subscription price, valid for subscribers of the whole series
▶ e (D) 181,89 | e (A) 186,99 | sFr 226,50
▶ 169,99 | £153.00
ISBN 978-3-642-36820-2
Encyclopedia of Food and Agricultural Ethics

Coeditors: K. Millar, University of Nottingham, UK; L. Heldke, Gustavus Adolphus College, Saint Peter, MN, USA; R. Bawden, Systemic Development Institute, Sydney, NSW, Australia

Contents

Topics for long articles (7500-10000 words each) are: Agricultural, food and environmental science-organization and focus of applied agrifood science, positivism and influence on course of agriculture, Green Revolution.- Agriculture and food technology - as distinct from above, discussion of key technologies including mechanizations, pesticides and biotechnology: [...]
**Stem Cell Niche**

Methods and Protocols

Contents

- Immunostaining of Germline Stem Cells and the Niche in Drosophila Ovaries.
- Identification of Male and Female Germline Stem Cells in Drosophila.
- Visualization of Adult Stem Cells Within their Niches Using the Drosophila Germline as a Model System.
- In vitro Construction of 2D and 3D Simulations of the Murine Hematopoietic Niche.
- Isolation of Embryonic Hematopoietic Niche Cells by Flow Cytometry and Laser Capture Micro-Dissection.
- Isolation and Enrichment of Stro-1 Immunoselected Mesenchymal Stem Cells from Adult Human Bone Marrow.
- Primary Marrow Derived Stromal Cells: Isolation and Manipulation.
- Detection In vitro and Quantitative Estimation of Artificial Microterritories Which Promote Osteogenic Differentiation and Maturation of Stromal Stem Cells.
- The Prospective Isolation of Viable, High Ploidy Megakaryocytes from Adult Murine Bone Marrow by Fluorescence Activated Cell Sorting.
- Looking for the Niche: Substance Delivery into the Lateral Ventricles of the Brain: The Osmotic Minipump System.
- Unbiased Stereological Method to Assess Proliferation Throughout the Subependymal Zone.
- Cardiac Stem Cell Niche, MMP9, and Culture and Differentiation of Embryonic Stem Cells.
- Human and Murine Skeletal Muscle Reserve Cells.
- Isolation of ckit+ Human Amniotic Fluid Stem Cells from Second Trimester.
- Hypoxia and Visualization of the Stem Cell Niche.

**Fields of interest**

- Cell Biology; Stem Cells

**Target groups**

- Professional/practitioner

**Product category**

- Contributed volume

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**Wetlands Encyclopedia. Volume III. Methodology**

Editorial advisor: N. Davidson, Ramsar, Gland, Switzerland; Editor-in-chief: C. M. Finlayson, Charles Sturt University, Albury, NSW, Australia

Contents

- a. Classification and inventory.
- b. Monitoring and assessment.
- c. Modeling.
- d. Mapping and delineation.
- e. Environmental Impact Assessment.
- f. Management planning.
- g. Environmental flow allocation.
- h. Mitigation and compensation.
- i. Economic evaluation.

**Fields of interest**

- Freshwater & Marine Ecology; Environment, general; Coastal Sciences

**Target groups**

- Research

**Product category**

- Encyclopedia

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**Low-Oxygen Stress in Plants**

Oxygen Sensing and Adaptive Responses to Hypoxia

During the last ten years, knowledge about the multitude of adaptive responses of plants to low oxygen stress has grown immensely.

**Features**

- First book describing in a detailed way oxygen stress in plants
- Integrates knowledge from different disciplines
- Gives a comprehensive overview of how plants cope with hypoxia

Contents

- Section I. Oxygen sensing.
- Sensing molecular oxygen.
- Sensing the energy status.
- Sensing pH.
- Sensing ROS / NO.
- Section II. Molecular responses.
- Transcriptional regulation.
- Translational regulation.
- Section III. Metabolic responses.
- Storage metabolism. Primary carbon metabolism.
- Primary nitrogen metabolism.
- Fermentation / Pasteur Effect.
- Regulation of respiration / oxygen consumption.
- Plant Hormobins.
- Section IV. Hormonal responses. Ethylene.
- ABA.
- Auxin.
- Section V. Morphological adaptations. Aerenchyma.
- Oxygen convection.
- Elongation.
- Adventitious rooting.
- Mangrove.
- Section VI. Ecophysiological adaptations. Species distribution.
- Underwater photosynthesis.
- Survival strategies.
- Radial oxygen loss.
- Section VII. Agronomical and horticultural aspects of low-oxygen stress.
- Fruit storage physiology.
- Intensive glasshouse horticulture.
- Rice (intelligent) breeding.
- Section VIII. General discussion and integration chapter.

**Fields of interest**

- Plant Physiology; Plant Biochemistry; Plant Ecology

**Target groups**

- Research

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**Oxygen Sensing and Adaptive Responses to Hypoxia**

J. van Dongen, Max Planck Institute for Molecular Plant Physiology; F. Licau, Scuola Superiore Sant’Anna (Eds)

Due July 2014

Print

2014. Approx. 810 p. 60 illus. in color.

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ISBN 978-94-007-4006-8

**Print + eReference**

2014.

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**Volume of Plant Cell Monographs**


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ISBN 978-3-7091-1253-3

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**Springer Reference**

Due July 2014

Print

2014. Approx. 810 p. 60 illus. in color.

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**Humana Press**

Due July 2013

2013. XVI, 284 p. 74 illus., 53 in color. (Methods in Molecular Biology, Volume 1035) Hardcover

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ISBN 978-1-62703-507-1

**Print + eReference**

2014. Approx. 810 p. 60 illus. in color.

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203
K. Venkataraman, Zoological Survey of India, Kolkata, India; C. Sivaperuman, C. Raghunathan, Zoological Survey of India, Port Blair, India (Eds)

Ecology and Conservation of Tropical Marine Faunal Communities

Contents
The late Holocene foraminifera from Andaman Islands, Andaman Sea, Bay Of Bengal.- Distribution of live Planktonic and benthic foraminifera in the shelf off Port Blair and Hutbay, Andaman and Nicobar Islands, India.- Species composition and distribution of sponges (Phylum: Porifera) in the Seagrass ecosystem of Minicoy Atoll, Lakshadweep, India.- Diversity and distribution of Polychaetes from Tamil Nadu Coast, India.- Species diversity and abundance of Opisthobranch molluscs (Gastropoda: Opisthobranchia) in the coral reef environments of Andaman and Nicobar Islands, India.- Macrofaunal assemblage of Oyster bed (Crassostrea madrasensis) in Vellar estuary.- Diversity and abundance of marine copepods in Muthupet mangrove waters, Southeast coast of India.- Assessment of the population status and threats to the Horseshoes along the northern East Coast of India.- Diversity and distribution of marine brachyuran crab communities inhabiting West Coast of India.- Diversity and community structure of brachyuran crab in North Andaman.- Present status and distribution of echinoderms in Reef Communities of Nicobar Islands, India.- Diversity and distribution of sea cucumber in Gulf of Mannar Biosphere Reserve, India.- Diversity of Ascidians from the Gulf of Mannar.- Fish fauna of Andaman and Nicobar Islands - a review.- Coastal marine fish fauna of East Coast of India. [...]

Fields of interest
Freshwater & Marine Ecology; Ecosystems; Biodiversity

Target groups
Research

Product category
Contributed volume

Due June 2013
2013. XIII, 553 p. 142 illus., 103 in color. Hardcover
► * € (D) 181,89 | € (A) 186,99 | sFr 226,50
► € 169,99 | £153.00
ISBN 978-3-642-38199-7

X. F. Wan (Ed)

Systems Biology of Influenza Research

Systems Biology of Influenza Research, will integrate the recent advances in influenza systems biology. The goal of this book is to introduce and simplify the systems biology thinking and document the systems biology advances in influenza research.

Features
► The material in this book is very focused and only look at the relationship between systems biology and influenza ► This book integrates the many advances in influenza systems biology ► A look at how high throughput biotechnologies have driven development and applications of systems biology approaches in understanding disease

Fields of interest
Systems Biology; Virology; Infectious Diseases

Target groups
Professional/practitioner

Product category
Contributed volume

Due May 2014
2014. 200 p. Hardcover
► approx. * € (D) 149,75 | € (A) 153,94 | sFr 201,00
► approx. € 139,95 | £126.50
M. Knecht

Diversification, Industry Dynamism, and Economic Performance

The decision to diversify lies at the core of corporate strategy and is one of the most important decisions for top management. Matthias Knecht introduces a new perspective on corporate diversification that extends the academic discussion and reveals substantial new insights with regards to one of the most pressing questions in strategic management: what makes a diversification strategy successful? The author introduces the dynamism of industries as the dominant force in the firm’s environment that influences the organization on all levels. Due to strategic, organizational, and managerial similarities of businesses competing in similar dynamic environments, synergistic benefits and superior economic performance can be realized through the combination of dynamic-related businesses in the corporate portfolio. This study provides a quantitative, multidimensional operationalization of industry dynamism and an in-depth assessment of the dynamism of a wide range of industries. At the core of the study lies the investigation of the performance impact of dynamic-related diversification strategies. The results provide new insights into successful portfolio construction strategies in the face of today’s dynamic environments.

Contents


Field of interest

Marketing

Target groups

Research

Product category

Monograph
Decision Making with the
Analytic Network Process

T. L. Saaty, L. G. Vargas, University of Pittsburgh, PA, USA

Economic, Political, Social and Technological Applications with Benefits, Opportunities, Costs and Risks

Features
- Revised 2nd Edition includes three new chapters, a new introduction, and a summary of applications covering relevant problems in today’s society
- Applications show how the Analytic Network Process (ANP) can be used to understand the problems presented and help develop ideas to solve them
- Editors are respected names in the field, with Thomas L.

Contents

Fields of interest
Operation Research/Decision Theory; Operations Research, Management Science; Econometrics

Target groups
Research

Product category
Handbook

Due June 2013

2nd ed. 2013. XIV, 365 p. 150 illus., 18 in color.
- € (D) 139,09 | € (A) 142,99 | sFr 173,50
- € 129,99 | £117.00
ISBN 978-1-4614-7278-0
J. P. Aubin, CNRS, Paris, France

Time and Money

How Long and How Much Money is Needed to Regulate a Viable Economy

This authored monograph presents an unconventional approach to an important topic in economic theory. The author is an expert in the field of viability theory and applies this theory to analyze how an economy should be dynamically endowed so that it is economically viable. Economic viability requires an assumption on the joint evolution of transactions, fluctuations of prices and units of numeraire goods: the sum of the “transactions values” and the “impact of price fluctuations” should be negative or equal to zero. The book presents a computation of the minimum endowment which restores economic viability and derives the dynamic laws that regulate both transactions and price fluctuations.

Features
- Presents an unconventional approach to an important topic in economics
- Includes a mathematically rigorous presentation of the material
- Written by a leading expert in the field

Contents

Fields of interest
Economics theory; Calculus of Variations and Optimal Control; Optimization; Socio- and Economic Theory; Calculus of Variations and Optimal Control; Modeling; Growth Theory

Target groups
Research

Product category
Monograph

J. G. Backhaus, Universität Erfurt, Germany (Ed)

Encyclopedia of Law and Economics

Law and Economics deals with the economic analysis of legal relations, legal provisions, laws and regulations and is a research field which has a long tradition in economics. It was lost after the expulsion of some of the leading economists from Germany during 1933 to 1938, but then revived in Chicago. Both the subject of Law of Economics and the need for a concise Encyclopedia is particularly relevant in Europe today.

Features
- Offers a concise source of definitions and entries for topics in Law and Economics covered by JEL-Code K
- Contains entries written by a global list of experts in the field

Fields of interest
Economics general; Law and Economics

Target groups
Research

Product category
Encyclopedia

Due January 2014

Print
2014. 3200 p.
- *€ (D) 1605,00 | € (A) 1650,00 |
- sFr 1999,00
- approx. € 1500,00 | £1350.00

eReference
2014.
- *€ (D) 1785,00 | € (A) 1800,00 |
- sFr 2098,50
- approx. € 1500,00 | £1350.00

Due July 2013

- *€ (D) 74,89 | € (A) 76,99 | sFr 93,50
- € 69,99 | £62.99
ISBN 978-3-319-00004-6

M. Barreto, D. L. Leal

Race, Class, and Precinct Quality in American Cities

Nearly forty years after passage of the 1965 Voting Rights Act, a fundamental question remains unanswered: although all citizens have an equal right to the ballot, do all citizens enjoy equal access to the ballot box? More specifically, are voting precincts in predominantly low-income and non-white neighborhoods less visible, less stable, harder to find, and more difficult to navigate than are precincts in high-income and predominantly white neighborhoods? If so, do such lower levels of accessibility result in lower levels of voting, all other things being equal? To investigate this important issue, scholars in cities across the United States participated in a precinct quality study during the November 2004 election. A similar 30-item check list was employed in each of the cities to gauge precinct quality and accessibility. This volume brings together the results and discusses the intricacies of precinct quality in many of America’s largest cities. While Congress has considered standardizing the voting process in all fifty states, the results of this study indicate that vast differences in polling place quality exist not only between but also within cities.

Features
- Considers the question although all citizens have an equal right to the ballot, do all citizens enjoy equal access to the ballot box
- Based on the results of a first-of-its-kind study of precinct quality, which took place during the November 2004 elections
- Examines the issue in America’s largest and most diverse cities, including New York, Los Angeles, Atlanta, Phoenix and Miami

Fields of interest
Economics/Management Science, general; Geography (general)

Target groups
Research

Product category
Contributed volume
Retail Branding and Store Loyalty

Analysis in the Context of Reciprocity, Store Accessibility, and Retail Formats

B. Berg, Trier, Germany

Marketers and retailers have to understand how to manage the different consumer perception levels of retail brands, which have a major determining role on store loyalty across different complex contexts. Addressing these issues, Bettina Berg analyzes first whether corporate reputation and retail store equity have a reciprocal relationship in determining store loyalty. Second, she evaluates whether retail brand equity or store accessibility provides a greater contribution to store loyalty across different local competitive situations. Third, she investigates whether perceptions of format-specific core attributes differ in their impact on the brand building process in saturated and emerging markets.

Features
- Publication in the field of economic science

Contents
Managing Retail Brands Across Different Consumer Perception Levels - Reciprocal Effects of the Corporate Reputation and Store Equity of Retailers - Managing retail brands in the light of different local competitive contexts - Importance of Retail Brand Equity and Store Accessibility for Store Loyalty in Local Competition - Managing Retail Brands Within Different Retail Formats in an International Context - A Comparison Study in Germany and Romania on the International Transfer and Perception of Retail Formats.

Field of interest
Marketing

Target groups
Research

Product category
Monograph

Due June 2013

2013. XX, 176 p. 9 Illus. (Reihe Handel und Internationales Marketing / Series Retailing and International Marketing) Softcover
- € (D) 59.99 | € (A) 61.68 | sFr 75.00
- € 36.07 | £50.99
ISBN 978-3-658-01595-4

Financial Inclusion of the Marginalised

Street Vendors in the Urban Economy

S. K. Bhowmik, Tata Institute of Social Sciences, Mumbai, India; D. Saha, Tata Institute of Social Sciences, Guwahati, India

This book is the product of a study conducted by the Tata Institute of Social Sciences (TISS) in collaboration with the United Nations Development Programme (UNDP) and Ministry of Urban Housing and Poverty Alleviation (MoHUPA). Its objective is to highlight some of the problems faced by street vendors in conducting their daily business and to examine how financial institutions, especially those in the banking sector, can include street vendors in their credit policies. Data was collected from 15 cities across the country.

Features
- Documents the current degree of financial inclusion among street vendors
- Identifies the policy constraints and drivers for the broader adoption of financial services appropriate to the needs of the street vendors
- Presents a gender-disaggregated picture of the financial inclusion among street vendors, improving the general understanding of the problems faced by women street vendors

Contents

Fields of interest
Development Economics; Labor Economics; Finance/Investment/Banking

Target groups
Research

Product category
Monograph

Due July 2013

2014. XXXIII, 10 p. (India Studies in Business and Economics) Hardcover
- € (D) 106.99 | € (A) 109.99 | sFr 133.50
- € 99.99 | £90.00

Search Methodologies

Introductory Tutorials in Optimization and Decision Support Techniques

E. K. Burke, University of Stirling, Scotland, UK; G. Kendall, University of Nottingham, UK (Eds)

The first edition of Search Methodologies: Introductory Tutorials in Optimization and Decision Support Techniques was originally put together to offer a basic introduction to the various search and optimization techniques that students might need to use during their research, and this new edition continues this tradition. Search Methodologies has been expanded and brought completely up to date, including new chapters covering scatter search, GRASP, and very large neighborhood search.

Features
- Brings field of heuristic optimization methods up to date
- Three new chapters cover scatter search, GRASP, and very large neighborhood search
- The editors, Edmund K. Burke and Graham Kendall, are respected names in the field

Contents

Fields of interest
Operation Research/Decision Theory; Operations Research, Management Science; Computer Methodologies

Target groups
Graduate

Product category
Graduate/Advanced undergraduate textbook

Due July 2013

2014. XX, 721 p. 129 illus., 11 in color. Hardcover
- € (D) 101,64 | € (A) 104,49 | sFr 126,50
- € 94,99 | £85.50
ISBN 978-1-4614-6939-1
News 6/2013

T.-M. Choi, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong (Ed)
Handbook of EOQ Inventory Problems
Stochastic and Deterministic Models and Applications
The Economic Order Quantity (EOQ) inventory model first appeared in 1913, and in its centennial, it is still one of the most important inventory models.

Features
- First handbook devoted to EOQ Problems
- Will be the standard reference in the field
- Covers both deterministic and stochastic models

Contents
A Century of the EOQ.
- Multi-period Lot-sizing with Stationary Demand: Extension to Forecast Horizons.
- EOQ Models with Supply Disruptions.
- Generalizing the Ordering Cost and Holding-Backlog Cost Rate Functions in EOQ-type Inventory Models.
- Economic and Environmental Performance of the Firm: Synergy or Trade-off? Insights from the EOQ Model.
- EOQ Models with Two Modes of Freight Transportation and All-Units Quantity Discounts.
- An EOQ-based Spare Parts Network Design.
- Coordinating a Supply Chain with an EOQ Model.
- The Utility of EOQ in Supply Chain Design and Operation.
- Modeling a Coordinated Manufacturer-Buyer Single-Item System Under Vendor-Managed Inventory.

Field of Interest
- Operation Research/Decision Theory; Operations Research, Management Science

Target groups
Research

Product category
Handbook

Due June 2013
- € (D) 139,09 | € (A) 142,99 | sFr 173,50
- $ 129,99 | £ 117,00

C. Demartini, University of Pavia, Italy
Performance Management Systems
Design, Diagnosis and Use
This book presents an analysis and a critical discussion on performance management systems. It seeks to advance the current state of knowledge in the subject by introducing a holistic performance management system - the loosely coupled performance management system. This new system presents a framework to leverage the systemic relationships among already established performance management mechanisms. The author contends that loosely coupled performance management systems fulfill two different objectives, namely - they assure control and foster innovation. Such a comprehensive approach to management control provides managers of economic organizations with an overarching architecture for the design, diagnosis and effective use of performance management systems.

Field of Interest
- Organization/Planning: Innovation/Technology Management; Business Information Systems

Target groups
Research

Product category
Monograph

Due August 2013
2014. Approx. 270 p. (Contributions to Management Science) Hardcover
- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- $ 99,99 | £ 90,00
ISBN 978-3-642-36683-3

S. Dennhardt
User-Generated Content and its Impact on Branding
How Users and Communities Create and Manage Brands in Social Media
The emergence of social media as one of the driving forces of consumers’ online experiences today also challenges our current understanding on marketing and brand management. The effects of brands’ social media involvement are to this day uncertain. Severin Dennhardt shows that social media and user-generated brands do have a strong influence on brands. Four independent studies demonstrate that first, successful brands can be created in virtual worlds, second, user-generated content drives the creation of unique brands, third social media strongly influences the social value perception of brands, and fourth, social media impacts consumers’ purchase decision process.

Feature
- Publication in the field of economic sciences

Field of Interest
- Marketing

Target groups
Research

Product category
Monograph

Due September 2013
2013. Approx. 160 p. Softcover
- approx. € (D) 64,19 | € (A) 65,99 | sFr 80,00
- approx. $ 59,99 | £ 53,99

S. Dennhardt
User-Generated Content and its Impact on Branding
How Users and Communities Create and Manage Brands in Social Media
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Feature
- Publication in the field of economic sciences

Field of Interest
- Marketing

Target groups
Research

Product category
Monograph
Information Systems for Small and Medium-sized Enterprises

This book establishes and explores existing and emerging theories on Small and Medium-sized Enterprises (SMEs) and the adoption of IT/IS. It presents the latest empirical research findings in that area of IS research and explores new technologies and practices. The book is written for researchers and professionals working in the field of IS research or the research of SMEs. Moreover, the book will be a reference for researchers, professionals and students in management information systems science and related fields.

Features
- Summarizes the latest IS research on SMEs
- Provides a clear agenda for IS Research on SMEs
- Serves as a reference for IS Researchers

Contents
Leading Operational Excellence in the Pharmaceutical Industry

Achieving operational excellence is a challenge for the pharmaceutical industry, with many companies setting successful examples time and again. This book presents such leading practices for managing operational excellence throughout the pharmaceutical industry. Based on the St.Gallen OPEX Model the authors describe the current status of OPEX and the future challenges that have to be dealt with. The ample theoretical background is complemented hand-in-hand by case studies contributed by authors from leading pharmaceutical companies.

Features

- Uses current data about the status and operations of pharmaceutical production
- Authors from big pharma contribute their own stories in the form of best practice case studies
- Theoretical backgrounds and practical insights are combined to offer a complete perspective on the industry as well as leadership models

Contents

- Introduction
- The Rise of OPEX in Pharmaceutical Industry
- Barriers & Success Factors in Managing Operational Excellence
- Leading Operational Excellence (1) - Outstanding Practices
- Leading Operational Excellence (2) - Leadership Redefined
- Summary & Outlook

Fields of Interest

- Production/Logistics/Supply Chain Management
- Business Strategy/Leadership
- Pharmaceutical Sciences/Technology

Target groups

Professional/practitioner

Product category

Contributed volume

Strategic Management of Global Manufacturing Networks

Aligning Strategy, Configuration, and Coordination

The preceding process of globalization and the continuously rising competitive pressure on manufacturing companies in more developed economies unveiled the limits of classical site-focused optimization approaches. The focus of network optimization shifts ever more towards an integrative view of manufacturing networks, striving for a harmonization of the strategy-, configuration- and coordination levels. This book presents such an integrative approach to the strategic management of manufacturing networks. Besides strategic network requirements, this book discusses the derivation of an optimal global footprint and the optimization of network coordination activities. Special attention is paid to the site roles concept, especially to the concept of 'lead factory'.

Features

- Provides a holistic perspective on manufacturing network management considering the interplay between strategy, configuration, and coordination
- Elaborates on each single dimension, thereby providing practitioners with proven applicable management concepts and tools
- Demonstrates the applicability of the tools and concepts along numerous up-to-date cases from the manufacturing industry

Field of Interest

- Operation Research/Decision Theory
- Production/Logistics/Supply Chain Management
- Emerging Markets/Globalization

Target groups

Professional/practitioner

Product category

Professional book

Data you need to know about China


Survey and research center for China household finance, a non-profit institution for academic inquiry and study, is founded by Southwestern University of Finance and Economics (SWUFE) and Institute of Finance Research of People's Bank of China. Its essential mission is to carry out China household finance survey in nationwide scope, collecting micro-level information about household finance, which includes housing assets and financial wealth, debts and credit constraints, incomings, expenditures, social security and insurance, intergenerational transfer payments, demographic characteristics and employments, habits of payments, etc, in order to offer high-quality micro data of household finance for academic study and policy making. This survey, held comprehensively and systematically by entering household questionnaire, is aiming at China household finance area. A basic database, related to micro area of China household finance, will be built based on the results of this survey, and shared all over the society. The center plans to carry out the entering household survey nationwide scope every two years. Those samples are distributed in 320 communities (urban and rural) in 80 counties (districts and cities) of 25 provinces (municipality), whose size is about more than 8400 families.

Field of Interest

- Financial Economics

Due July 2013

2014. Approx. 360 p. 70 illus. Hardcover
- approx. * € (D) 85,55 | € (A) 87,95 | sFr 106,50
- approx. € 79,95 | £72.00
ISBN 978-3-642-35160-0
K. Gebert  
**Performance Control in Buyer-Supplier-Relationships**  
The Design and Use of Formal Management Control Systems

A company’s ability to best exploit performance potentials within buyer-supplier relationships has become a critical success factor in securing competition and improving a company’s overall performance. One powerful attempt to meet this challenge can be found in the application of cross-company management accounting approaches in order to execute performance control. However, implementation of suitable mechanisms and execution of control activities across company boundaries – commonly executed by both partners – is often insufficient because actual improvement potentials are not identified correctly.

**Feature**
- Publication in the field of economic sciences

**Contents**
A contingency-based model to better understand conditions under which managerial control in an inter-organizational context is effective. - Implications for performance evaluation processes to systemize and quantify the impact of contingent external factors on performance (based on variance analysis). - Assessment of the mediating effect of control on the relationship's performance (based on structural equation modeling). - A control process-oriented guideline, helping managers to systematically identify and analyze the weak points of their cross-company control activities.

**Field of interest**
Production/Logistics/Supply Chain Management

**Target groups**
Research

**Product category**
Monograph

S. Grossbard  
**On the Economics of Marriage**  
A Theory of Marriage, Labor and Divorce

While this book contains numerous facts and empirical findings and touches on policy issues, its main contribution to the existing literature lies in the theoretical perspective it offers. The core of this book is a general equilibrium theory of labor and marriage presented in Chapter 2, which provides the conceptual framework for the rest of the chapters. Two major implications of the theory are sex ratio effects and compensating differentials in marriage. The book demonstrates how a few core concepts, linked via economic analysis, help explain a multitude of findings based on statistical analyses of data from a wide variety of cultures.

It is hoped that readers of this book will improve their understanding of how marriage works to help us design better economic and social policies as well as help people live better and happier lives, making the book of interest to not only economists but sociologists and anthropologists as well.

**Features**
- Provides the first comprehensive economic theory of marriage, spanning a wider variety of aspects of marriage including chapters on labor supply of women and the effect of marriage on productivity at work. - Surveys an extensive literature on various aspects of marriage written by economists, sociologists, anthropologists and others. - Presents both theoretical and empirical analysis on the topics discussed.

**Fields of interest**
Labor Economics; Family; Sociology, general

**Target groups**
Graduate

**Product category**
Monograph

S. H. Hallerstede, Nürnberg  
**Managing the Lifecycle of Open Innovation Platforms**

Innovations are a critical success factor for organizations to survive. Nowadays possibilities of information and communication technologies facilitate the use of IT-based tools for the integration of external innovators into the innovation process of organizations. These tools, like innovation communities, innovation contests, innovation toolkits, and innovation market places, are subsumed under the term open innovation platforms (OIPs). The skills required to design and manage OIPs differ significantly from those for a default website. Hence, typical lifecycle models cannot be applied.

Stefan Hallerstede addresses this gap and develops a dedicated lifecycle management approach for OIPs. In doing so, information systems and open innovation literature are merged as well as the major players in the market are introduced. He builds on three in-depth cases of professional OIP lifecycle management, and compiles guidelines for managing each phase of an OIP’s lifecycle. Thereby, challenges in the lifecycle of OIPs are identified and mechanisms to overcome them are developed.

**Feature**
- Publication in the field of economic sciences

**Contents**
Model of OIP lifecycle management and activities in each phase. - Process of designing an OIP from a socio-technical perspective. - Challenges in the lifecycle of OIPs and mechanisms to address them. - Typology of OIP projects. - Functions of open innovation intermediaries.

**Fields of interest**
Economics/Management Science, general; Innovation/Technology Management

**Target groups**
Research

**Product category**
Monograph

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Due June 2013

- Approx. 250 p. (Supply Chain Management, Volume 3) Softcover
  - approx. *€ (D) 64,19 | € (A) 65,99 | sFr 80,00
  - ISBN 978-3-658-01892-4

Due July 2013

- 2013. 370 p. Hardcover
  - approx. *€ (D) 149,75 | € (A) 153,94 | sFr 201,00

Due May 2013

- 2013. XXIV, 249 p. 56 illus. (Markt- und Unternehmensentwicklung / Markets and Organisations) Softcover
  - *€ (D) 64,19 | € (A) 65,99 | sFr 80,00
  - ISBN 978-3-658-02307-6
W. Jho

Building Telecom Markets
The Evolution of Governance in the Korean Mobile Telecommunication Market

The mobile telecommunication industry has been one of the fastest growing industries in the global economy since the late 1990s. As the first country to offer commercial Code Division Multiple Access (CDMA) cellular service in the world, Korea was able to jump right into the digital mobile markets, enhancing its status as a leading manufacturer of mobile equipment.

Features
- Evaluates the influence of markets and technologies on telecom market liberalization and repudiates the single neo-liberal model of market-oriented reform
- Analyses the changing relationship between the state and the private sector and empirical cases for governance perspective

Contents
1. Research Questions
2. Theoretical discussion
3. Global Challenges in Telecommunication
4. Overview of the Korean Response: From Monopolies to Liberalization
5. The Emergence of Centralized Governance in the Korean Mobile Market
6. The Emergence of Flexible Governance under the WTO Regime
7. Conclusion

Fields of interest
Economic Policy; Innovation/Technology Management; Political Economy

Target groups
Research

Product category
Monograph

Due August 2013

2014. Approx. 200 p. (The Political Economy of the Asia Pacific) Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 127,50
- approx. € 99,95 | £86,50
ISBN 978-1-4614-7887-4

A. Karasavvoglou, P. Polychronidou, Kavala Institute of Technology, Kavala, Greece (Eds)

Economic Crisis in Europe and the Balkans
Problems and Prospects

The economies of the European countries are still in recession, the development process is at a standstill, companies are facing financial difficulties, and the EU’s monetary policy is tight and focused on lowering inflation. The fiscal problems and high debt levels of the northern European countries are of great importance, and they are the consequences of both the European economy’s structural characteristics and the EU’s policies. The economic area of Eastern Europe, the Balkans and the Black Sea countries is also vital, due to its special economic characteristics. The effects of the economic crisis on this particular area are catalytic, while the prospects for recovery are doubtful. The present book deals with the key aspects of the economic crisis in Europe, especially focusing on southeast Europe and the Balkans. The consequences of the crisis in these countries are analyzed and suggestions for how to address the crisis are outlined.

Features
- With special focus on the European debt crisis
- In-depth analysis of South East Europe and the Balkans
- Concrete suggestion how to address the crisis

Contents
Part I: Economic Crisis in Europe
Part II: European Policies and Integration
Part III: European and Regional Development in South-Eastern Europe

Fields of interest
European Integration; Macroeconomics/Monetary Economics; Public Finance & Economics

Target groups
Research

Product category
Contributed volume

Due July 2013

2013. X, 240 p. 36 illus., 12 in color. (Contributions to Economics) Hardcover
- *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00
ISBN 978-3-319-00493-8

K. Kourtit, P. Nijkamp, VU University, Amsterdam, The Netherlands; R. Stimson, University of Melbourne, Parkville, Vic, Australia (Eds)

Applied Regional Growth and Innovation Models

Modern spatial-economic systems exhibit a high degree of dynamics as a result of technological progress, demographic evolution or global change. In the past decade, an avalanche of new regional economic growth and innovation models has been put forward. This volume contains a unique collection of operational models of a strong applied nature that may be seen as original landmarks in the rich tradition of spatial-economic growth modelling. The contributors are recognized experts from different parts of the world.

Features
- A collection of unique and operational regional growth and innovation models
- Major emphasis on applied and advanced spatial-economic models
- Review of various space-time modelling experiences

Contents
Preface
Part A: Knowledge and Innovation in Space
Part B: Human Capital and Regional Growth
Part C: Spatial Systems and Economic Development

Fields of interest
Regional/Spatial Science; Economic Geography; Economic Growth

Target groups
Research

Product category
Monograph

Due August 2013

2013. Approx. 300 p. 68 illus. (Advances in Spatial Science) Hardcover
- approx. *€ (D) 139,05 | € (A) 142,94 | sFr 173,00
- approx. € 129,95 | £117.00
ISBN 978-3-642-37818-8

E. Scammell, R. Stimson, VU University, Amsterdam, The Netherlands; K. Kourtit, P. Nijkamp, Melbourne University, Melbourne, Parkville, Vic, Australia (Eds)

Applied Regional Growth and Innovation Models

Modern spatial-economic systems exhibit a high degree of dynamics as a result of technological progress, demographic evolution or global change. In the past decade, an avalanche of new regional economic growth and innovation models has been put forward. This volume contains a unique collection of operational models of a strong applied nature that may be seen as original landmarks in the rich tradition of spatial-economic growth modelling. The contributors are recognized experts from different parts of the world.

Features
- A collection of unique and operational regional growth and innovation models
- Major emphasis on applied and advanced spatial-economic models
- Review of various space-time modelling experiences

Contents
Preface
Part A: Knowledge and Innovation in Space
Part B: Human Capital and Regional Growth
Part C: Spatial Systems and Economic Development

Fields of interest
Regional/Spatial Science; Economic Geography; Economic Growth

Target groups
Research

Product category
Monograph

Due August 2013

2014. Approx. 200 p. (Closed Border Economies) Hardcover
- approx. *€ (D) 129,95 | € (A) 132,94 | sFr 165,00
- approx. € 129,95 | £117,00
ISBN 978-3-642-37818-8
National Intellectual Capital and the Financial Crisis in Indonesia, Malaysia, The Philippines, and Thailand

In the first decade of the twenty-first century, the biggest event of worldwide proportion was the 2008 global financial crisis, which was caused primarily by ineffective governance, failed surveillance systems, and implementation flaws. While fiscal and monetary policies succeeded in pulling many countries out of a financial freefall, most economies have performed beneath pre-recession levels as governments continued to struggle with their finances. Examining the financial crisis from the viewpoint of intangible assets provides a different perspective from traditional economic approaches. National Intellectual Capital (NIC), comprised mainly of human capital, market capital, process capital, renewal capital, and financial capital, is a valuable intangible asset and a key source of national competitive advantage in today’s knowledge economy.

Contents

Fields of interest
Economic Growth; Economic Policy; R & D/Technology Policy

Target groups
Research

Product category
Monograph

Contemporary Logistics in China of Year 2013

Driven by decades of steady economic growth in China, logistics has been bolstered to the front stage of the nation’s development plan. Both infrastructural construction and operations system have been upgraded to propel logistics to a new era. This book, the second volume of the series on “Contemporary Logistics in China”, is a “just-in-time” publication which provides the readers with a depiction of the logistics development in China for this pivotal period. The writings are founded on the up-to-date studies of a team of dedicated researchers, and supported by the reputable Logistics Research Center at Nankai University. The book presents a comprehensive and thorough analysis of the progression and transformation of modern-day logistics in China, as well as the critical issues and perspectives thereof. Researchers and practicing professionals alike will find this book an indispensable and a “just-in-need” information source and reference document.

Field of interest
Production/Logistics/Supply Chain Management

Target groups
Research

Product category
Monograph

Subsidiary Internationalization and Cross-Border Subsidiary Mandates

A select and temporary MNC phenomenon

This book investigates how foreign subsidiaries of multinational corporations expand their presence and functional scope into foreign territories. It thereby focuses on how cross-border subsidiary mandates are obtained and how they develop over time. Multiple case-studies based on in-depth interviews with HQ and subsidiary management suggest that subsidiary internationalization represents a select MNC phenomenon and that associated foreign market mandates are only of temporary nature. Foreign subsidiaries appear to receive cross-border responsibility if their value proposition for overcoming liability of inter-regional foreignness is capable of more than offsetting any risk increase that stems from principal-agent relationships between corporate headquarters and foreign subsidiaries. Following the initial mandate gain, the subsidiary’s restrained access to HQ-like functions, intra-MNC competition and altering localization degrees in the market covered by the mandate puts the sustainability of cross-border responsibilities at risk. As a consequence, internationalization trajectories of foreign subsidiaries often follow discontinuous rather than gradual evolutionary paths. In addition, cross-border subsidiary mandates often appear to be predefined and temporary in nature.

Feature
► Publication in the field of the economic sciences

Contents
Internationalization processes. - Subsidiary mandates. - Subsidiary evolution. - Multinational firm.

Field of interest
Management/Business for Professionals

Target groups
Research

Product category
Monograph
M. Marzo, University of Bologna, Italy

**Dynamic Stochastic General Equilibrium Models: the Macro-Finance Link**

**Term Structure and Asset Pricing implications**

This book presents a formal introduction to the real business cycle (RBC) model with consideration of monetary and asset pricing implications. In the first part, the mechanics underlying the basic RBC model are thoroughly reviewed, with discussion of various commonly employed solution methods. The second part studies the analytic features characterizing the famous 'new neoclassical synthesis', including money together with other assets, by exploring the role of different approaches adopted in inserting money in the basic RBC model. Special attention is devoted to the design of nominal and real rigidities to be included in the model: several methodologies are contrasted (wage and price rigidities), and their impact on the design of the aggregate supply curve is considered. The final part of the book explores the implications of the previous setting for asset pricing, by studying the role of term structure of interest rates and stock prices within a dynamic stochastic general equilibrium model.

**Features**
- Tutorials, with step-by-step analytical discussion, on specific topics not covered in other books on dynamic general equilibrium models, such as price and wage rigidities
- Careful tutorials on the role of money and bonds in such dynamic macro models
- Implications for asset pricing: a step-by-step guide to the endogenous derivation of the price kernel employed for the term structure of interest rates and asset pricing

**Fields of interest**
- Macroeconomics/Monetary Economics; Financial Economics

**Target groups**
- Graduate

**Product category**
- Monograph

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S. McGreal, R. Sotelo (Eds)

**Real Estate Investment Trusts in Europe**

**Evolution, Regulation, and Opportunities for Growth**

Shortly before of the beginning of the global financial crisis of 2008 REITs were introduced in several European countries based on their success in mature markets like the US, Australia and some Asian countries. While the history of REITs in Europe has been relatively brief, REITs are well on the way to become an industry standard as a real estate investment financial vehicle not only in Europe but throughout the developed world. This book provides both academics and decision makers an introduction to the economics of REITs beyond tax transparency, an overview of the mature REITs markets, and a closer reflection of the development of different REIT-structures in Europe including the history, regulation and markets of each country.

**Features**
- Presents a pan-European perspective on origins of REITs, regulatory differences
- Country-wise analyses of different REIT regimes
- Economic analysis on REITs and view on specific REITs-structure in Europe
- Includes the perspective of EPRA and NAREIT
- Introduction to European REITs based on lessons learned in mature markets around the world

**Fields of interest**
- Finance/Investment/Banking; Business Taxation/Tax Law; Financial Economics

**Target groups**
- Research

**Product category**
- Contributed volume

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P. C. Murschetz, University of Salzburg, Austria (Ed)

**State Aid for Newspapers**

**Theories, Cases, Actions**

Ever since newspaper companies first turned to their governments for support in the 1950s, print media has been supported by state aid in many parts of the world. Today, the principles and practicalities of these subsidies have been called into question, endangering the secure funding of expensive high-quality press output. This book provides a comprehensive analysis of today’s global challenges in the print news media’s struggle for survival. It presents current practices concerning government subsidies to newspapers for political, economic, and socio-cultural purposes against the background of declining readership and revenues, increased inter-media competition, austerity budgets imposed on national economies and shifting audience tastes. Using the insights of theoretical debates in the fields of media economics, media governance, and modern management theory, the book analyses these issues by investigating the power of government subsidies to shape and control newspaper markets.

**Features**
- International thematic scope
- Highly timely subject
- Focus on both academic and practical issues

**Contents**
- Preface.
- Part 2: Public Subsidy Schemes - Empirc Evidence from Europe and Abroad.
- Part 3: Conclusions.

**Fields of interest**
- Media Management; Public Finance & Economics; Industrial Organization

**Target groups**
- Research

**Product category**
- Contributed volume

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**Due June 2013**


2013. Approx. 220 p. 50 illus. Hardcover
- *€ (D) 106.95 | € (A) 109.95 | sFr 133,50*
- *€ 99.95 | £90.00*

ISBN 978-3-642-36855-4

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**Due October 2013**

2nd ed. 2014. Approx. 280 p. (Media Business and Innovation) Hardcover
- *€ (D) 106.95 | € (A) 109,95 | sFr 133,50*
- *€ 99,95 | £90.00*

ISBN 978-3-642-35690-2
**Mathematical Economics**

**Basic Concepts and Patterns**

This book explains the basic structure and patterns across mathematical concepts and results which is required to efficiently read and understand papers in economics that involve mathematics. It also illustrates the usefulness of understanding these patterns with the help of several applications which are detailed in the book. The reader is guided through the language of mathematics, basic mathematical concepts, structure to construction of a theoretical model, until the method to read, understand and analyze any research article.

**Features**

- Clear description of how any mathematical concept is constructed starting with an unstructured set
- Clarifies the common patterns across mathematical concepts and results
- Provides an intuitive explanation of the concepts and results most often used in microeconomics

**Contents**

- Where does it all start? - What are the alphabets of mathematics?
- From unstructured sets to structured sets, via structuring tools
- What are the main structured sets used in economics?
- Order structure
- What does it take to define a line?
- From a function to a continuous function?
- Properties of functions and correspondences
- The language of lemmas, propositions, theorems, and corollaries
- Reading and questioning a result
- The brief, in brief

**Fields of interest**

- Game Theory/Mathematical Methods
- Game Theory, Economics, Social and Behavior Sciences
- Economic Theory

**Target groups**

Graduate

**Product category**

Brief

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**Internal Brand Management in an International Context**

C. Ravens

Employees with a sound knowledge of and strong commitments to a brand are likely to display behaviors that conform to a brand’s identity, so called brand citizenship behavior. Organizations have access to various internal branding instruments that support commitment structures but multinational corporations are challenged by a diverse workforce environment. The study analyzes the relevance of these instruments across a German, Chinese and North American sample. This research further analyzes the impact of an individual’s cultural values on brand commitment which is an antecedent to brand citizenship behavior.

**Feature**

- Publication in the field of economic science

**Contents**

- Brand citizenship behavior – definitional foundation and conceptualization
- Brand commitment – A central determinant of brand citizenship behavior
- Brand commitment determinants
- Cultural values – value based operationalization of culture as measurement instruments for internal branding model
- Brand commitment in an international context

**Field of interest**

- Marketing

**Target groups**

Research

**Product category**

Monograph

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**The Run to the Pennant**

D. W. Rockerbie, S. T. Easton

A Multiple Equilibria Approach to Professional Sports Leagues

A number of clubs in professional sports leagues exhibit winning streaks over a number of consecutive seasons that do not conform to the standard economic model of a professional sports league developed by El Hodiri and Quirk (1994) and Fort and Quirk (1995). These clubs appear to display what we term “unsustainable runs”, defined as a period of two to four seasons where the club acquires expensive talent and attempts to win a league championship despite not having the market size to sustain such a competitive position in the long run.

**Features**

- Explores the effects of revenues that are earned at the league level (television, apparel, naming rights, etc.) that are then shared by all of the member clubs
- Develops new models that can generate multiple equilibria and unsustainable runs
- Employs sound empirical work using time-series methods not commonly used in the economics of sports

**Contents**

- Chapter 1. Introduction
- Chapter 2. Use of empirical data to motivate the theoretical model
- Chapter 3. A review of the two-team and N-team profit-maximizing model of a league
- Chapter 4. An exposition of the profit-maximizing league model with multiple equilibria
- Chapter 5. Roles for policy in the presence of multiple equilibria
- Chapter 6. Empirical tests for multiple equilibria in sports leagues
- Chapter 7. Concluding thoughts and suggestions for future work

**Fields of interest**

- Economics general
- Econometrics
- Management/Business for Professionals

**Target groups**

Research

**Product category**

Monograph
Advances in Advertising Research (Vol. IV)
The Changing Roles of Advertising

Advances in Advertising Research are published by the European Advertising Academy (EAA). This volume is a compilation of research presented at the 11th International Conference in Advertising (ICORIA) which was held in Stockholm (Sweden) in June 2012. The conference gathered 150 leading researchers from 22 countries under the conference theme “The changing roles of advertising.” The book provides international state-of-the-art research with 30 articles by renowned scholars from the worldwide ICORIA network.

Contents

Field of interest
Marketing

Target groups
Research

Product category
Monograph

Multi Tenancy for Cloud-Based In-Memory Column Databases
Workload Management and Data Placement

With the proliferation of Software-as-a-Service (SaaS) offerings, it is becoming increasingly important for individual SaaS providers to operate their services at a low cost. This book investigates SaaS from the perspective of the provider and shows how operational costs can be reduced by using “multi tenancy,” a technique for consolidating a large number of customers onto a small number of servers.

Features
► A background chapter on column databases and multi tenancy summarizes the key concepts of these technologies in a compact manner
► A dedicated chapter on related work provides a detailed survey of the state of the art in workload management, data placement and multi tenant databases in general
► A validation of the algorithmic results is conducted using traces from a production data center running one of SAP’s on-demand applications, and the particularities of such realistic data are being discussed and generalized

Contents

Fields of interest
Business Information Systems; Database Management; Algorithm Analysis and Problem Complexity

Target groups
Research

Product category
Monograph

Financial Stability Policy in the Euro Zone
The Political Economy of National Banking Regulation in an Integrating Monetary Union

Due to the lack of political salience that financial stability policy enjoys in tranquil economic times, this policy field lends itself particularly well to capture – the more so the more important the role of banks is in the financial system. Gundbert Scherf’s research focuses on this nexus between integrated banking, supranational monetary policy and national banking regulation. He finds that national level differences in financial systems and related institutions explain and drive variation in regulatory financial stability policy across countries.

Features
► Publication in the field of economic sciences

Contents

Field of interest
Economics general

Target groups
Research

Product category
Monograph
Multi-Stage Simultaneous Lot-Sizing and Scheduling
Planning of Flow Lines with Shifting Bottlenecks

Due to a varying product demand (changing product mix) and different production speeds, bottlenecks may shift between the stages. In that case, a simultaneous lot-sizing and scheduling of these stages is recommendable. Hence, an improved version of the General Lot-Sizing and Scheduling Problem for Multiple production Stages (GLSPMS) was developed. Moreover, several reformulation techniques were applied to this model to solve it exactly. Besides, a new meta-heuristic which combines the principles of Variable Neighborhood Decomposition Search (VNDs) and Exchange was implemented to find good solutions, even for a real-world problem case. Finally, further model extensions, e.g., for scarce setup resources, were proposed.

Feature
- Publication in the field of economic sciences

Contents
Simultaneous Lot-Sizing and Scheduling for flowline production systems.- General Lot-Sizing and Scheduling Problem for Multiple production Stages.- Model reformulation & Heuristics.

Field of interest
Economics/Management Science, general

Target groups
Research

Product category
Monograph

Tourism Development in the GCC States
Reconciling Economic Growth, Conservation and Sustainable Development

Features
- Develops new strategies to avoid past errors and proposes remedial actions to currently unsustainable tourism development pathways.- Investigates the effect of unsustainable rapid development and its detrimental environmental, socio-cultural and security impacts.- Examines the net social benefit of tourism development, to encapsulate economic, social and environmental benefits and costs, and asks whether benefits outweigh costs overall.

Contents

Fields of interest
International Economics; Emerging Markets/Globalization; International Relations

Target groups
Research

Product category
Contributed volume

Due October 2013
2014. Approx. 300 p. Hardcover
- € (D) 106,95 | € (A) 109,95 | sFr 127,50
- € 99,99 | £86.50
ISBN 978-1-4614-7452-4

Business Research Methods
An Applied Orientation

Since research is best learned by doing, this book emphasizes a hands-on, do-it-yourself approach. The readers have many opportunities to see how business researches affect and support management decision. The book used a case study approach for all the chapters with interactive videos. The book gave emphasis to quantitative data analysis using a software program, IBM SPSS 20.0. The data analysis chapters illustrate in detail each step in running the software programs.

Features
- Provides step by step guidelines for business research methods and data analysis using software programs.- Offers a mix of both qualitative and quantitative research that readers can apply directly in real market scenarios.- Each chapter ends with a case study that demonstrates the business research concept discussed.

Contents

Fields of interest
Business/Management Science, general; Statistics for Business/Economics/Mathematical Finance/Insurance; Business Information Systems

Target groups
Research

Product category
Monograph

Due May 2013
2013. XXVI, 182 p. 68 illus. (Produktion und Logistik) Softcover
- * € (D) 64,19 | € (A) 65,99 | sFr 80,00
- € 59,99 | £53.99
ISBN 978-3-658-02088-0

Due July 2013
- * € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00
ISBN 978-3-540-00338-6
The Economics of Epidemiology

The book presents a basic introduction to epidemiology from the perspective of economics, using economic modeling to better understand and describe how infectious disease spreads. Three main elements are introduced: epidemiology, social network analysis, and the economics needed to model the behavior of individuals in the presence of infectious disease. The book aims to provide a starting point for discussion between medical professionals, social scientists and public health officials, the three groups interested in the spread of disease.

Features
- Introduces public health and medical professionals to the economic analysis and modeling of infectious disease
- Introduces economists to issues of epidemiology
- Provides an introduction of social network analysis into the study of infectious disease

Contents

Fields of interest
Health Economics; Epidemiology; Public Health

Target groups
Research

Product category
Brief

Cross-Border Due Diligence
Cases and Guidance for Planning Business in Emerging Markets

This book is a practical guide to conducting due diligence for business in emerging markets. It explores the reasons and the right context for companies to operate in the emerging markets. It describes how frontiers matter and explains the challenges of managing across borders provides cases of companies who have built successful businesses in the emerging markets and lessons learnt.

Features
- Practical guide for conducting due diligence for planning business in emerging markets
- Discusses contexts in which companies should consider going into emerging markets
- Provides a useful checklist and several case studies

Fields of interest
Emerging Markets/Globalization; Organization/Planning; Business Strategy/Leadership

Target groups
Professional/practitioner

Product category
Brief

Due June 2013

2013. Approx. 100 p. 20 illus. (SpringerBriefs in Public Health) Softcover
- € (D) 53,49 | € (A) 54,99 | sFr 67,00
- £ 49,99 | £44.99
ISBN 978-3-642-38119-5

Due July 2013

2013. Approx. 120 p. 6 illus. (SpringerBriefs in Business) Softcover
- approx. * € (D) 53,45 | € (A) 54,95 | sFr 66,50
- approx. £ 49,95 | £44.99
ISBN 978-3-642-36891-2

Due August 2013

2014. Approx. 290 p. (Management for Professionals) Hardcover
- approx. * € (D) 64,19 | € (A) 65,99 | sFr 80,00
- approx. £ 59,99 | £53.99
ISBN 978-3-642-38588-9
Digital government consists in the purposeful use of information and communication technologies (ICT), in particular the internet, to transform the relationship between government and society in a positive manner. This book focuses on the current status, prospects and foundations of digital government. Integrating examples and cases from administrative practice, it covers all important aspects of digital government management. Learning outcomes include understanding the implications of the internet for government and society; gaining deeper insights into the concept and opportunities of digital democracy; understanding the challenges of moving public services online.

**Contents**

Preface. 1 Introduction to Digital Government. 2 Impact of Digital Government. 3 The Digital Divide. 4 Legal Aspects of Digital Service Delivery. 5 Online One-Stop Government. 6 Open Government. 7 E-Procurement. 8 E-Voting. 9 E-Participation. 10 Lesson Learned and Outlook.

**Features**

- Covers all important aspects of digital government management
- Provides theories and frameworks from academic literature to understand digital government
- Integrates examples and cases from administrative practice

**Fields of interest**

Business Information Systems; Public Administration; Computers and Society

**Target groups**

Upper undergraduate

**Product category**

Graduate/Advanced undergraduate textbook

**Due August 2013**

2013. Approx. 170 p. 32 illus. (Springer Texts in Business and Economics) Hardcover

**Due August 2013**

2014. Approx. 230 p. 27 illus., 4 in color. (Management for Professionals) Hardcover

**Due June 2013**

2013. XVII, 158 p. 4 illus. (Familienunternehmen und KMU) Softcover
Corporate Social Responsibility in the Global Business World

This book provides an overview of the application of Corporate Social Responsibility in businesses and corporations around the world. Primarily based on real cases, it focuses on different approaches to CSR from a global perspective. It provides a critique of the "wrong" practices often employed even by multinational organizations, and highlights the resultant negative effects. On the other hand the book demonstrates good examples that can help multinationals or even entire countries to achieve both a better reputation and increased profitability. "CSR in the Global Business World" is a rich resource of illustrative cases, serving both as a basis for ongoing research as well as for teaching purposes at the business school level.

Features
► Provides a global version and discussion of the CSR concept ► Analyzes specific cases that are of interest to scholars and practitioners ► Explores and discusses different guises of the CSR notion in business and management schools ► Covers a wide array of business functions such as marketing, consumer behaviour, corporate governance, non-profit organizations and financial aspects

Contents

Fields of interest
Non-Profit Enterprises/Corporate Social Responsibility; Migration; Marketing

Target groups
Research

Product category
Contributed volume

Due June 2013

2013. XXIX, 382 p. 15 illus. Hardcover
► approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. € 99,95 | £90.00
ISBN 978-3-642-37619-1
Intellectual Property and Free Trade Agreements in the Asia-Pacific Region

This book is highly topical. The shift from the multilateral WTO negotiations to bilateral and regional Free Trade Agreements has been going on for some time, but it is bound to accelerate after the WTO Doha round of negotiations is now widely regarded as a failure. However, there is a particular regional angle to this topic as well.

Features
- Written by experts in the IP developments of the Asia-Pacific region
- Multidisciplinary approach with chapters on law and economics and the political economy of region
- Comprehensive regional coverage and selection of FTAs with significant IP chapters

Contents

Fields of interest
International IT and Media Law, Intellectual Property Law; International Economic Law, Trade Law; Regional/Spatial Science

Target groups
Research

Product category
Contributed volume

A Model Harmonised International Arbitration Law Code for the Middle East and North Africa

The law codes in the Middle East North Africa (MENA) region are a well-crafted blend of civil and Islamic law in which civil law principles do not violate Islamic provisions. Yet, common law principles derived either from English common law or Islamic customary usages remain unidentified and thus ignored. Here, this complex scenario is rectified through a comparative analysis of the primary data (e.g. cases, statutes and arbitral award decisions), adding common law and uncodified Islamic custom to MENA law codes. The purpose of this comparative analysis is to allow common legal principles found in civil, common and Islamic law to be distilled in order to create a new, harmonised international commercial arbitration law code (HICALC) or uniform Arab arbitration law (UAAL) for adoption in the MENA region, where these principles already greatly influence the legal systems and can be readily assimilated into a harmonised or uniform code.

Features
- Use of the precedent of the Mixed Courts to help with MENA arbitration
- Analysis of Sharia law and the Arab Spring on its practical impact on international arbitration in the MENA
- Honest assessment of the real adjudicatory risk in the MENA
- Practical idea in the HICALC for bringing about consistency and predictability through harmonisation and incorporating principles from the lex mercatoria

Contents

Fields of interest
Private International Law, Comparative Law; Business Taxation/Tax Law; International Economic Law, Trade Law

Target groups
Professional/practitioner

Product category
Professional book

A Legal Guide to United States Business Organizations

This volume provides an overview of United States federal and state law governing business organisations. The chapters take the reader through a step-by-step exposition of the most basic sole proprietorships to the most complex multi-tiered conglomerates.

Features
- Provides a concise synopsis of the black letter law, summarizing leading cases rather than reproducing them for the reader to read, analyze and reconcile
- An excellent companion to any business and law qualifications, who has first hand experience with practicing law on three continents and who is well-versed with American law and explaining it to foreign practitioners
Corporate Governance in China
The Comparative Perspectives on Derivative Actions

This book considers the derivative action, an important corporate governance tool which is commonly considered to serve two basic functions, i.e., enabling shareholders to gain redress for a wrong done to their company and deterring potential breaches of directors’ fiduciary duties. This book critically examines the derivative action from theoretical, evolutionary, and comparative perspectives. It considers how controversial issues such as locus standi, demand requirements, indemnity cost orders, information asymmetry and res judicata are approached in selected civil law countries as well as throughout the Commonwealth. The book also assesses whether derivative litigation could fulfill a similar role in China, which is one of the most rapidly developing economies in the world, yet lacks adequate corporate governance mechanisms. The ultimate aim discussed in the book is how to establish a remedial mechanism which makes derivative actions more accessible and consistent, while maintaining the balance between corporate efficiency and protecting minority shareholders’ interests.

Features
► Embraces three major jurisdictions of the EU (France, Germany), UK and China  ► Reflects the latest development about the derivative claims across jurisdictions  ► Characterized with the in-depth and original comparative examination provides valuable insights for academic researcher, students, policy makers and other stakeholders

Fields of interest
Private International Law, International & Foreign Law, Comparative Law; International Economic Law, Trade Law; Finance/Investment/Banking

Target groups
Research

Product category
Monograph

Due June 2013
2013. 300 p. Hardcover
► approx. € (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. € 99,95 | £90.00
ISBN 978-3-642-35529-5

International Handbook of Cooperative Law

The degree of development reached by cooperatives of different sectors throughout the world, which among others led to the UN declaring 2012 as the International Year of Cooperatives, needs to be accompanied by a similar development of corresponding legislation. To this end, a better knowledge of cooperative law from the comparative point of view, as has already been established for other types of enterprises, becomes of great importance. This book strives to fill this gap, and is divided into four parts. The first part offers an analytic and conceptual framework with which to understand, study and assess cooperative law from a transnational and comparative perspective. The second part includes several chapters dealing with attempts to harmonize cooperative laws.

Features
► Fills a gap in legal scholarship  ► Legal scholars from 30 countries and five continents jointly contribute to a unique book which presents and describes in the same context and in the same language their national cooperative laws, providing the reader with common concepts and terminology, and shows existing trends in cooperative law  ► Represents a fundamental instrument for training and research, especially comparative, in the area of cooperative law  ► No comparable or similar books exist worldwide

Fields of interest
International Economic Law, Trade Law; Private International Law, International & Foreign Law, Comparative Law; Commercial Law

Target groups
Research

Product category
Contributed volume

Due August 2013
2014. 600 p. Hardcover
► approx. € (D) 181,85 | € (A) 186,94 | sFr 226,50
► approx. € 169,95 | £153.00
ISBN 978-3-642-30128-5

Alternative Dispute Resolution in Administrative Proceedings

This book examines the role, the general framework and the empirical effectiveness of the main alternative dispute resolution tools (administrative appeals, mediation, and ombudsman) in administrative matters, within the broader context of the administrative justice system. The book uses approaches from law, public administration, public policy and political science, in order to assess the importance of different instruments for alternative dispute resolution, with an accent on administrative appeals.

Features
► First attempt to assess the effectiveness of administrative appeals and other forms of ADR in administrative law  ► First foray into the different alternatives to courts in administrative law in recent times  ► Interdisciplinary approach to classical legal institutions

Fields of interest
Dispute Resolution, Mediation, Arbitration; Administrative Law; Public Administration

Target groups
Research

Product category
Handbook

Due July 2013
2014. 400 p. Hardcover
► approx. € (D) 139,05 | € (A) 142,94 | sFr 173,00
► approx. € 129,95 | £117.00
ISBN 978-3-642-34945-4

Alternative Dispute Resolution

This book considers the role, the general framework and the empirical effectiveness of the main alternative dispute resolution tools (administrative appeals, mediation, and ombudsman) in administrative matters, within the broader context of the administrative justice system. The book uses approaches from law, public administration, public policy and political science, in order to assess the importance of different instruments for alternative dispute resolution, with an accent on administrative appeals.

Features
► First attempt to assess the effectiveness of administrative appeals and other forms of ADR in administrative law  ► First foray into the different alternatives to courts in administrative law in recent times  ► Interdisciplinary approach to classical legal institutions

Fields of interest
Dispute Resolution, Mediation, Arbitration; Administrative Law; Public Administration

Target groups
Research

Product category
Contributed volume

D. Cracogna, University of Buenos Aires, Argentina; A. Fici, University of Molise, Italy; H. Henry, University of Helsinki, Finland (Eds)

Q. Bu, Queen’s University Belfast, UK

Due June 2013
2013. 300 p. Hardcover
► approx. * € (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. € 99,95 | £90.00
ISBN 978-3-642-35529-5

Due August 2013
2014. 600 p. Hardcover
► approx. * € (D) 181,85 | € (A) 186,94 | sFr 226,50
► approx. € 169,95 | £153.00
ISBN 978-3-642-30128-5

Due July 2013
2014. 400 p. Hardcover
► approx. * € (D) 139,05 | € (A) 142,94 | sFr 173,00
► approx. € 129,95 | £117.00
ISBN 978-3-642-34945-4
Same-Sex Couples before National, Supranational and International Jurisdictions

More and more often same-sex couples go before national and international judges (and also quasi-jurisdictional bodies) protesting about the lack of recognition of their rights. The nature of their complaints clearly depends both on the legal order at stake and on the legal recognition of same-sex couples already accorded. Thus, the book pursues two main objectives. First, considering that jurisdictions are becoming progressively more relevant in protecting same-sex couples’ rights, the book aims to provide a detailed analysis of national, international and supranational case-law and offers readers some reflections on judicial activism in this context. Secondly, the book investigates the role of the judiciary when confronted with the protection of “new” fundamental rights, taking into account the dialogical and dialectical relationship with the legislative power, in terms of encouragement to enact new laws or to modify them.

Features

► First comprehensive study on national, international and supranational case law related to same-sex couples
► Written by both researchers and practitioners in the relevant fields
► Useful reference book for academics, attorneys, judges and policy makers

Fields of interest
Private International Law, International & Foreign Law, Comparative Law; Public International Law

Target groups
Research

Product category
Contributed volume

The Protection of Human Rights through International Law and International Criminal Law

This Work deals with chances and boundaries of the protection of Human Rights through International Law and International Criminal Law. It contains contributions by leading legal scholars and experts from all over the world and provides positive as well as skeptical attitudes.

Fields of interest
Human Rights; International Criminal Law; Public International Law

Target groups
Research

Product category
Contributed volume

International Space Law

Contents

FORWARD
PREFACE
INTRODUCTION
PART ONE: GENERAL PRINCIPLES OF SPACE LAW
1. Factual Background (a) Distinctive features of the space environment (b) Current and potential future uses of outer space (c) Participants in space activities
2. Law-Making Process Relating to Space Activities
3. Legal Status of Outer Space and Celestial Bodies (a) Applicability of international law and the UN Charter to outer space activities (b) Question of boundaries (incl. the geo-stationary orbit) (c) Common interest in exploration and use of outer space (d) Regime of freedom (e) Non-appropriation of outer space (g) Responsibility of the “appropriate” State for national space activities (h) Launching State and State liability (i) Legal regime of celestial bodies (incl. the exploitation of resources and the common heritage of mankind) (j) International co-operation and mutual assistance

Fields of interest
Law of the Sea, Air and Outer Space; Astronomy, Astrophysics and Cosmology; Private International Law, International & Foreign Law, Comparative Law

Target groups
Research

Product category
Monograph
B. Marten, University of Wellington, New Zealand

**Port State Jurisdiction and the Regulation of International Merchant Shipping**

This book examines the concept of port state jurisdiction in the context of international maritime law. In particular the book focuses on situations where port states have used their jurisdiction over visiting foreign-flagged vessels to apply unilateral domestic law, as compared with the internationally-agreed standards enforced by regional port state control organisations. To illustrate the legal issues involved three recent pieces of legislation are analysed in detail: the United States' Cruise Vessel Security and Safety Act 2010, the EU's liability insurance directive of 2009, and Australia's Fair Work Act 2009. Key issues include the legality of port states' attempts to regulate aspects of a vessel's structure or equipment, or even certain activities that may take place before a vessel's arrival in port.

**Features**
- First book to focus exclusively on port state jurisdiction as a standalone concept
- Detailed legal analysis drawing on a wide range of international sources
- Particular relevance to government maritime administrations

**Contents**

**Fields of interest**
Law of the Sea, Air and Outer Space; Private International Law, International & Foreign Law, Comparative Law

**Target groups**
Research

**Product category**
Monograph

Due August 2013

M. Stolleis, Max-Planck-Institut für europäische Rechtsgeschichte, Frankfurt am Main, Germany

**History of Social Law in Germany**

The sole available comprehensive history of social law and the model of social welfare in Germany. The book explains the origins since the medieval times, but concentrates on the 19th and 20th centuries, especially on the introduction of the social insurance 1881-1889, of the expansion of the system in the Weimar Republic, under the Nazi System and after World War II in the FRG and the GDR. The system of social welfare in Germany is one of the pillars of economic stability.

**Features**
- Sole available history of social law in Germany
- Explains a complicated system in a clear way
- The legal history is embedded in the political and social history

**Contents**

**Fields of interest**
Theories of Law, Philosophy of Law, Legal History; Social Policy; Labour Law/Social Law

**Target groups**
Research

**Product category**
Monograph

Due September 2013

P. Thielbörger, Ruhr-Universität Bochum, Germany

**The Right(s) to Water**

The Multi-Level Governance of a Unique Human Right

Politicians and diplomats have for many years proclaimed a human right to water as a solution to the global water crisis, most recently in the 2010 UN General Assembly Resolution "The human right to water and sanitation." To what extent, however, can a right to water legally and philosophically exist and what difference to international law and politics can it make? This question lies at the heart of this book. The book's answer is to argue that a right to water exists under international law but in a more differentiated and multi-level manner than previously recognised.

**Features**
- A complete monograph devoted to the right to water
- A comprehensive, consistent and in-depth analysis of the legal consequences and political impact of the development and establishment of the right to water through the lens of a single author
- An innovative theoretical frame within which to understand the debate on the human right to water, and the relationship of human rights with national and regional rights
- Examines all possible philosophical and conceptual objections to the right

**Contents**

**Fields of interest**
Human Rights; Water Policy/Water Governance; Water Management; International Environmental Law

**Target groups**
Research

**Product category**
Monograph

Due July 2013

- approx. € (D) 106,99 | € (A) 109,99 | sFr 133,50
- approx. £ 99,99 | £90.00
ISBN 978-3-319-00350-4

2013. Approx. 320 p. Hardcover
- approx. * € (D) 106,99 | € (A) 109,99 | sFr 133,50
- approx. ** € 99,99 | £90.00
ISBN 978-3-642-33907-3
F. Tronchetti, Harbin Institute of Technology School of Law, China

**Fundamentals of Space Law and Policy**

Presents and addresses key space law and policy issues for the benefit of wider informed audiences that wish to acquaint themselves with the fundamentals of the space law field. This brief analyzes in a concise manner the combined influence of space law and policy on international space activities.

**Feature**

- Addresses key space law and policy issues for the benefit of wider audiences that wish to acquaint themselves with the fundamentals of this field.

**Contents**

Chapter 1: Introduction - Space Law and Policy.
Chapter 2: The Historical Context.
Chapter 3: How "Rules" Are Made for Space Activities.
Chapter 4: The Participants and Actors in Space Law and Policy.
Chapter 6: Distinction vs. Cooperation - Civic, Commercial and Military Uses of Outer Space.
Chapter 7: International Space Law.
Chapter 8: Space Regulations, Standard, and Codes.
Chapter 9: Space Policy, State Practice, and Emergent Normative Regimes.
Chapter 11: Dispute Settlement and Arbitration.
Chapter 12: Conclusions - Top Ten Things to Know About the Latest in Space-Related Enterprises.

**Fields of Interest**

Law of the Sea, Air and Outer Space; Aerospace Technology and Astronautics; Extraterrestrial Physics, Space Sciences.

**Target groups**

Research.

**Product category**

Brief.

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L. Yamamoto, Kanagawa University, Japan; M. Esteban, University of Tokyo, Japan

**Atoll Island States and International Law**

**Climate Change Displacement and Sovereignty**

Atoll Island States exist on top of what is perceived to be one of the planet's most vulnerable ecosystems: atolls. It has been predicted that an increase in the pace of sea level rise brought about by increasing greenhouse gas concentrations in the atmosphere will cause them to disappear, forcing their inhabitants to migrate.

**Features**

- Interdisciplinary legal and engineering perspective.
- Scenario-based approach on the possible future situation of atolls, and its implications on sovereignty and the exploitation of maritime areas.
- Over 50 figures and maps describing the geomorphological problems of atolls and corals.
- Detailed analysis of the implications to human rights.

**Contents**

Chapter 1: Geography, Economy and Environment of Low-lying Island States.
Chapter 2: Climate Change and its Effects on Low-lying Island States.
Chapter 3: Climate Change Negotiations and AOSIS.
Chapter 4: Low-lying Island Future Scenarios, Adaptation Strategies and their Implication under UNCLOS.
Chapter 5: Alternative Solutions to Preserve the Sovereignty of Atoll Island States.
Chapter 6: Climate Change Displacement in Atoll Island States.

**Fields of Interest**

Public International Law; Climate Change Management and Policy; Oceanography.

**Target groups**

Research.

**Product category**

Monograph.

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J. Zhang, China University of Political Science and Law, Beijing, China

**The Tradition and Modern Transition of Chinese Law**

The book was first published in 1997, and was awarded the first prize of scientific research by the Ministry of Justice during the ninety Five-Year Plan of China. In 2005, it was adopted the text book for the postgraduates of law majors. In 2009, it was awarded the second prize of the best books on law in China. The book discusses from different aspects the long legal tradition in China, and it not only helps us to have a further understanding of Chinese legal system but also combines theories and practice and illustrate the modern legal transition which probes the history of Chinese legal system.

**Features**

- System described the characteristics of ancient Chinese legal tradition.
- Thoughtful in-depth discussion of the reasons for the transformation of modern Chinese law and the process.
- Reprint many times in China, received good reputation.

**Contents**

I. The Tradition of Chinese Law: To Introduce Li into Law and to Integrate Li with Law.
II. To Take Humans as foremost, and to Promote Morality and Enforce Penalty Prudently.
III. To be Duty-Oriented.
IV. Advocating Impartiality, Emphasizing Criminal Categories of Rights and To be Duty-Oriented.
V. The Law Deriving from Monarch , the Monarchy Power Overweighing Law.
VI. To Take Clan as foremost, to Rule by Ethical Traditions.

**Field of Interest**

Theories of Law, Philosophy of Law, Legal History.

**Target groups**

Graduate.

**Product category**

Monograph.

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Due June 2013

2013. XIV, 96 p. 8 illus., 7 in color. (SpringerBriefs in Space Development) Softcover

- € (D) 53,45 | € (A) 54,95 | sFr 66,50
- € 49,95 | £44.99
- ISBN 978-1-4614-7869-0

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Due June 2013

2013. Approx. 300 p. 48 illus., 8 in color. Hardcover

- € (D) 106,99 | € (A) 109,99 | sFr 133,50
- € 99,99 | £90.00
- ISBN 978-3-642-38185-0

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Due June 2013

2013. Approx. 580 p. Hardcover

- approx. *€ (D) 74,85 | € (A) 76,95 | sFr 100,50
- approx. € 69,95 | £62.99
- ISBN 978-3-642-23265-7
M. Alley, Penn State University, University Park, PA, USA

**The Craft of Scientific Writing**

The Craft of Scientific Writing is designed to help scientists and engineers—both professionals already active in the disciplines as well as students preparing to enter the professions—write about their work clearly and effectively.

**Features**
- The book’s advice is well-tested, used by research engineers and scientists at many national labs and universities for over ten years
- The text uses scores of interesting examples to teach the principles of scientific writing
- The book is fun to read, conversational and focuses on the stylistic traits that distinguish the best scientific writing
- The updated edition will continue to take more stylistic chances, using humor and stories to make an interesting read that students and professionals alike can devour in two or three sittings
- This new edition explores more deeply how to design illustrations so that they are more persuasive

**Contents**
Analyzing the audience, purpose, and occasion.- Structuring documents.- Organization.- Emphasis.- Depth.- Crafting the language.- Making the writing clear and precise.- Making connections between sentences.- Maintaining energy.- Anchoring the language in the familiar.- Illustrating documents.- Making illustrations informative.- Making the illustrations persuasive.- Actually sitting down to write.- Thinking.- Drafting.- Revising.- Finishing.

**Fields of interest**
Popular Science, general; Physics, general

**Target groups**
Research

**Product category**
Popular science

Due July 2013

► approx. *€ (D) 32,05 | € (A) 32,95 | sFr 45,00
► approx. € 29,95 | £21.99

J. Waxman

**MacLeod’s Introduction to Medicine**

The Sweetest Pill is a collection of humorous stories that gives the reader an insight into the humorous side of a clinician’s life. It spans a period from when medicine was grand to its current state. There is a rich source of humor in medicine, and the book aims to share some of this.

**Features**
- The author is both an expert in oncology and a gifted storyteller
- Written in an informal, enjoyable style
- A collection of vignettes from the author’s decades of clinical experience

**Contents**

**Field of interest**
Popular Science in Medicine and Health

**Target groups**
Popular/general

**Product category**
Popular science

Due August 2013

2014. X, 270 p. Softcover
► approx. *€ (D) 21,35 | € (A) 21,94 | sFr 27,00
► approx. € 19,95 | £17.99
APOS Theory

A Framework for Research and Curriculum Development in Mathematics Education

**Contents**


**Fields of interest**

Mathematics Education; Learning and Instruction

**Target groups**

Research

**Product category**

Monograph

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**Early Mathematics Learning**

Selected Papers of the POEM 2012 Conference

**Contents**


**Fields of interest**

Teaching and Teacher Education; Mathematics Education; International and Comparative Education

**Target groups**

Research

**Product category**

Contributed volume
New Series
Mathematics Education in the Digital Era
Eds: D. Martinovic, V. Freiman

The Mathematics Education in the Digital Era (MEDE) series explores ways in which digital technologies support mathematics teaching and the learning of Net Gener"e", paying attention also to educational debates. Each volume will address one specific issue in mathematics education (e.g., visual mathematics and cyber-learning; inclusive and community based e-learning; teaching in the digital era), in an attempt to explore fundamental assumptions about teaching and learning mathematics in the presence of digital technologies. This series aims to attract diverse readers including: researchers in mathematics education, mathematicians, cognitive scientists and computer scientists, graduate students in education, policy-makers, educational software developers, administrators and teachers-practitioners. Among other things, the high quality scientific work published in this series will address questions related to the suitability of pedagogies and digital technologies for new generations of mathematics students.

The series will also provide readers with deeper insight into how innovative teaching and assessment practices emerge, make their way into the classroom, and shape the learning of young students who have grown up with technology. The series will also look at how to bridge theory and practice to enhance the different learning styles of today's students and turn their motivation and natural interest in technology into an additional support for meaningful mathematics learning. The series provides the opportunity for the dissemination of findings that address the effects of digital technologies on learning outcomes and their integration into effective teaching practices; the potential of mathematics educational software for the transformation of instruction and curricula; and the power of the e-learning of mathematics, as inclusive and community-based, yet personalized and hands-on.

Due June 2013

2013. Approx. 200 p. 50 illus. Hardcover
► approx. * € (D) 106,99 | € (A) 109,99 | sFr 133,50
► approx. € 99,99 | £90.00
ISBN 978-94-007-6856-7

Due September 2013

2013. Approx. 350 p. 80 illus. (Mathematics Education in the Digital Era, Volume 2) Hardcover
► approx. * € (D) 139,05 | € (A) 142,94 | sFr 183,00
► approx. € 129,95 | £117.00
ISBN 978-94-007-4637-4
Wisdom has been sought since antiquity as an intellectual virtue associated with living a good life, but only recently has scientific evidence been gathered about it. Wisdom develops over the lifespan, and many suggestions exist about how it can be taught. This SpringerBrief in Education will examine the history and scientific evidence surrounding the development of wisdom, and about how it can be taught or fostered. We also situate our essay in the context of existing programs to promote character education, claiming that character education that ignores teaching for wisdom is necessarily incomplete.

Fields of interest
Educational Psychology; Educational Philosophy

Target groups
Research

Product category
Brief

Conceptual Profile: A Theory of Teaching and Learning Scientific Concepts

The idea of a conceptual profile - that people can exhibit different ways of seeing and representing the world, which are used in different contexts - was proposed by Mortimer in the 1990s, as an alternative to counterbalance a strong tendency that theories and models of conceptual change exhibited at that time. The idea of conceptual profile is an attempt to frame the problem of generating new meanings in science teaching considering the interplay between modes of thinking and ways of speaking. The basic assumption is that different modes of thinking that characterize the heterogeneity of verbal thinking are interwoven with different ways of speaking. The idea of conceptual profile recognizes the coexistence, in the individual, of two or more meanings for the same word or concept, which are accessed in the appropriate context. This book is about a research program on how people learn scientific concepts and how these concepts can be taught in terms of dialoguing this heterogeneity.

Features
- Reports the construction of a research program that is responsive to all the main developments in the field of science education
- Defines the fundamental tasks for founding the conceptual profile research program
- Positions the learner of science in a place coherent with his/her pluralist condition of belonging to different communities

Fields of interest
Science Education; Teaching and Teacher Education; Learning and Instruction

Target groups
Research

Product category
Contributed volume

Teaching and Learning in a Community of Thinking

This book explores a new pedagogical model called The Third Model, which places the encounter between the child and the curriculum at the center of educational theory and practice. The Third Model is implemented in an alternative classroom called Community of Thinking. Teaching and learning in a Community of Thinking is based on three “stations”: the fertile question; research; and concluding performance. The essence of a Community of Thinking is the formation of a group of students and teachers who grapple with a troubling question to which they do not know the answer at the outset – and sometimes even at the end of their investigation. The Community of Thinking framework is supported by a whole school model – the Intel-Lect School. The model, or parts of it, is currently implemented in schools in Israel, England, Australia, and New Zealand.

Features
- The first to bridge child-centered and curriculum-based models of schooling
- Sums up in an original way the leading educational insights of the last three decades
- Provides a new horizon for education

Contents

Fields of interest
Learning and Instruction; Educational Philosophy

Target groups
Research

Product category
Monograph
The New Development of Technology Enhanced Learning: Concept, Research and Best Practices

The book will address the main issues concerned with the new development of learning processes, innovative pedagogies changes, effects of new technologies on education, future learning content, which aims to gather the newest concepts, research and best practices on the frontiers of technology enhanced learning from the aspects of learning, pedagogies, and technologies in learning in order to draw a picture of technology enhanced learning in the near future. Some issues like “e-learning – m-learning – u-learning – innovative approaches”, “the Framework and Method for Understanding the New Generation Students”, “Context-aware Mobile Role Playing Game for Learning.” “Pedagogical issues in content creation and use: IT literacy through Spoken Tutorials”, “Supporting collaborative knowledge construction and discourse in the classroom”, “Digital Systems for Hierarchical Open Access to Education”, “Using Annotated Patient Records to Teach Clinical Reasoning to Under-graduate Students of Medicine.” “Utilizing Cognitive Skills Ontology for Designing Personalized Learning Environments.” “Using Interactive Mobile Technologies to Develop Operating Room Technologies Competency” will be discussed in each chapter.

Features
► Presenting the most frontier of educational technology ongoing around the world ► Showing the effective research methods on the newly emerging phenomenon in education ► Guiding researches and practices in future educational technology

Field of interest
Educational Technology

Target groups
Professional/practitioner

Product category
Contributed volume

Digital Knowledge Maps in Higher Education

D. Ifenthaler, R. Hanewald (Eds)

Digital knowledge maps are ‘at a glance’ visual representations that enable enriching, imaginative and transformative ways for teaching and learning, with the potential to enhance positive educational outcomes. The use of such maps has generated much attention and interest among tertiary education practitioners and researchers over the last few years as higher education institutions around the world begin to invest heavily into new technologies designed to provide online spaces within which to build resources and conduct activities.

Features
► Provides the only cross-disciplinary model for creating digital knowledge maps in higher education ► Includes concrete examples of technology enhanced curriculum design prototypes utilizing digital knowledge maps ► Facilitates transformative teaching and learning through the use of digital knowledge maps

Contents

Fields of interest
Educational Technology; Learning and Instruction; Computers and Education

Target groups
Research

Product category
Contributed volume

Literacy and Language in East Asia

M. Kell, Charles Darwin University, Darwin, NT, Australia; P. Kell, Charles Darwin University, Darwin, NT, Australia

Shifting Meanings, Values and Approaches

This book critically explores why some Asian nations are on top of the world in students’ achievement tests in reading and literacy, yet governments and industry in these nations are anxious about a crisis in education.

Features
► A critical analysis of the high performing East Asian nations and the “contests” and “league tables” derived from international literacy and numeracy achievement tests ► Argues for education systems to embrace reforms that promote capabilities which prepare students for life and work in modern and globalised communities ► A unique approach that departs from traditional country study approaches and seeks to identify how each nation has been influenced by cross national policy borrowing

Contents

Fields of interest
Literacy; International and Comparative Education; Educational Policy and Politics

Target groups
Research

Product category
Monograph
International Education Hubs

Student, Talent, Knowledge-Innovation Models

Contents


Fields of interest

International and Comparative Education; Higher Education; Educational Policy and Politics

Target groups

Research

Product category

Contributed volume

Effective Group Work in Primary School Classrooms

The SPRinG Approach

This book offers a challenge to traditional approaches to classroom teaching and pedagogy.

Features

➤ Offers a major contribution to understanding and evidence on collaborative group work that challenges traditional approaches to teaching and pedagogy ➤ Develops a new and ambitious social pedagogic approach to classroom learning and group work ➤ Makes a substantial contribution to our knowledge of teaching and learning, particularly in the context of seeking more active forms of learning using more diverse forms of pedagogy

Contents


Fields of interest

Learning and Instruction; Child and School Psychology; Childhood Education

Target groups

Research

Product category

Monograph

Due July 2013


➤ € (D) 106,99 | € (A) 109,99 | sFr 133,50
➤ € 99,99 | £90.00

ISBN 978-94-007-6990-8

Due June 2013

2013. Approx. 500 p. 50 Illus. (Computer-Supported Collaborative Learning Series, Tentative volume 10000) Hardcover

➤ approx. * € (D) 149,75 | € (A) 153,94 | sFr 186,50
➤ approx. * € 139,95 | £126.50

ISBN 978-1-4614-3304-0

J. Knight, University of Toronto, ON, Canada (Ed)

P. Kutnick, University of Hong Kong, Hong Kong; P. Blatchford, Institute of Education, London, UK

J. Larusson, Brandeis University, Waltham, MA, USA; B. White, University of California, Berkeley, CA, USA (Eds)

Handbook of Learning Analytics

Methods, Tools and Approaches

Learning Analytics (LA) refers to the collection, analysis, and application of data accumulated throughout a semester to assess the behavior of educational communities. Through the use of statistical techniques and predictive modeling, its ultimate goal is to optimize both student learning and faculty performance, to refine pedagogical strategies, to streamline institutional costs, to determine students’ engagement with course material, to highlight potentially struggling students and alter pedagogy accordingly, and to allow instructors to accurately judge their own efficacy.

Features

➤ Consolidates current Learning Analytics research into one volume ➤ Includes numerous examples of Learning Analytics implementations ➤ Provides strategies for integrating Learning Analytics at the classroom, departmental, and institutional level

Contents


Fields of interest

Educational Technology; Computers and Education; Assessment, Testing and Evaluation

Target groups

Research

Product category

Handbook
Contents
1 Delving into a complex system. 2 Knowledge. 2.1 Epistemology. 2.2 Types of knowledge – Bloom’s revised taxonomy. 2.3 Knowledge in physics. 3 Neuroscience. 3.1 Definitions. 3.2 Implicit memory. 3.3 Explicit memory. 3.3.1 Sensory input and attention. 3.3.2 Encoding. 3.3.3 Memory consolidation. 3.3.4 Memory storage. 3.3.5 Recall 3.4 Neuroscientific teaching. 4 Cognitive psychology. 4.1 Attention. 4.2 Working memory. 4.2.1 Cognitive load theory. 4.3 Long-term memory. 4.3.1 Concepts. 4.3.2 Schema theory. 4.3.3 Sweller’s cognitive architecture. 5 Constructivism. 5.1 The transmission myth. 5.2 Different perspectives within constructivism. 5.3 Personal constructivism. 5.3.1 Piagetian constructivism. 5.3.2 Radical constructivism. 5.4 Social constructivism. 5.4.1 Social constructivism in science. 5.4.2 Sociocultural constructivism. 5.4.3 Postmodern constructivism. 5.5 Compare and align: Do they really disagree? 6 Theory into practice. 6.1 Direct instruction vs. discovery learning – the great debate. 6.2 The individual. 6.2.1 Novices vs. experts. 6.2.2 The journey from novice to expert. 6.2.3 The Model of Domain Learning. 6.2.4 Instructional design. 6.3 The social. 7 A reflection on the fields of Physics and Education.

Fields of interest
Learning and Instruction; Educational Psychology; Science Education

Target groups
Research

Product category
Brief

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C. Reid, University of Western Sydney, NSW, Australia; J. Collins, University of Technology Sydney, NSW, Australia; M. Singh, University of Western Sydney, NSW, Australia

Global Teachers, Australian Perspectives

Goodbye Mr Chips, Hello Ms Banerjee

This is the first book on global teachers and the increasingly important phenomenon of ‘brain circulation’ in the global teaching profession. A teaching qualification is a passport to an international professional career: the global teacher is found in more and more classrooms around the world today. It is a two-way movement.

Contents
Introduction. - Chapter 1) Introduction. - Chapter 2) Globalizing Teachers: policy and theoretical dimensions. - Chapter 3) Immigrant Teachers in Australia: Quantitative Insights. - Chapter 4) Global Teachers’ Pathways to Australia. - Chapter 5) The Capital Reconversion of Global Teachers in Australia. - Chapter 6) Internationally Educated Teachers’ Critiques of Tests of their Employability. - Chapter 7) Global Teachers Living and Teaching in Australia. - Chapter 8) Goodbye ‘Mr Chips’: the global mobility of Australian-educated teachers. - Chapter 9) Revisiting Ms Banerjee and Mr Chips.

Fields of interest
Sociology of Education; Migration; Educational Policy and Politics

Target groups
Research

Product category
Monograph

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M. Miwa, S. Miyahara (Eds)

Quality Assurance in LIS Education

An International and Comparative Study

Features
- Compares and examines LIS education systems in Asia, North America, Latin America, Europe and Africa
- Written by leading researchers and scholars of LIS education in each country represented
- Focuses on the quality assurance of LIS professional education at the university level

Contents

Fields of interest
Educational Technology; Information Systems and Communication Service; International and Comparative Education

Target groups
Research

Product category
Contributed volume
New Series
Cultural Studies and Transdisciplinarity in Education

Series editors: V. Carrington, A. KOH

We live in a time where the complex nature and implications of social, political and cultural issues for individuals and groups is increasingly clear. While this may lead some to focus on smaller and smaller units of analysis in the hope that by understanding the parts we may begin to understand the whole, this book series is premised on the strongly held view that researchers, practitioners and policy makers interested in education will increasingly need to integrate knowledge gained from a range of disciplinary and theoretical sources in order to frame and address these complex issues. A transdisciplinary approach takes account the uncertainty of knowledge and the complexity of social and cultural issues relevant to education. It acknowledges that there will be unresolved tensions and that these should be seen as productive. With this in mind, the reflexive and critical nature of cultural studies and its focus on the processes and currents that construct our daily lives has made it a central point of reference for many working in the contemporary social sciences and education.

This book series seeks to foreground transdisciplinary and cultural studies influenced scholarship with a view to building conversations, ideas and sustainable networks of knowledge that may prove crucial to the ongoing development and relevance of the field of educational studies. The series will place a premium on manuscripts that critically engage with key educational issues from a position that draws from cultural studies or demonstrates a transdisciplinary approach. This can take the form of reports of new empirical research, critical discussions and/or theoretical pieces. In addition, the series editors are particularly keen to accept work that takes as its focus issues that draw from the wider Asia Pacific region but that may have relevance more globally, however all proposals that reflect the diversity of contemporary educational research will be considered.
Teaching and Research in Contemporary Higher Education

Systems, Activities and Rewards

Contents

Fields of interest
International and Comparative Education; Higher Education; Sociology of Education

Target groups
Research

Product category
Contributed volume

Due July 2013


- € (D) 139,09 | € (A) 142,99 | sFr 173,50
- € 129,99 | £117.00
ISBN 978-94-007-6829-1
S. R. Waldstein, University of Maryland School of Medicine, College Park, MD, USA (Ed)

**Behavioral and Social Science in Medicine**

**Principles and Practice of Biopsychosocial Care**

Behavioral and Social Science in Medicine: Principles and Practice of Biopsychosocial Care provides state of the art reviews of the critical topic areas in undergraduate medical education identified in the 2004 Institute of Medicine (IOM) report, “Improving Medical Education: Enhancing the Behavioral and Social Sciences Content of Medical School Curricula.”

**Contents**

2. Psychological Factors.
5. Developmental Life Course Aspects and Family Dynamics of Illness.
7. Applications to Specific Medical Conditions.
8. Impact of Illness and Treatment on the Patient.
9. Physician Role and Behavior.

**Fields of interest**

Medical Education; Primary Care Medicine; Health Psychology

**Features**

- Only comprehensive textbook on behavioral and social science in medicine
- Outlines the skills necessary to integrate complex interacting health-related variables across multiple frames of reference
- Addresses what physicians need to know and do to provide appropriate care to patients with differing social, cultural, and economic backgrounds

**Product category**

Graduate/Advanced undergraduate textbook

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L. Wang, Zhejiang University, Hangzhou, P.R. China

**A New Cultural Revolution?**

The Road to Privatization of Higher Education in China

**Contents**

Chapter 1: Introduction - This chapter explains the aim and scope of the book.
Chapter 2: Higher education in China: local, national and global context - This chapter provides the background for privatization of HE in China.
Chapter 3: Privatization of higher education: theoretical underpinnings - This chapter conceptualizes privatization of HE in the Chinese context.
Chapter 4: Implementation of privatization: scale and scope - This chapter aims to answer how privatization is implemented by looking at the development of the private HE sector, and the privatization strategies adopted in publish HEIs.
Chapter 5: Financing higher education: changing rationales for funding - This chapter examines the financial aspects of HE in terms of revenue and expenditure.
Chapter 6: Control and regulation of higher education: innovated university governance - This chapter looks into the control of HE from three aspects, i.e. educational regulation, institutional autonomy and the mechanism of HE control.
Chapter 7: Rethinking privatization of higher education in China: lessons and impacts - This chapter concludes the book by evaluating the privatization of HE in China in terms of effects and problems.

**Features**

- Provide useful experience in general education curriculum innovations for Chinese educators
- Help readers better understand the innovation process in Peking University
- Help identify and illuminate many salient issues that are essential to the success of general education innovations in Chinese universities

**Product category**

Monograph

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W. Wang, The University of Hong Kong, PR China

**The Yuanpei Program in Peking University**

A Case Study of Curriculum Innovation

The Yuanpei program is an institution wide curriculum innovation, modeling on the core curriculum in Harvard which is committed to carrying out general education. This research investigated the major conflicts that arose in the process of initiation and implementation of the Yuanpei program, how these conflicts evolved during the process, and what were the sources of these conflicts. The conflict model, primarily derived from conflict theory, was adopted to interpret and analyze the process of curriculum innovation in this context. The study employed a qualitative case study approach. Data were collected primarily through interviews, observations and document analysis.

**Fields of interest**

Literacy; Migration

**Features**

- Help readers better understand the innovation process in Peking University
- Helped identify and illuminate many salient issues that are essential to the success of general education innovations in Chinese universities

**Product category**

Monograph
C. Wyatt-Smith, V. Klenowski, P. Colbert (Eds)

Assessment for Learning
Improvement and Accountability
The Enabling Power

Contents

Fields of interest
Assessment, Testing and Evaluation; Learning and Instruction

Target groups
Research

Product category
Contributed volume

Due September 2013

➤ approx. *€ (D) 106,95 | € (A) 109,95 | sFr 133,50
➤ approx. € 99,95 | £90.00
Linking Trade and Security
Evolving Institutions and Strategies in Asia, Europe, and the United States

The connections between trade and security are hardly new. Analysts and practitioners have clearly recognized this interrelationship since the mercantilist arguments of the 16th and 17th centuries.

**Features**
- Examines the influence of security factors in driving trade policy measures
- Investigates the effects of security on trade
- Takes the additional step of illuminating the effects of trade arrangements themselves on the security environment
  - Includes "non-traditional" or "human" security factors in addition to traditional military security concerns

**Contents**
1) The Trade-Security Nexus in the Asia-Pacific
2) Linking Traditional and Human Security to Trade: The U.S. Approach
3) Linking Security, Human Rights and Sustainable Development to Trade: The EU Strategy in Bilateral Free Trade Agreement Negotiations
4) Linking Human Security to Trade Liberalization in ASEAN: New Issues, New Actors
5) Same Bed, Different Security to Trade Liberalization in ASEAN: New Agreements and Human Security
6) FTA Dreams: The 'ASEAN Plus X' and Its Implications
7) APEC: Strategic Constraint: Issues and Options
8) Global Trade Linkages: Security, and Traditional Security in East Asia
9) The Shanghai Cooperation Organization: The Environment, Labor, and Human Rights
10) Bilateral Trade Agreements and Human Security

**Fields of interest**
International Relations; International Economics; Political Economy

**Target groups**
Research

**Product category**
Contributed volume

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Germany’s New Security Demographics
Military Recruitment in the Era of Population Aging

This book analyzes the impact of demographic change on military recruitment in Germany.

**Features**
- Thorough overview and discussion of the interaction between demographic trends and international security
- New insights into a topic thus far inadequately addressed in international affairs, namely the impact of demographic change on strategic calculations
- First systematic review of the demography-induced recruitment challenges of the German military, including a discussion of the quantitative and qualitative dimension
- Germany as an instructive case study given its redefined international role, its neglect of demographic research for several decades, its special civil-military relationship, the consequent sensitivity towards analyses at the security-demography nexus, and the comparatively high magnitude and rapidity of demographic change

**Contents**
1) Introduction
2) The Military Environment
3) A Demographic View on Security
4) The Selectivity of Manpower Arrangements
5) The Military Recruitment Target Population
6) Determinants of Military Manpower Supply
7) The Military Recruitment Demand and Supply
8) Global Trade Linkages: Security, Environment, Labor, and Human Rights
9) The Shanghai Cooperation Organization: The Environment, Labor, and Human Rights
10) Bilateral Trade Agreements and Human Security

**Fields of interest**
Demography; International Relations; Aging

**Target groups**
Research

**Product category**
Monograph

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Family Care and Social Capital: Transitions in Informal Care

Becoming a caregiver is increasingly an inevitable experience for many people and, therefore, a likely life transition. Drawing on research and personal experiences of working with family caregivers, this book examines a range of family caregiving situations from across the life course. It seeks to capture the dynamics of caregiving in a number of common situations: caregiving during infancy, for adults who acquire a disability through accidents or illness, for older people with age-related issues, and caregiving by children and adolescent carers and grandparent carers.

**Features**
- Caregiving situations at different life course stages
- Focus on key moments of vulnerability faced by family and informal caregivers
- Focus on facilitating the development of social capital

**Contents**
Chapter 1: Family Care and Social Capital
Chapter 2: Informal Care in Social Context: An Expression of Social Relationships
Chapter 3: The Dynamic Experience of Caregiving
Chapter 4: Informal Caring and Early Childhood
Chapter 5: Caring for Family Members with a Lifelong Disability
Chapter 6: Caring for Adults with Acquired Disabilities
Chapter 7: Caring for Older People
Chapter 8: Caring across the Generations
Chapter 9: In Support of Informal Carers

**Fields of interest**
Sociology, general; Health Care Management; Nursing

**Target groups**
Research

**Product category**
Monograph

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É. Brian, ENS, Paris, France (Ed)

**Revue de synthèse**

Métamorphoses des fondements

Les articles rassemblés dans ce numéro mettent en évidence la mobilité et la dynamique des formes de légitimation des principes qui fondent savoirs ou compétences. Les théories de la démonstration de l’Antiquité tardive, la philosophie de la physique vers 1900, les débats sur la légitimité de la monarchie espagnole à la fin du XVIIe siècle, ou encore les différentes formes de religion consacrées à la vie civile sont autant de lieux où se dessine une métamorphose des fondements.

**Features**

- L’enquête porte sur les formes de justification des principes qui fondent opinions, croyances, connaissances ou encore formes d’autorité politique
- Cette question est abordée à propos de méthodes de mathématiciens antiques, d’une controverse de philosophie de la physique vers 1900, de débats sur la légitimité de la monarchie espagnole à l’époque moderne, des formes de religions consacrées à la vie civile parmi les historiens
- Le volume met en évidence, dans chaque cas, la mobilité et la dynamique des formes de légitimation des principes qui fondent ces savoirs et ces compétences

**Fields of interest**

Social Sciences, general

**Target groups**

Research

**Product category**

Contributed volume

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**Encyclopedia of Migration**

Editor-in-chief: F. D. Bean, S. K. Brown, University of California, Irvine, CA, USA

**Features**

- Encompasses all aspects of migration in both modern and recent historic times, as well as major migrations from early periods
- Covers multiple disciplinary perspectives and all parts of the world, including many specific countries

**Contents**


**Fields of interest**

Migration; Population Economics; Sociology, general

**Target groups**

Professional/practitioner

**Product category**

Encyclopaedia

Due May 2014

Print

2014. 4000 p.

- *approx. € (D) 2140.00 | € (A) 2200.00 |
- sFr 2867.50
- *approx. € 2000.00 | £1800.00

ISBN 978-94-007-2785-4

**eReference**

2013.

- *approx. € (D) 2380.00 | € (A) 2400.00 |
- sFr 3013.00
- *approx. € 2000.00 | £1800.00

ISBN 978-94-007-2786-1

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A paraître June 2013

Only available in print

2013. Ca. 150 p. (Revue de Synthèse) Broché

- *approx. € (D) 2485 | € (A) 2555 | sFr 31.00
- *approx. € 23.22 | £19.99


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**Moving Toward a Just Peace**

J. M. Fritz, University of Cincinnati, OH, U.S.A. (Ed)

**The Mediation Continuum**

**Contents**


**Fields of interest**

Social Sciences, general; Demography; Sociology, general

**Target groups**

Research

**Product category**

Contributed volume

Due October 2013

Print + eReference

2014. 250 p. (Clinical Sociology: Research and Practice) Hardcover

- *approx. € (D) 106.99 | € (A) 109.99 | sFr 133.50
- *approx. € 99.99 | £90.00

ISBN 978-94-007-2884-4

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239
Freedom, Security, and Justice in the European Union

Internal and External Dimensions of Increased Cooperation after the Lisbon Treaty

Features
- Focuses on the institutional relations of policymaking in AFSJ, both within member states and between member states
- Examines the peer review process for conduct evaluations by member states, in collaboration with the European Commission
- Investigates the tension between security and fundamental rights, data retention, the policing of external borders and the interface of ASFJ with the Common Foreign and Security Policy

Contents
1. Freedom, Security, and Justice: Intern- and Extern- alization in the EU and the Member States after the Lisbon Treaty
4. Redefining the relationship between security, data retention and human rights
5. The Externalization of undocumented migration controls as a threat for the EU's constitutional commitment to fundamental human rights
6. Prüm Treaty and Prüm decision
7. The Interface between the Area of Freedom, Security and Justice and the Common Foreign and Security Policy of the EU: Legal Constraints to Political Objectives

Fields of interest
Comparative Politics; European Integration; International Relations

Target groups
Research

Product category
Contributed volume

Reforming Juvenile Justice

Reforming Juvenile Justice deals with fundamental, and at times, controversial issues in juvenile justice that are universal and go beyond the individual juvenile justice systems of various countries. For example: What age groups can be transferred to the adult criminal justice system and for what crimes? What can be said about the mental and moral development of juveniles in that age group? Do we know anything about the effects in terms of recidivism and reconviction by juveniles who have been penalized in the adult system?

Contents

Fields of interest
Criminology & Criminal Justice; Social Sciences, general

Target groups
Professional/practitioner

Product category
Monograph

Due July 2013

+ € (D) 106,99 | € (A) 109,99 | sFr 133,50
+ € 99,99 | £90.00

Translational Criminology and Counterterrorism

Global Threats and Local Responses

This brief focuses on translational criminology practices as they relate to counter-terrorism and homeland security. The work provides a detailed and practical examination of how global threats (such as terrorism, trafficking, and victimization) are managed through local response teams. It covers emerging strategies from new data collection procedures, inter-agency cooperation, and new analytical techniques for problem solving and decision-making. The authors examine these issues while considering how law enforcement responds to security threats including terrorism but also extending to cross-national organized crime, trafficking, drugs, and other topics.

Contents

Fields of interest
Criminology & Criminal Justice; International Relations; Private International Law, International & Foreign Law, Comparative Law

Target groups
Research

Product category
Brief

Due September 2013

2009. XIV, 276 p. Softcover
+ approx. * € (D) 48,10 | € (A) 49,45 | sFr 64,00
+ approx. * € 44,95 | £39.99
ISBN 978-1-4419-8130-1

Due June 2013

2013. Approx. 100 p. 10 illus. in color. (SpringerBriefs in Criminology / SpringerBriefs in Translational Criminology) Softcover
+ approx. * € (D) 42,75 | € (A) 43,95 | sFr 49,50
+ approx. * € 39,95 | £33.99
ISBN 978-1-4614-5555-4
Due June 2013

2013. Approx. 320 p. 16 illus. Softcover
► approx. *€ (D) 53,45 | € (A) 54,95 | sFr 66,50
► approx. € 49,95 | £44.99
ISBN 978-3-658-01056-0

Due August 2013

2013. Approx. 350 p. 2 illus. Hardcover
► approx. *€ (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. € 99,95 | £90.00
ISBN 978-3-642-37480-7

Due September 2013

2014. X, 140 p. 25 illus. Hardcover
► approx. *€ (D) 106,95 | € (A) 109,95 | sFr 143,50
► approx. € 99,95 | £90.00
ISBN 978-94-007-6978-6

News 6/2013

U. Krause

Development-Oriented Refugee Assistance

Gender-Sensitive, Sustainable and Efficient - a Case Study in Uganda

Current trends clearly reveal that the majority of refugee movements take place in the less developed global South while the global North increases asylum restrictions. A suitable approach that takes these trends into account is development-oriented refugee assistance. It aims at bridging the gap between emergency aid and development as well as sharing the burdens between the global South and North. Guided by the research question “How can a development-oriented approach to refugee assistance be delivered in a way that is sustainable, efficient and gender-sensitive?” the epistemological interest of Ulrike Krause’s thesis is distinguished in three research aims: 1. analyses of the concepts of refugee aid and development assistance as well as the previous operational approaches of the migration-development nexus; 2. elaboration of features of development-oriented refugee assistance; 3. studying the case of Rhino Camp in Uganda. Hence, the author analyzes not only previous approaches of the development orientation in refugee assistance and protection; moreover, she elaborates fundamental features necessary for its successful implementation. Research is rounded up by studying a case of refugeeism in Uganda.

Feature
► Publication in the field of Social Sciences

Contents

Refugee Protection and Assistance.- Development.- Gender.- Development-Oriented Refugee Assistance.- Case Study of Rhino Camp.

Field of interest
Social Sciences, general

Target groups
Research

Product category
Monograph

J.-F. Kremer, Bonn University, Germany; B. Müller, Essen, Germany (Eds)

Cyberspace and International Relations

Theory, Prospects and Challenges

Contents


Fields of interest
International Relations; Computers and Society; Systems and Data Security

Target groups
Research

Product category
Contributed volume

M. McEniry, University of Wisconsin, Madison, WI, USA

Early Life Conditions and Rapid Demographic Changes in the Developing World

Consequences for Older Adult Health

This book examines the long term consequences of improvements in life expectancy in the mid 20th century which are partly responsible for the growth of the elderly population in the developing world. Rapid demographic changes in child and infant mortality due to the reduction in and better treatment of disease were not often accompanied by parallel increases in standard of living. Lower mortality led to greater survival by those who had suffered poor early life conditions.

Features
► Tests a tantalizing conjecture regarding mortality decline of the 20th century, early life conditions and older adult health in low and middle income countries. ► Uses a newly compiled cross national data set of over 144,000 older adults from 20 low, middle and high income countries in addition to using extensive historical data to test the conjecture. ► Adds to the knowledge regarding early life events and older adult health

Contents

1: Aging Populations and the Determinants of Older Adult Health.- 2: A Contrarian Conjecture, Road Map, Ideal Data, Approach.- 3: Data Sources, Measures, Validity, and a Description of the Older Adult Population.- 4: Cross-National Morbidity Patterns.- 5: Cross-National Mortality Patterns and Health Disparities.- 6: Tide, Trick or Flow.- Appendices.- References.- Index

Fields of interest
Demography; Aging; Public Health

Target groups
Research

Product category
Monograph
Transition to Parenthood moves beyond a one-study focus and captures multidisciplinary work on all families making the transition to parenthood. The book covers societal trends, changes, and most importantly expectations. Focus is also placed on how families are impacted by their surroundings and their individual members. Strengths and limitations of current theories are discussed, as well as how the phenomenon of parenthood requires a combination of both macro- and micro-level theories.

Content

Fields of interest
Family; Developmental Psychology; Social Work

Target groups
Research

Product category
Monograph

Due July 2013
2013. 200 p. 20 illus. (The Political Economy of the Asia Pacific) Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 137,00
- approx. *€ 99,95 | £86.50
ISBN 978-1-4614-1616-6

A. Öhidy (Ed)
The Bologna Process in Central and Eastern Europe

The Bologna Process opened a new chapter in the history of the European higher education. The idea of a common European Higher Education Area was developed in Western Europe and accelerated increasingly there in the second half of the 20th century, as a phenomenon of globalization. For the post-communist states in Eastern Europe the complete change of the political system made it possible to join the European Union and the Bologna Process. These changes had an impact not only on the educational policies but also on the educational system and the educational culture as well. This book shows the changes in the higher education of ten countries in Central and Eastern Europe: Croatia, the Czech Republic, Hungary, Poland, Romania, Slovakia, Slovenia, Serbia and Ukraine. The country studies are supplemented with an international and a historical comparative analysis, to point out the special features of the implementation of the Bologna aims in the region.

Feature
- New articles in social sciences

Contents
Bologna Process.-Comparative Education.-Central and Eastern Europe.-Higher Education.

Fields of interest
Political Science, general; Education (general)

Target groups
Research

Product category
Monograph

Due August 2013
2012. 200 p. 20 illus. (The Political Economy of the Asia Pacific) Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 137,00
- approx. *€ 99,95 | £86.50
ISBN 978-1-4614-1616-6

R. R. Nazarinia Roy, W. R. Schumm, S. L. Britt, Kansas State University, Manhattan, KS, USA

T. O’Callaghan, V. Vivoda

Regulatory Regimes and Risk in Asia

A Comparative Analysis of Mining Sector Governance

The mining sector is a major issue for most Asian governments as well as a controversial one, drawing criticism from indigenous groups, non-governmental organizations and politically-motivated elites. In addition, corruption and a lack of institutional capacity frequently plagues the sector. Despite significant resource wealth and positive regulatory reform over the past decade, investors have continued to treat the region with caution. Poor performance of the governance structures and non-performing regulatory regimes in the mining sector is behind the high level of risk for foreign mining investors and the low levels of foreign direct investment (FDI) in many of these countries. The objective of this book is to identify key drivers for poor regulatory performance in six mineral-rich Asian countries (Australia, China, India, Indonesia, Papua New Guinea and the Philippines) and suggest particular causes of action to improve regulatory architecture in the region.

Features
- Provides the first region-wide study of mining regulation available
- Develops a new framework for assessing regulatory performance
- Puts forward a set of policy recommendations to assist regional governments and regulating agencies to improve the governance infrastructure of their mining sectors

Contents
Governance

Fields of interest
Political Science, general; Environmental Economics; Development Economics

Target groups
Research

Product category
Monograph

Due July 2013
2014. Approx. 375 p. Softcover
- approx. *€ (D) 53,49 | € (A) 54,99 | sFr 67,00
- approx. *€ 49,99 | £44.99
ISBN 978-3-658-02332-4
New Series
Global Migration Issues

This book series contributes to the global discussion about the future of migration policy through the publication of a series of books on emerging migration issues. Most reports on migration policy tend to focus on national or regional perspectives; books in this series will focus on global policy challenges, such as the impact of climate change or the global economic crisis, on migration. This series is closely linked to the production of IOM’s World Migration Report. Some of the books in this series will be based on research which has been prepared for the World Migration Report. The series also includes a special focus on the linkages between migration and development, and the themes discussed each year at the Global Forum on Migration and Development (GFMD), given the growing policy interest in harnessing the benefits of migration for development.

Fields of interest
Migration; Climate Change Impacts; Environmental Science and Engineering

Target groups
Research

Product category
Contributed volume

Due July 2013
2014. XX, 300 p. 60 illus., 7 in color. Hardcover
► € (D) 106,99 | € (A) 109,99 | sFr 133,50
► € 99,99 | £90.00
ISBN 978-1-4614-7559-0
M. Rodekamp
Their Members’ Voice?
Civil Society Organizations in the European Union

The role of civil society organizations in Brussels is debated. Some view them as representatives of their members and thus as legitimising agents for policy-making in the European Union. Others see them as being elitist and out of touch with their membership bases, therefore ill-suited to promote democracy at the EU level. Taking civil society organisations in the EU’s external relations as an example, Meike Rodekamp submits these controversial views to a reality check. Interviews with representatives of civil society organisations in Brussels and their member organisations in the EU show that the Brussels offices have not lost contact with their members. However, member organisations differ substantially in their participation in internal decision-making processes, which raises doubts about the legitimacy gains through civil society participation in EU policymaking.

Contents
Civil Society Organizations - European Union - Representativeness - Democratic Deficit - Participation - Interviews.

Field of interest
Social Sciences, general

Target groups
Research

Product category
Monograph

H. Sen
Time-Out in the Land of Apu
Childhoods, Bildungsmoratorium and the Middle Classes of Urban West Bengal

The book is based on extensive ethnographic research on middle class childhoods in a specific region in India. It situates itself within the contemporary sociological perspectives in Childhood Research, where starkly different theoretical and empirical concerns characterize the global south-north divide, the agency friendly ‘new’ childhood studies in the academia of primarily industrialized western contexts and the once ‘rights’ heavy, ethnography shy tradition of academic discourse on childhood in South Asia which has for decades talked about the absence of childhoods in the developing world. It attempts to bridge the gap in childhood research which thematises childhoods differently according to their developing/developed, western/non western contexts, and finds its middle ground in the context of the urban middle classes in contemporary West Bengal.

Feature
Publication in the field of social sciences.

Contents
Childhoods and Social Inequalities - Sentiment, Middle Classes, and a Culture of Childhood in Bengal - Talking to Children and Talking about Childhoods - The Bhadrakul Culture and the Ethos of Education in Bengal - “Leisure” Culture and Space - Children, Leisure, and Cultural Heritage - Class, Gender, and Generation in Children’s Culture - The Children from Memory.

Field of interest
Sociology, general

Target groups
Research

Product category
Monograph
While religion was expelled from the public space during Communist times and became a secret form of "inner emigration," it entered the empty public space again in Post-Communist times. Public interest in religious issues and the public prestige of religion have dramatically increased. The book "Under Construction. The Role of Religion in Eastern Europe Today" deals with the (re-)emergence of religion in Eastern Europe and its impact on the economy, the society, and the state in 15 essays. The authors represent various fields of science related to human interaction – Economics, Political Science, Sociology, and Law. The added value is an up-to-date and interdisciplinary perspective on religion and its effects in major spheres of the societies in Eastern Europe today.

Feature
► Publication in the field of social sciences

Field of interest
Social Sciences, general

Target groups
Research

Product category
Monograph


Migration, Gender and Social Justice
Perspectives on Human Security
This book is the product of a collaborative effort involving partners from Africa, Asia, Europe and Latin America who were funded by the International Development Research Centre Programme on Women and Migration (2006-2011). The International Institute of Social Studies at Erasmus University Rotterdam spearheaded a project intended to distill and refine the research findings, connecting them to broader literatures and interdisciplinary themes.

Features
► Synthesis of research projects on feminization of migration
► Promotion of migrant women’s human rights
► Security within liminal legality

Contents
Section I: Introduction – migration, gender and social justice: the research and policy agendas.
Section II: Transformation of social reproduction systems and migration: local-global interactions.
Section III: The state and female internal migration: Rights and livelihood security.
Section IV: Complexity of gender: embodiment and intersectionality.
Section V: Liminal legality, citizenship and migrant rights mobilization.
Section VI: Conclusion – the complexities of migration research-policy interactions.
Women’s Rights and Citizenship Program.
Annex B - Profile of the Editors.

Fields of interest
Gender Studies; Migration; International Humanitarian Law, Law of Armed Conflict

Target groups
Research

Product category
Professional book

F. Virchow, Fachhochschule Düsseldorf, Düsseldorf, Germany (Ed)

Visual Politics of the Far Right
Although far right movements and political parties in the first half of the 20th century have paid great attention to their visual performance this dimension has not gained much of researchers’ interest for the post WW II period. Contributions in this volume investigate the use far right protagonists make of images and drawings as a crucial resource for the symbolic definition of political events and as a means to express their world view.

Feature
► Visual politics of the far right

Contents
Introduction. - Part I. - Part II. - Conclusion.

Field of interest
Political Science, general

Target groups
Research

Product category
Monograph
Territoriality and Migration in the E.U. Neighbourhood
Spilling over the Wall

Contents

Fields of interest
Migration; European Integration; Population Economics

Target groups
Research

Product category
Contributed volume

The Impact of Private Actors on Security Governance
An Analysis based on German ISR Capabilities for ISAF

With the ever farther advancement of globalization, governance has become one of the most prominent theoretical concepts to describe today’s world. Governance theory is concerned with a system of rule through non-hierarchical governing modes, such as networks and market mechanisms. Initially the field of security was ignored, as it was seen as the last bastion of the nation state. When the concept of security governance emerged at the beginning of the millennium, it sought to take account of transnational threats, such as nuclear proliferation or cluster bombs. However, the traditional security domain of the state, i.e. the provision of security by military force, is still exempt from governance theory. Provoked by the increasing support of private actors to military operations, Gloria Westermeyer aims to investigate whether this exemption is still valid. Based on the conduct of Intelligence, Surveillance and Reconnaissance services in the German ISAF Mission, the author examines the impact of private actors on the governance of today’s military affairs. What is the relative power of private security actors vis-à-vis the state? Which factors determine if, to what extent and why private actors support the military?

Feature
► Publication in the field of social sciences

Climate Politics as Investment
From Reducing Emissions to Building Low-carbon Economies

Simon Wolf describes how the growing awareness for the economic consequences of climate change and the economic opportunities of climate protection has led to changes in the rationality of governing climate change, from reducing emissions to building low-carbon economies. One crucial strategy for governments in orchestrating the transformation to cleaner economies is to enable low-carbon investment. The author therefore takes a critical look at how climate governance is reframed as an economic and investment challenge in recent years, and reveals some of the blind spots of focusing on the economic and investment opportunities related to climate protection.

Feature
► Study in the field of social sciences
Households and Consumption Forecasting

The New Method, Software and Applications

Contents


Fields of interest
Demography; Population Economics; Statistics, general

Target groups
Research

Product category
Monograph

Due August 2013


➤ approx. *€ (D) 106,95 | € (A) 109,95 | sFr 143,50
➤ approx. 99,95 | £90.00
A. Bailey, Wolverhampton University, UK; D. O’Brien, Oxford Brookes University, UK

Hume’s Critique of Religion: ‘Sick Men’s Dreams’

In this volume, authors Alan Bailey and Dan O’Brien examine the full import of David Hume’s arguments and the context of the society in which his work came to fruition. They analyze the nuanced nature of Hume’s philosophical discourse and provide an informed look into his position on the possible content and rational justification of religious belief. The authors first detail the pressures and forms of repression that confronted any 18th century thinker wishing to challenge publicly the truth of Christian theism.

Features
► Offers a distinctive interpretation of David Hume, a figure of considerable interest to today’s general educated public ► Features an overview of Hume’s writings on religion as well as detailed analysis of his relevant texts ► Carefully examines the inter-relationships between Hume’s various works that discuss religion

Contents

Fields of interest
Philosophy of Religion; Epistemology; Modern Philosophy

Target groups
Research

Product category
Monograph

A. M. Cutter, University of Central Lancashire, Preston, UK; B. Gordijn, Dublin City University, Ireland (Eds)

In Pursuit of Nanoethics
Transatlantic Reflections on Nanotechnology

In pursuit of the truth of Christian theism.

Features
► Global governance focus (including authors from a number of global organisations) ► Exploration of the nanotechnology-biotechnology convergence ► Transatlantic perspective (deliberate inclusion of global perspectives from US, Europe and developing world).

Contents

Fields of interest
Ethics; Law, general; Nanotechnology

Target groups
Research

Product category
Contributed volume

G. Floeistad, University of Oslo, Norway (Ed)

Ethics or Moral Philosophy

This volume examines a variety of philosophical approaches that seek to formulate practical guidelines or norms for human actions and behavior in different areas of society, including politics, cultural traditions, the environment, business management, architecture, and medicine. Written by a team of international authors, this volume features thirteen surveys.

Features
► Considers the idea of a universal system of ethics ► Includes coverage of a new type of ethics called Eco-ethica ► Scrutinizes the relationship between ethics and cultural tradition

Contents

Fields of interest
Ethics; Political Theory

Target groups
Research

Product category
Contributed volume
Theories of Information, Communication and Knowledge

A Multidisciplinary Approach

Contents
Introduction; Fidelia Ibelew-SanJuan and Thomas Dousa.- Chapter 1: Cybersemiotics: A new foundation for transdisciplinary theory of information, cognition, meaning, communication and consciousness; Soren Brier.- Chapter 2: Epistemology and the Study of Social Information within the Perspective of a Unified Theory of Information; Wolfgang Hofkirchner.- Chapter 3: Perception and Testimony as Data Providers; Luciano Floridi.- Chapter 4: Human communication from the semiotic perspective; Winfried Noth.- Chapter 5: Mind the gap: transitions between concepts of information in varied domains; Lyn Robinson and David Baden.- Chapter 6: Information and the disciplines: A conceptual meta-analysis; Jonathan Furner.- Chapter 7: Epistemological Challenges for Information Science; Ian Cornelius.- Chapter 8: The nature of information science and its core concepts; Birger Hjorland.- Chapter 9: Sylvie Leleu-Merviel. Coalescence in science and its core concepts; Birger Hjørland.- Chapter 10: Understanding users’ informational process. Application to visual...
**Dao Companion to Japanese Buddhist Philosophy**

G. Kopf, Luther College, Decorah, IA, USA. (Ed)

Contents


**Fields of interest**

Non-Western Philosophy; Religious Studies; Philosophy of Religion

**Target groups**

Research

**Product category**

Handbook

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**Buddhist Philosophy**

D. Li, China University of Political Science and Law, Beijing, China (Ed)

**Values of Our Times**

Contemporary Axiological Research in China

Contents


**Field of interest**

Philosophy (general)

**Target groups**

Research

**Product category**

Contributed volume

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**Quṭb al-Din Shirāzī and the Configuration of the Heavens**

K. Niazi, Berkeley, CA, USA

As a leading scientist of the 13th century C. E. Quṭb al-Din Shirāzī wrote three substantial works on hay’a (or the configuration of the celestial orbs): Nihāyat al-’irdār fī dirāyat al-’Affāk (“The Limits of Attainment in the Understanding of the Heavens”), al-’Uūs al-shāhīya fi ’ilm al-hay’a (“The Royal Offering Regarding the Knowledge of the Configuration of the Heavens”), and Ikhtiyārāt-i Mu’affār (“The Mu’affār Elections”). Completed in less than four years and written in two of the classical languages of the Islamic world, Arabic and Persian, these works provide a fascinating window to the astronomical research carried out in Ilkhanid Persia. Shirāzī and his colleagues were driven by their desire to rid Ptolomaic astronomy from its perceived shortcomings.

**Features**

► This study clarifies the relationship between three well-known but little studied medieval works on astronomy ► Provides a detailed biography of Quṭb al-Din Shirāzī, a leading scientist of his era ► Sheds light on the nature of the patronage of the sciences in Ilkhanid Persia

**Contents**


**Fields of interest**

Philosophy of Science; History of Science; Non-Western Philosophy

**Target groups**

Research

**Product category**

Monograph

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**Due July 2013**

2012. Approx. 575 p. (Dao Companions to Chinese Philosophy) Hardcover

► approx. *€ (D) 181.85 | € (A) 186.95 | sFr 244.00
► approx. *€ 169.95 | £153.00

**Due June 2013**

2013. VII, 284 p. Hardcover

► *€ (D) 139.09 | € (A) 142.99 | sFr 173.50
► *€ 129.99 | £117.00
ISBN 978-3-642-38258-1

**Due August 2013**


► *€ (D) 106.99 | € (A) 109.99 | sFr 133.50
► *€ 99.99 | £90.00
ISBN 978-94-007-6998-4

250
**News 6/2013**

**Philosophy**

**The Feminist Philosophy Collection**

Over the past 40 years, philosophy has become a vital arena for feminists. Recent feminist work has challenged canonical claims about the role of women and has developed new methods of analysis and critique, and in doing so has reinvigorated central areas of philosophy. The Feminist Philosophy Collection presents new work representative of feminist contributions to the five most significant areas of philosophy: Feminist Ethics and Political and Social Philosophy; Feminist Philosophy of Religion; Feminist Aesthetics and Philosophy of Art; Feminist History of Philosophy; and Feminist Epistemology and Philosophy of Science. Feminist work in some fields, notably ethics and social theory, has been going on for four decades, while the youngest area of feminist work is, arguably, feminist philosophy of art and aesthetics. Thus, some volumes will contain essays that build upon established feminist work as they explore new territory, while others do not have that luxury, but are all the more exciting in that they break new ground.

**Features**

- Contains newly written essays that apply philosophical methods and approaches to feminist concerns
- Displays the breadth of feminist contributions to philosophy
- An excellent resource for those who wish to explore how feminist philosophy is transforming the very nature of philosophical inquiry

**Fields of interest**

Philosophy (general); History of Philosophy; Philosophy of Religion

**Target groups**

Research

**Product category**

Contributed volume

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**Legal Scholarship as a Source of Law**

This book is about the use of legal scholarship by judges. It discusses the possibility that legal scholarship may function as a genuine source of law in modern municipal legal systems. The book advances a number of claims, some conceptual, some empirical, some normative. The major conceptual claims are found in Chapters 2 and 3, where a general account of the notion of a source of law is provided. Roughly, sources of law are documents or practices (e.g. statutes, judicial decisions, official customs) from which norms can be derived that function as sources of content-independent reasons for judges to decide legal cases one way or another. The relevant notion of content-independence is derived (with qualifications) from H.L.A. Hart’s jurisprudence.

**Features**

- Deals with conceptual, empirical and normative questions about the use of legal scholarship by judges
- Adopts a Hartian philosophical perspective and, in so doing, attempts to illustrate the usefulness of the Hartian framework for the purpose of analyzing specific aspects of judicial practice
- Draws from the experience of different jurisdictions in an attempt to be relevant to an international audience

**Contents**


**Fields of interest**

Non-Western Philosophy; Religious Studies; Philosophy of Religion

**Target groups**

Research

**Product category**

Contributed volume

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**Dao Companion to Classical Confucian Philosophy**

Contents


**Fields of interest**

Non-Western Philosophy; Religious Studies; Philosophy of Religion

**Target groups**

Research

**Product category**

Contributed volume
C. Straßer, Ghent University, Belgium

**Adaptive Logics for Defeasible Reasoning**

Applications in Argumentation, Normative Reasoning and Default Reasoning

**Features**

- Presents adaptive logics as an intuitive and powerful framework to model defeasible reasoning
- Features intuitive examples and case studies
- Details a range of applications that will appeal to researchers with various interests and backgrounds

**Contents**


**Fields of interest**

Logic; Artificial Intelligence (incl. Robotics); Philosophy of Science

**Target groups**

Research

**Product category**

Monograph

Due September 2013


Hardcover

- approx. *€ (D) 139,09 | € (A) 142,99 | sFr 173,50
- approx. *£ 129,99 | £117.00

ISBN 978-3-319-00791-5

R. Urbaniak, Gdańsk University, Poland

**Leśniewski’s Systems of Logic and Foundations of Mathematics**

This meticulous critical assessment of the ground-breaking work of philosopher Stanislaw Leśniewski focuses exclusively on primary texts and explores the full range of output by one of the master logicians of the Lvov-Warsaw school. The author’s nuanced survey eschews secondary commentary, analyzing Leśniewski’s core philosophical views and evaluating the formulations that were to have such a profound influence on the evolution of mathematical logic. One of the undisputed leaders of the cohort of brilliant logicians that congregated in Poland in the early twentieth century, Leśniewski was a guide and mentor to a generation of celebrated analytical philosophers (Alfred Tarski was among his PhD students).

**Features**

- Accessible introduction to Leśniewski’s foundations of mathematics
- Critical analysis covers Leśniewski’s philosophical views as well as his contributions to mathematical logic
- Exclusive focus on primary texts reveals the core principles of Leśniewski’s work

**Contents**


**Fields of interest**

Philosophy of Science; Mathematical Logic and Foundations; Logic

**Target groups**

Research

**Product category**

Monograph

Due July 2013

2013. XII, 226 p. 3 illus. (Trends in Logic, Volume 37)

Hardcover

- *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- *£ 99,99 | £90.00

ISBN 978-3-319-00481-5
**The Variation Theory of Comparative Literature**

S. Cao, Beijing Normal University, P.R. China

Seeing the restrictions of former studies in Comparative Literature and aiming to amend these deficiencies, the author of this book mainly discusses the major theoretical significance and academic value of the Variation Theory in the whole process of the development of Comparative Literature in the world. In China the seminal comparative study of literature among different cultures can be dated back to ancient China, while the founding of comparative literature as a distinct academic discipline has to be largely owing to the influence of the West. The modern Chinese study of comparative literature formed its uniqueness under Western influence. The direct influence of the translation of western theories into China is remarkable.

**Features**
- Offers a new perspective and new methods for comparative literature studies
- Opens a new stage in the course of the development of comparative theory by focusing on heterogeneity and variation
- Highlights the differences between various civilizations, as well as promotes the dialogues and exchanges of civilizations

**Contents**
Introduction The Variation Theory: An Important Breakthrough of Comparative Literature.
- Chapter I Major Contributions of Influence Study and Its Weaknesses.
- Chapter II Major Contributions of Parallel Study and Its Weaknesses.
- Chapter III The Variation Theory on the Aspect of cross-state.
- Chapter V Cross-cultural Variation Theory.
- Chapter VI Cross-civilization Variation Theory.

**Field of interest**
Comparative Linguistics

**Target groups**
Research

**Product category**
Monograph

Due June 2013

2013. Approx. 280 p. Hardcover
- approx. € 106.95 | £ 109.95 | sFr 133.50
- approx. € 99.95 | £ 90.00
ISBN 978-3-642-34276-9

**Asymmetries between Language Production and Comprehension**

P. Hendriks, University of Groningen, The Netherlands

This book asserts that language is a signaling system rather than a code, based in part on such research as the finding that 5-year-old English and Dutch children use pronouns correctly in their own utterances, but often fail to interpret these forms correctly when used by someone else. Emphasizing the unique and sometimes competing demands of listener and speaker, the author examines resulting asymmetries between production and comprehension. The text offers examples of the interpretation of word order and pronouns by listeners, and word order freezing and referential choice by speakers. It is explored why the usual symmetry breaks down in children but also sometimes in adults.

**Features**
- Offers the first unified explanation of several asymmetries between language production and language comprehension
- Asserts that grammar is shaped by the competition between the speaker’s perspective and the hearer’s perspective
- Combines insights in theoretical linguistics, psycholinguistics and computational modeling on the organization, use and acquisition of language

**Contents**
1 Understanding and Misunderstanding
- 2 Asymmetries in Language Acquisition
- 3 The Listener's Perspective
- 4 The Speaker's Perspective
- 5 Symmetry and Asymmetry Across Languages
- 6 Competing Perspectives

**Field of interest**
Linguistics (General)

**Target groups**
Research

**Product category**
Monograph

Due July 2013

2014. X, 212 p. 29 illus., 6 in color. (Studies in Theoretical Psycholinguistics, Volume 42) Hardcover
- *€ (D) 106.99 | £ (A) 109.99 | sFr 133.50
- *€ 99.99 | £ 90.00
ISBN 978-94-007-6900-7

**Classroom-oriented Research**

M. Pawlak, J. Bielak, A. Myszkowska-Wiertelak, Adam Mickiewicz University, Kalisz, Poland (Eds)

**Achievements and Challenges**

The volume brings together papers related to different aspects of classroom-oriented research on teaching and learning second and foreign languages that have been authored by specialists from Poland and abroad. The first part contains contributions dealing with individual variation in the language classroom, in particular age, anxiety, beliefs and language learning strategies. The second part deals with various facets of teachers’ behaviors in the classroom, focusing in particular on classroom communication and the use of action research in teacher training.

**Features**
- The papers included in the collection represent a variety of theoretical perspectives and research methods
- Many of the contributions report the findings of original research which enhance our knowledge of teaching and learning in the language classroom
- The studies reported in the volume provide important guidelines for researchers interested in conducting classroom-oriented research
- The theoretical issues and research findings presented in specific papers serve as a basis for concrete pedagogic implications

**Contents**
From the Contents: Age and the classroom learning of additional languages.
- The sociolinguistic parameters of L2 speaking anxiety.
- Comparing teachers’ and learners’ views on grammar instruction and error correction.
- Stability and variability in pre-service teachers’ beliefs.
- The relationship between learning strategies and speaking performance.

**Fields of interest**
Applied Linguistics; Language Education

**Target groups**
Research

**Product category**
Monograph

Due June 2013

2013. XV, 303 p. 11 illus., 2 in color. (Second Language Learning and Teaching) Hardcover
- *€ (D) 139.09 | £ (A) 142.99 | sFr 173.50
- € 129.99 | £ 117.00
ISBN 978-3-319-00187-6

29 illus., 6 in color. (Second Language Learning and Teaching) Hardcover
- *€ (D) 139.09 | £ (A) 142.99 | sFr 173.50
- € 129.99 | £ 117.00
ISBN 978-3-319-00187-6
**Linguistics**

**M. Pawłak**, Adam Mickiewicz University, Kalisz, Poland; E. Waniek-Klimczak, University of Lodz, Poland (Eds)

**Issues in Teaching, Learning and Testing Speaking in a Second Language**

The volume constitutes a state-of-the-art account of issues related to teaching, learning and testing speaking in a second language. It brings together contributions by Polish and international scholars which seek to create links between theory, research and classroom practice, report the findings of studies investigating the impact of linguistic, cognitive and affective factors on the development and use of speaking skills, and provide concrete pedagogic proposals for instruction and assessment in this area. As such, the book will be of interest not only to second language acquisition theorists and researchers, but also to foreign language teachers willing to enhance the quality of speaking instruction in their classrooms.

**Features**
- Approaches teaching, learning and testing speaking from a variety of theoretical perspectives
- Provides an account of original studies investigating different aspects of the development and use of speaking skills
- Successfully links theoretical positions, empirical evidence and classroom practice

**Contents**
Mediating between theory, research and classroom practice.

**Fields of interest**
Applied Linguistics; Language Education

**Target groups**
Research

**Product category**
Monograph

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**M. Pawłak**, Adam Mickiewicz University, Kalisz, Poland

**Error Correction in the Foreign Language Classroom**

Reconsidering the Issues

The book aims to dispel some of the myths surrounding the place of oral and written error correction in language education by providing an exhaustive and up-to-date account of issues involved in this area, taking the stance that the provision of corrective feedback constitutes an integral part of form-focused instruction. This account places an equal emphasis on the relevant theoretical claims, the most recent research findings and everyday pedagogical concerns, particularly as they apply to the teaching of additional languages in the foreign language setting. The book will be of relevance and significance not only to specialists in the field of second language acquisition, but also to graduate and doctoral students carrying out research in the area of form-focused instruction and error correction.

**Features**
- Places corrective feedback firmly within the framework of form-focused instruction
- Provides a detailed account of issues involved in both oral and written error correction
- Contains a thorough overview of research findings into the effects of oral and written correction
- Uses theoretical positions and research findings to provide concrete and feasible guidelines for classroom practice

**Contents**
Error Correction as an option in form-focused instruction.

**Fields of interest**
Applied Linguistics; Language Education

**Target groups**
Research

**Product category**
Monograph

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**W. Szubko-Sitarek, L. Salski, P. Stalmaszczyk**, University of Lodz, Poland (Eds)

**Language Learning, Discourse and Communication**

Studies in Honour of Jan Majer

This volume brings together papers on a wide spectrum of topics within the broad area of language acquisition, stressing the interconnections between applied and theoretical linguistics, as well as language research methodology. These contributions in honor of Professor Jan Majer have been grouped in two sections: language learning, and discourse and communication. The former discusses issues varying from aspects of first, second, and third language acquisition, individual learner differences (i.e.

**Features**
- Offers multiple perspectives on research conducted within the field of applied linguistics
- The contributions explore practical implications for foreign language education
- The studies discussed provide important guidelines for researchers interested in conducting similar research

**Contents**
From the Contents: Analyzing spoken language for complexity, accuracy and fluency: some methodological considerations.

**Fields of interest**
Applied Linguistics; Language Education

**Target groups**
Research

**Product category**
Monograph

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Due October 2013

2014. Approx. 280 p. 12 illus. (Second Language Learning and Teaching) Hardcover
- approx. *€ (D) 106,95 | € (A) 109,95 | sFr 133,50
- approx. *€ 99,95 | £90.00
ISBN 978-3-642-38338-0

Due August 2013

2014. 370 p. 10 illus. (Second Language Learning and Teaching) Hardcover
- approx. *€ (D) 139,05 | € (A) 142,94 | sFr 173,00
- approx. *€ 129,95 | £117.00
ISBN 978-3-642-38435-6

Due August 2013

2014. 170 p. (Second Language Learning and Teaching) Hardcover
- approx. *€ (D) 106,99 | € (A) 109,99 | sFr 133,50
- approx. *€ 99,99 | £90.00
ISBN 978-3-319-00418-1
Multilingual Lexical Recognition in the Mental Lexicon of Third Language Users

The monograph constitutes an attempt to demonstrate that trilinguals should be considered as learners and speakers in their own right as opposed to L2 learners with a view to enumerating consequences this would bring to third or additional language teaching. Its theoretical part offers an insight into the structure of the multilingual mental lexicon which is a product of the interplay of a whole array of cross-linguistic factors in the minds of multilingual speakers. The empirical part reports the findings of an empirical study which aimed to investigate connections which are formed between multiple languages in a multilingual mind.

Features
► Provides profound insights into the analysis of the multilingual lexicon for a language combination
► Describes concrete examples of the special status of bi- and trilingual cognates
► Deals with multilingual didactics

Contents
Beyond Bilingualism: Theoretical Foundations of Multilingualism and Multilingual Language Acquisition.
- Modelling the Lexicon.
- The Mental Representation of Multilingualism and its Implications for Word Recognition.
- The Representation of Cognates in the Multilingual Mind - Background to the Empirical Study.
- Cognate Facilitation Effects in the Multilingual Word Recognition.

Field of interest
Psycholinguistics

Target groups
Research

Product category
Monograph

Due August 2013

2014. 270 p. (Second Language Learning and Teaching) Hardcover
► approx. *€ (D) 106,95 | € (A) 109,95 | sFr 133,50
► approx. € 99,95 | £90.00
ISBN 978-3-642-32193-1
G. Marranci, Macquarie University, Sydney, Australia
(Ed)

Handbook of Contemporary Islam and Muslim Lives

Contents

Fields of interest
Religious Studies; Sociology, general; Anthropology

Target groups
Research

Product category
Handbook

Due January 2014

Print
► approx. * € (D) 747,93 | € (A) 768,90 | sFr 931,00
► approx. € 699,00 | £629.50
ISBN 978-94-007-4919-1

eReference
2014.
► approx. ** € (D) 831,81 | € (A) 838,80 | sFr 978,00
► approx. € 699,00 | £629.50
ISBN 978-94-007-4920-7

Print + eReference
► approx. * € (D) 935,18 | € (A) 961,40 | sFr 1163,50
► approx. € 874,00 | £787.00
ISBN 978-94-007-4921-4
J. W. Berkman
Due Diligence and the Business Transaction
Getting a Deal Done

Due Diligence and the Business Transaction: Getting a Deal Done is a practical guide to due diligence for anyone buying a business or selling a privately held business of any size, or anyone entering into a major agreement with another company. When you’re buying a business, it’s wise to conduct due diligence. That’s the process of investigating and verifying the firm’s finances, labor record, exposure to environmental issues, store of intellectual property, hard assets, ownership structure, and much more. If you don’t, you may later stumble into serious, costly problems, or you may pay an inflated price for the business.

Field of interest
Business/Management Science, general

Target groups
Popular/general

Product category
Professional book

L. M. Bujarski, L. Mesa, J. Hampton
How to Do Business in Latin America
Open Doors, Make Deals, Tap Markets

How to Do Business in Latin America explains how to get projects off the ground in the many exciting and quickly changing markets of Latin America. Packed full of valuable strategic insights and information on how to set up shop and scale up in the region, How to Do Business in Latin America is for those serious about developing and expanding operations in Mexico and Central and South America. With a population approaching 600 million, rapid proliferation of the internet and mobile telephony, and improvements in social and physical infrastructure, the region has become a bountiful source of untapped, lower-cost talent and other resources and a huge consumer market for products and services. Yet, with 20 different countries and 20 distinct markets to choose from, Latin America can be very difficult to navigate. In addition to language barriers, there are cultural, legal, regulatory, and technological issues nonnative businesspeople must manage effectively.

Features
► Provides strategic information on how to get projects started in Latin America
► Shows how to tap Latin American markets, expand sales, develop new territories, and more
► Author works for Nearshore Americas, a web hub (www.nearshoreamericas.com) and conference organizer for sourcing products and services in Latin America
► Nearshore will help pump the book
► Provides detailed case studies on how seasoned professionals and companies have succeeded in setting up shop in Latin America

Field of interest
Business/Management Science, general

Target groups
Popular/general

Product category
Professional book

J. J. Gross
Surviving Your Divorce
A Legal Guide

Thinking about divorce? Already in the process of divorce? You need this book. Divorce is complex, and complications are not what you need when you are facing its emotional and financial pressures. In Surviving Your Divorce: A Legal Guide, veteran divorce attorney James J. Gross breaks down the divorce process for nonlawyers in easy-to-understand steps. He explains the legal system in plain and simple language, and he describes the process of obtaining a fair separation agreement and navigating family law and the legal system. Just as important, it explains the emotional hazards of divorce and how to withstand the myriad pressures you will face. Surviving Your Divorce: Explains divorce laws in easy-to-understand words. Guides you through the steps for obtaining a separation agreement. Provides a friendly user manual for divorce court. Helps you and your spouse decide what’s best for the children. Shows you how to protect your assets and legal extent possible. Explains when and how to play hardball. Nearly a million people get divorced each year in the United States.

Feature
► Helps you decide when it’s time to go
► First steps to take when divorce is imminent
► How to negotiate your own separation agreement
► When and how to acquire a good lawyer
► How to play hardball when necessary
► There are nearly 1 million divorces each year in the U.S., creating a strong market for the book

Field of interest
Business/Management Science, general

Target groups
Popular/general

Product category
Professional book


**Apress / Business for Professionals**

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**F. X. Mahady**

**Developing Local Economies**

*How to Create Jobs, Expand the Tax Base, and Improve Opportunities for All*

The political mantra of the 21st century is jobs, jobs, jobs! But how do states and local communities create the jobs, economic opportunity, and a tax base that improves civic life for everyone? While cities can create private-sector jobs directly, they can create the conditions that generate jobs. And that’s what Developing Local Economies: How to Create Jobs, Expand the Tax Base, and Improve Opportunities for All is about. Drawing upon author Francis X.

**Features**

- Handbook for people whose job it is to help create jobs in states and communities—city planners, politicians, real estate developers, urban planners, economic development officials, bankers, local business leaders, etc.
- Author knows WHAT WORKS in economic development
- Author has been in economic development for 40 years and is very prominent
- Provides answers to the plea for jobs, jobs, jobs

**Field of interest**

Business/Management Science, general

**Target groups**

Popular/general

**Product category**

Professional book

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**S. Osborn**

**Makers at Work**

*Folks Reinventing the World One Object or Idea at a Time*

What do you get when you combine an electronics hobbyist, hacker, garage mechanic, kitchen table inventor, tinkerer, and entrepreneur? A maker: &maker; &maker; of course. Playful and creative, makers are &maker; through expertise and experimentation &maker; creating art, products, and processes that are helping change the way all of us think and interact with the world. As &maker; &maker; see from the 20 interviews in Makers at Work, inquisitive makers are just as apt to pick up a laser cutter or Arduino or Raspberry Pi as a wrench to fashion something new. One maker powered a scooter with a battery-operated drill. Another made a messenger bag &maker; &maker; like a phone.

**Features**

- Makers getting more and more attention
- Maker Faires (official and unofficial) are popping up on all continents. Maker movement is growing as some makers achieve star power. The maker movement has spawned a small industry catering to their needs for circuit boards, unique one-off objects, tools, ideas, open source methods, and more. Author a prominent maker who sponsors monthly maker events in Portland, Oregon. Author has good contacts at GigaOm and the Wall St. Journal’s All Things D. Part of the best selling At Work series (Founders at Work, Coders at Work, CIOs at Work.)

**Fields of interest**

Business/Management Science, general; The Computer Industry

**Target groups**

Popular/general

**Product category**

Professional book
P. Paetz

Disruption by Design
How to Create Products that Disrupt and then Dominate Markets

From Eli Whitney to Henry Ford to Ray Kroc to Steve Jobs, market disruptors have reaped the benefits, including fame and fortune. But do you have to be that rare genius whose unique skills can literally change the world? No. Disrupting a market is a discipline that can be learned. Disruption by Design is a handbook for entrepreneurs, CEOs, product developers, innovators, and others who want to build products or create services that systematically disrupt markets. It is the first book that shows you how. There is a huge difference between being an innovator and being a disruptive innovator. Disruptors change the basis for competition in markets, and they end up controlling market share typically 40 to 80% of the total revenue and half or more of the total profits in the categories they create. But while many market opportunities have disruptive potential, only a small fraction of those ever succeed in disrupting markets. And, too often, those that do disrupt by accident. It doesn’t have to be that way.

Feature

Guides entrepreneurs with a practical how-to process for taking product ideas and turning them into game-changing disruptive innovations. First book to simplify theory into actionable steps, checklists, and business strategy necessary to maximize the probability of market disruption. Innovation is on every CEO’s mind today, and disruptive innovation is a white-hot topic. Everyone wants their innovation to be disruptive, which this book helps them do. Author well known blogger, consultant, and thought leader in the area of market disruption.

Field of interest
Business/Management Science, general

Target groups
Popular/general

Product category
Professional book

J. Toigo

Office Automation 2.0
A Management Handbook for Re-Integrating Business and IT Processes

Office Automation 2.0 is the essential guide to office automation for managers and IT professionals whose organizations are charting their path into the post-PC era. It drills down into the enterprise automation strategies and tactics appropriate to post-PC technologies such as virtual desktop infrastructure, mobile clients, and cloud services. This book teaches that rollouts of the latest enterprise-class technologies cannot produce business value unless management ensures that the front office is trained to use them correctly, and that end-user practices and IT processes are dynamically and efficiently coupled in the organizational culture.

Features

Timely guide for managers and IT planners seeking to harness the office automation potential of post-PC technologies to make leaner staff more productive
Strategy based on experience in the trenches for designing and rolling out office automation projects that both deliver measurable improvements to the business bottom line and engage users as partners in the design, implementation, and improvement of work-supporting applications
Crisp advice and telling examples from an author who is an IT consultant and former business IT manager with 30 years experience, has written 15 books and hundreds of articles for the IT print and online trade press, operates a highly trafficked blog at DrunkenData.com, delivered IT training courses to more than 80,000 trainees, and keynoted at international conferences staged by leading vendors including IBM, HP, Dell, Sun Microsystems, Microsoft, Quantum, DataCore Software, and numerous systems integrators

Field of interest
Business/Management Science, general

Target groups
Popular/general

Product category
Professional book

Apress°

Due September 2013

2013. 275 p. Softcover

* € (D) 24,56 | € (A) 25,24 | sFr 31,00

* € 22,95 | £17.50


Apress°

Due September 2013

2013. 320 p. Softcover

* € (D) 28,24 | € (A) 29,03 | sFr 35,50

* € 26,39 | £23.99

ISBN 978-1-4302-4530-8
C. Antognini

Troubleshooting Oracle Performance

Troubleshooting Oracle Performance, 2nd Edition is your systematic guide to diagnosing and resolving performance problems in database-backed applications involving Oracle's database engine. Christian Antognini brings a decade and a half of experience to his topic. His first edition is one of the most well-respected books in its field. This second edition has been rigorously updated to cover the latest developments in Oracle Database 11g Release 2 through Oracle Database 12c. What do you do when your database application isn't running fast enough? You troubleshoot, of course. Finding the slow part of an application is often the easy part of the battle. It's finding a solution that's difficult. Troubleshooting Oracle Performance, 2nd Edition helps by providing a systematic approach to addressing the underlying causes of poor database application performance. The author freely shares his experience while explaining the underlying foundations of how SQL statements are executed in the Oracle database engine. You'll be able to draw a solid foundation of theory and shared experience as you face head-on the performance challenges in your daily work. Written for developers by an application developer who has learned by doing, this book gives a systematic approach to solving database application performance problems. Helps you plan for performance as you would for any other application requirement.

Feature
- Endorsed by Oracle Database luminaries Jonathan Lewis and Cary Millip
- Consistently earns five-star reviews on Amazon Current with the latest developments in Oracle Database 12c

Field of interest
Database Management

Target groups
Popular/general

Product category
Professional book

R. Blewett, A. Clymer, R. S. Ltd

Pro Asynchronous Programming with .NET

Pro Asynchronous Programming with .NET teaches the essential skill of asynchrony in .NET. It answers critical questions in .NET application development: how do I keep my program responding at all times to keep my users happy? How do I make the most of available hardware? How can I improve performance? In the modern world, users expect more and more from their applications and devices, and multicore hardware has the potential to provide it. But it takes carefully crafted code to turn that potential into responsive, scalable applications. With Pro Asynchronous Programming with .NET you will: Meet the underlying model for asynchrony on Windows®/threads. Learn how to perform long blocking operations away from your UI thread to keep your UI responsive, then weave the results back in as seamlessly as possible. Master the async/await model of asynchrony in .NET 4.5, which makes asynchronous programming simpler and more achievable than ever before. Solve common problems in parallel programming with modern async patterns.

Features
- Nearly every up-to-date .NET book includes a chapter on asynchronous programming but this is the first full guide to mastering what is now an essential programming skill
- Packed full of practical advice and demonstrations to solve problems that come up in a developer's daily coding life, ranging from the server to the user interface
- Asynchronous programming is the solution to fluid, responsive user interfaces, making it a vital skill for modern development in a world full of touch-based devices

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

D. Bramhall

Beginning Xcode

Xcode is Apple's Integrated Development Environment (IDE), Interface Builder and other tools for helping app developers and coders to build Objective-C/Cocoa or iOS SDK based apps more efficiently and quickly. Beginning Xcode by Daniel Bramhall aims to get you up and running with Apple's latest Xcode and includes a complete working case study app. So, if you have some programming experience with iOS SDK and Objective-C, but want a more in-depth tutorial on Xcode, then this book is for you. The book focuses on the new technologies, tools and features that Apple has bundled into Xcode, to compliment the latest and greatest version of iOS SDK. By the end of this book, you'll have an app case study and examples to draw from to get your very first app out the door using Xcode. Maybe, even sell on Apple iTunes App Store.

Features
- Aims to be first contemporary Xcode tutorial to book market, covering latest Xcode, mainly for iOS app developers
- Pairs nicely with Apress Beginning iOS Storyboarding by Rory Lewis
- Author is a practicing Apple iOS and Mac apps developer
- Xcode is Apple’s IDE/tools similar to Microsoft’s Visual Studio IDE/tools

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book
J. Bucanek

Learn iOS App Development

The iOS 6 SDK offers powerful new features, and this book is the fastest path to mastering them. The rest of the iOS SDK & iPhone development for programmers with some experience who are new to iPhone and iPad apps development. Many books introduce the iOS SDK, but very few explain how to develop apps optimally and soundly. This book teaches core Objective-C language concepts and how to wisely and quickly employ the design patterns and logic using the iOS SDK, which is based on Objective-C and its Cocoa touch libraries. Learn iOS App Development is both a rapid tutorial and useful reference. You'll quickly get up to speed. You'll learn best practices that ensure your code will be efficient and perform well. An app that works well and is well designed is likely to get you the best reviews on the iTunes App Store, which in turn helps drive higher value search results and perhaps more revenue. Why spend months or years discovering what your board, your boards, and your most off-the-wall gaming plans: Pro Arduino Games will help make them a reality.

Feature

- This book aims to fit a growing or emerging need for a more comprehensive, accelerated all-in-one treatment of iOS app development for many of today’s aspiring app developers. The author is an expert trainer, teacher and app developer. iPhone and iPad apps development using the iOS SDK remains key tech and book markets of high interest/demand.

Field of interest

Computer Science, general

Target groups

Popular/general

Product category

Professional book

D. Cervo, D. Bebb

Pro Arduino Games

With Pro Arduino Games, you won’t just learn how to build some cool gaming projects: you’ll learn about game theory, game physics, the wide variety of sensors you can use, and the buffet of boards you can use to build your craziest gaming ideas. As Arduino fans already know, Arduino has tons of possibilities in the gaming world, and the Esplora and GameDuino make those possibilities easier than ever to create. But the possibilities actually go beyond the traditional handheld games or controller/console combos. What if your game could turn the real world into a massively-multiplayer game using Arduino? With Arduino and a combination of GPS and social interaction, you can make the world your MMO. Bring your brains, your boards, and your most off-the-wall gaming plans: Pro Arduino Games will help make them a reality.

Feature

- The only book specifically on Arduino game projects Complete coverage of a variety of types of games, including handhelds, controller/console games, and connecting Arduino with non-electronic games The authors are experienced Arduino enthusiasts and engineers who run MAD Fellows, a science and technology research company; Dan Cervo is also the co-author of Pro Arduino

Field of interest

Computer Science, general

Target groups

Popular/general

Product category

Professional book

G. Cleeren, P. Nijs, D. Miscoria

Windows 8 Data Development Recipes

A Problem-Solution Approach

Windows 8 Recipes with Data is the missing cookbook for developers who want to build content-first Windows Store apps. Taking a problem-solution approach with easy-to-follow examples, this book guides you from basic data handling topics towards more advanced themes, focusing heavily on fetching and handling data and communicating with web services, so you can put the content and effectiveness of your app first and provide a great experience for your users. This book will give you the solutions and insight you need: Create touch-enabled, data-driven apps with the great performance your users will expect and appreciate. Familiarize yourself with the advantages and potential pitfalls of working with data, content and services in Windows 8 on the device, on the web and in the cloud. Build apps based on enterprise-proven architectural patterns. Communicate with a wide range of web services and APIs, from REST services in XML or JSON to Facebook, Twitter and Microsoft SkyDrive.

Features

- The only book of its kind currently on the market
- Valuable code resource for busy professionals who need to get their apps working as quickly as possible
- Data is at the core of all great apps
- For many fans of the recipe style, this could even be their most important Windows 8 resource

Fields of interest

Computer Science, general; Computer Appl. in Administrative Data Processing

Target groups

Popular/general

Product category

Professional book
J. Dellinger

Pro Android and Cloud Services

Pro Android and Cloud Services is an end-to-end guide designed to prepare you to build mobile applications that integrate with the wide variety of social and data services available on the internet. If you are developing a mobile application that takes advantage of cloud services, it is likely that you will integrate with more than one service. How will those services interact with each other? How do you deal with partial failures or unavailability? How can you maintain backwards compatibility for users who cannot upgrade to your latest version? These are some of the real-world issues that most Android development books are only able to gloss over. Now that you are familiar with the core features of Android development, you are certainly ready to dive deeper into building more compelling, professional apps with a higher degree of polish and integration. With the topics, techniques, and sample applications discussed in this book, you will be prepared to build applications that are more interactive, immersive, and relevant to your users' needs. This translates to satisfied customers, better ratings, and can boost the success of your mobile app portfolio.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

J. DiMarzio

Android Game Recipes

A Problem-Solution Approach

Android game apps are typically the most popular type of Android apps in the various Google Play, Amazon Appstore and other Android app stores. So, beyond the Android game tutorials out there, what about a day-to-day handy and complete code reference for Android game developers? Android Game Recipes is your first, reliable game coding reference for today’s Android game apps. This book provides easy to follow real world game code problems and solutions, including source code. This book covers code recipe solutions that are common to 2D game development problems such as designing a game menu, collision detection, moving characters, moving backgrounds and more. This book also includes how to work with player data, how to add multiple levels, how to create game graphics for different screen resolution, and even a handy reference on game math and physics. After reading and using this book, you’ll have the templated code snippets, solutions and frameworks to apply to your game app design to build your game, customize it, and then sell it on the Android app stores.

Feature
- Aims to be first game focused code cookbook or recipes book for Android app developers/builders.
- J. DiMarzio is an industry recognized Android game expert, developer and books author.
- Android and gaming are key technology and book markets for today’s app developers.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

W. Evans, K. Hailey

Data Virtualization

Data Virtualization is about building on the techniques for virtualization that have been so successful in easing the management and cost of server infrastructure, and extending those techniques to the virtualization of corporate data. If you’re ever frustrated over the seemingly simple tasks of provisioning test databases for development projects, or spinning off reporting databases in response to fast-changing business opportunities, then you’re going to find much to like in this book. New techniques for data virtualization are built around recognizing that most of what sits in a given database remains static. To clone a database, one need only clone the small amount of data that is changing, and then to keep track of the ever-changing delta between clone and source. Virtualization helps you respond with swiftness and agility to the flood of ever-changing business requests that currently leave you harried and haggard. Creating a snapshot for reporting becomes a five-minute task involving a few button-clicks. Does every developer want their own copy of production in their development sandbox? You can give them that, and with almost no expenditure for additional storage. Migrating data into the cloud and back again can be done transparently. Data Virtualization is your introduction to the new world of software making all these things possible by transforming data management into an agile and responsive business asset. Explains the foundation for the virtualizing of corporate data. Compares and contrasts different cloning technologies Presents case-studies highlighting the benefits to be obtained

Field of interest
Database Management

Target groups
Popular/general

Product category
Professional book
Practical ASP.NET MVC 4 Projects

Practical ASP.NET MVC 4 Projects walks you through the process of building nine real web applications using ASP.NET MVC. Along the way, you will meet all the building blocks of a real-world web application and gain valuable hands-on experience with a wide range of techniques such as advanced view authoring, data retrieval and handling asynchronous tasks. Start as you mean to go on, by using MVC best practices to build a blog application. Practice advanced view authoring techniques to impress your users with a contact list management system. Learn to retrieve data from a public web service and handle errors effectively with the help of a model weather app. Discover the benefits of unit testing with a simple game, for a valuable principle you can apply to all your applications. Build working subscribe and login functionality, with your own social networking site modeled on Twitter. Build your own chat room, to see how a real-time multi-user web application works. Grasp the importance of the room, to see how a real-time multi-user web application works. Grasp the importance of the room, to see how a real-time multi-user web application works.

Features
- Gives readers direct hands-on experience building a range of application types with ASP.NET MVC
- Includes full code walkthroughs for seven exciting projects
- Demonstrates a range of useful skills and advanced techniques along the way

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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Intel®&#174; Trusted Execution Technology for Server Platforms

A Guide to More Secure Data Centers

Intel®&#174; Trusted Execution Technology (Intel TXT) is a new security technology that started appearing on Intel server platforms in 2010. This book explains Intel Trusted Execution Technology for Servers, its purpose, application, advantages, and limitations. This book guides the server administrator / data center manager in enabling the technology as well as establishing a launch control policy that he can use to customize the server’s boot process to fit the data center’s requirements.

Features
- For servers, TXT is just now ramping into volume
- While a few "rabbit" OEMs and hypervisor vendors have enabled support with the Intel® Xeon® 5600 series processors in 2010/2011, such that the infrastructure and software ecosystem is just now materializing
- Sandy Bridge (Jaketown) is the first "TOCK" launch with TXT and thus there will be significant platform offerings with TXT starting early next year
- With the Intel® Xeon® E5 launch, many more OEM and ODM vendors and additional key OS and Hypervisor vendors enable support
- In short, TXT will be virtually ubiquitously available at that time
- Being TXT is a relatively new technology for servers and the uses are so fundamental to basic server and cloud security, it will have a life of at least 5 more years and will most likely survive long after that

Field of interest
Data Encryption

Target groups
Popular/general

Product category
Professional book

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Dashboards for Excel

Dashboards for Excel is your key to creating informative, actionable, and interactive dashboards that will have your managers singing your praises. The book takes a hands-on approach to developing dashboards, from instructing users on advanced Excel techniques to addressing dashboard pitfalls common in the real world. Throughout the book, the reader is challenged to think about Excel and data analytics differently—that is, to think outside the box. This book will show you how to create dashboards in Excel quickly and effectively.

Features
- Strongly speaks to the applications-side of Excel development, a need recognized in both the business and academic worlds
- Promotes good dashboard design, visualization, organization, and principles critical to making decisions in a fast-paced, data driven environment
- Leaves readers with valuable creative and analytical skills required to create effective dashboards, giving them the confidence to do even more Excel

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book
P. Havewala

Building the Oracle Cloud with Enterprise Manager 12c

Building the Oracle Cloud with Enterprise Manager 12c presents a solid introduction to creating and managing a cloud computing infrastructure built around Oracle Database and Oracle Enterprise Manager 12c. You'll learn about the Consolidation Planner and its use in the initial planning of your cloud. Then you'll learn to create and configure the following cloud types: Infrastructure as a Service (IaaS) Database as a Service (DBaaS) Schema as a Service (SCaaS) Platform as a Service (PaaS) As part of configuring these cloud types, you'll learn about self-service provisioning and how to let your clients do your work for you. Author Purush Havewala also goes over the topics of metering and chargeback. These feature sets are critical to cloud computing because they allow you to allocate costs properly to your cloud clients. The book next moves into Oracle Real User Experience Insight tool, and its role in monitoring your systems in ways that provide you with a good sense of how your customers perceive those systems. This approach to monitoring is essential if you plan to have satisfied cloud computing clients.

Features
► Plays to a growing market for cloud-based management technologies  ► Goes beyond just database management to also include centralized management of Oracle applications such as E-Business Suite, PeopleSoft, JD Edwards, and more  ► The only Enterprise Manager book so far to include coverage of Oracle Real User Experience Insight, a tool for monitoring cloud application performance as experienced by end users

Field of interest
Database Management

Target groups
Popular/general

Product category
Professional book

S. Hayat, N. Qazi

Web 3.0 Search Engine Performance

Web 3.0 Search Engine Performance contains information introducing the reader to the concepts, algorithms, and applications required to understand search engine performance issues as the web moves toward Web 3.0. With the vast amount of Big Data and IoT coupled with smarter mobile devices, web search performance must be enhanced. This book will cover the topics needed to understand the performance issues, search algorithms, and semantic web architecture and will guide the user in understanding the software and hardware platform issues and requirements to support better performance. In essence, the book is an educational tool leading to the understanding of the algorithms and performance issues of the web and provide necessary knowledge to address those issues with Web 3.0.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

N. Horspool, N. Tillmann, J. Bishop

TouchDevelop

Programming on the Go

Smartphones are set to become the main computers that virtually all people will own and carry in their pockets at all times. And yet, smartphones are not yet used for all computing tasks. A project at Microsoft Research wanted to answer a simple question: “Is it possible to create interesting apps directly on a smartphone, without using a separate PC or a keyboard?” The result is TouchDevelop, a programming environment that runs on all mobile devices. This book walks you through all of the screens of the TouchDevelop app, and it points out similarities and differences of the TouchDevelop language compared to other programming languages. For users, the book can serve as a handy reference next to the phone. The book systematically addresses all programming language constructs, starting from the very basic constructs such as variables and loops. The book also explores many of the phone sensors and data sources which make creating apps for mobile devices so rewarding. If you are new to programming with TouchDevelop, or if you have not yet worked on touchscreen devices, we suggest that you read the book starting from Chapter 1. If you are already familiar with the basic paradigm of the TouchDevelop programming environment, then feel free to jump ahead to the later chapters that address particular topic areas. The book is written from the perspective of a Windows Phone user; all screenshots and navigation instructions refer to the Windows Phone app. The TouchDevelop Web App also runs in many modern browsers on many different devices such as the iPhone, iPad, Android phones, tablets, Macs, and PCs.

Fields of interest
Computer Science, general; Programming Languages, Compilers, Interpreters

Target groups
Popular/general

Product category
Professional book
D. Hows, E. Plugge, P. Membrey, T. Hawkins

The Definitive Guide to MongoDB

A complete guide to dealing with Big Data using MongoDB

The Definitive Guide to MongoDB, Second Edition, is updated for the latest version and includes all of the latest MongoDB features, including the aggregation framework introduced in version 2.2 and hashed indexies in version 2.4. MongoDB is the most popular of the "Big Data" NoSQL database technologies, and it's still growing. David Hows from 10gen, along with experienced MongoDB authors Peter Membrey and Eelco Plugge, provide their expertise and experience in teaching you everything you need to know to become a MongoDB pro. The Definitive Guide to MongoDB, Second Edition, starts with the basics, including how to install on Windows, Linux, and OS X, and how MongoDB handles your data. Then you'll learn how to develop with MongoDB with both PHP and Python, including an example application using a PHP driver to create a blog application. Finally, you'll dig into more advanced but extremely important MongoDB features, including optimization, replication, and sharding - load-balancing that makes MongoDB ideal for dealing with Big Data. If you're dealing with data, MongoDB should be on your must-learn list. The Definitive Guide to MongoDB, Second Edition, is just the book you need.

Feature
► An important update to one of the first books on MongoDB Co-authored by David Hows from 10gen, the MongoDB company Author team has written five highly-regarded books

Field of interest
Database Management

Target groups
Popular/general

Product category
Professional book

S. Hudson

Creative JavaScript

Creative JavaScript teaches you how to use every feature of this versatile and powerful language in exciting and creative ways. JavaScript can be used for so much more than simple interactivity. Master your use of canvas, animation, audio and video, 3D visualizations, motion detection and real-time collaboration. In every chapter of this book you will learn how to use and evolve JavaScript's creative capabilities in your own projects, as well as having project examples to follow throughout. Specifically, you will learn how to: Expertly use canvas and animation Push audio and video to its full capabilities Code and manipulate advanced 3D visualizations Create your own music directly from the browser Implement real-time collaboration with Node.js Explore real-time audio and video with WebRTC Play with motion detection and gesture control Combine all features into one social music creation experiment, similar to Google's 'Jam with Chrome' Creative JavaScript is for the developer who has a working knowledge of JavaScript and wants to take their code to the next level. Every feature explored can be manipulated and implemented in your everyday projects to really impress your clients or just increase your code skill.

Feature
► Introduces new creative aspects of JavaScript to make music, which is an area being promoted by known names in the music industry, such as Imogen Heap Provides real projects that can be developed for clients and for hobby by the developers who buy the book Has the input of known experts in the field such as Stuart Memo, who presents on music creation in JavaScript across the world (he has also agreed to TR the music chapters)

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

C. Ihrig

Pro Node.js for Developers

Since it&’s creation in 2009, Node.js has grown into a powerful and increasingly popular asynchronous-development framework for creating highly-scalable network applications using JavaScript. Respected companies such as Dow Jones and LinkedIn are among the many organizations to have seen Node&’s potential and adopted it into their businesses. Pro Node.js for Developers provides a comprehensive guide to this exciting new technology. Across seventeen carefully sequenced chapters we introduce you to Node &’150; what it is, why it matters and how to set it up &’150; before diving deeply into the key concepts and APIs that underpin its operation. Building upon your existing JavaScript skills you&’146;ll be shown how to use Node.js to build both Web- and Network-based applications, to deal with data sources, capture events and deal with child processes to create robust applications that will work well in a wide range of circumstances. Once you&’146;ve mastered these skills we&’146;ll go further, teaching you more advanced software engineering skills that will give your code a professional edge. You&’146;ll learn how to create easily reusable modules that will save you time through code reuse, to log and debug your applications quickly and effectively and to write code that will scale easily and reliably as the demand for your application grows.

Feature
► A detailed deep-dive into the Node.js technology explaining not just how it works, but how it can be used to maximum effect across a wide range of situations. Covers both the system and web applications of Node.js to provide a rounded view of the technology. Written by Colin Ihrig, an active Node.js community member and evangelist.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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265
Learn Spring Framework

The Spring Framework is the leading “out of the box” Java productivity framework and tools solution for Java developers and programmers to build end-to-end Java-based enterprise, web and soon, also mobile applications. Learn Spring Framework introduces the Spring Framework to you in a holistic way that aims to teach you the techniques and core values on which the Spring framework was conceived. If you are in the process of becoming Spring certified, or you just want to become a more productive Java application developer, then this book gets you started with Spring and how you can use it effectively. This book has diagrams, screenshots, and illustrations showing the meaning of the code. The text is broken up into paragraphs with helpful coded sidebars such as certification tips, sample questions, FAQs, warnings, and. This is especially helpful for you if you are considering Spring Certification. A real life sample application will be used in the book and all the key concepts will be explained to you about it, so you’re prepared to develop your own projects.

Features
- From the publishers of Pro Spring and Spring Recipes, Apress’ Learn Spring Framework aims to be one of only two active Spring Framework tutorials to market
- Apress is a leading - if not the leading - books publisher on the Spring Framework
- Written by an enterprise Java expert
- Evans data reports that 2/3 of Java developers use or plan to use the Spring Framework
- Spring is still the key framework for Java app developers

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

The Definitive Guide to Django

Web Development Done Right

This third edition of The Definitive Guide to Django is updated for the latest version of Django, and, with the forward and compatibility guarantee that Django now provides, should still serve as the ultimate tutorial and reference for this popular framework for years to come. Django is of the most popular Python-based web frameworks, and it now supports Python 3. It's the framework behind Pinterest, Instagram, and Mozilla.org. Experienced author and Django developer Katie Cunningham built the strong foundation laid by lead Django developer Jacob Kaplan&Moss and Django creator Adrian Holovaty show you how they use this framework to create award-winning web sites by guiding you through the creation of a web application reminiscent of ChicagoCrime.org. The Definitive Guide to Django, Third Edition is broken into three parts, with the first introducing Django fundamentals such as installation and configuration, and creating the components that together power a Django-driven web site. The second part delves into the more sophisticated features of Django, including outputting non-HTML content such as RSS feeds and PDFs, caching, and user management. The appendixes serve as a detailed reference to Django’s many configuration options and commands.

Features
- Complete update of THE Definitive Guide to Django Experienced author and Django developer Katie Cunningham is working with the original authors to bring the content up to date for the latest version of Django One of the first books to cover Django 1.6, the first version of Django to fully support Python 3

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

Pro JPA 2

J. Kaplan-Moss, A. Holovaty, K. Cunningham

The Definitive Guide to Django

Web Development Done Right

This third edition of The Definitive Guide to Django is updated for the latest version of Django, and, with the forward and compatibility guarantee that Django now provides, should still serve as the ultimate tutorial and reference for this popular framework for years to come. Django is of the most popular Python-based web frameworks, and it now supports Python 3. It's the framework behind Pinterest, Instagram, and Mozilla.org. Experienced author and Django developer Katie Cunningham built the strong foundation laid by lead Django developer Jacob Kaplan&Moss and Django creator Adrian Holovaty show you how they use this framework to create award-winning web sites by guiding you through the creation of a web application reminiscent of ChicagoCrime.org. The Definitive Guide to Django, Third Edition is broken into three parts, with the first introducing Django fundamentals such as installation and configuration, and creating the components that together power a Django-driven web site. The second part delves into the more sophisticated features of Django, including outputting non-HTML content such as RSS feeds and PDFs, caching, and user management. The appendixes serve as a detailed reference to Django’s many configuration options and commands.

Features
- Updates a definitive and unique book on Oracle’s JPA or Java Persistence APIs
- The authors are Oracle engineers, experts and authors who are definitive experts
- Java Persistence APIs are a key set of APIs to be found in the new Java EE 7 platform

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book
E. Kennedy

Arduino, Sensors, and the Internet of Things

You’re ready to move beyond “blink” and basic bots, and who better to explain how Arduino works with the Internet of Things than RobotGrrl. In Arduino, Sensors, and the Internet of Things, Erin Kennedy, better known in the Arduino community as RobotGrrl, shows you the basics of connecting your Arduino to the Internet of Things. Then you’ll advance to learn how to create networks of connected devices, how to make sensor decisions, and how to filter data. Key elements in Arduino, Sensors, and the Internet of Things shows you how to make your Arduino-based gadgets talk to each other and to you.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

I. Krajci, D. Cummings

Android on x86

For the overwhelming majority of Android applications, the chipset simply will not matter. This book is for the exceptions. Android on X86 is meant to be a guide and a reference to any programming optimizations, issues, and problem that may arise from using x86 platforms. The authors have attempted to compile any issues associated with the chipset and discuss them in detail here. So this is meant to be a one stop shop for any developer who may need this information.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

J. Krause

Pro SharePoint 2013 Development

Building Solutions for SharePoint 2013

Microsoft’s SharePoint platform has become the tool of choice in business small and large around the world. With SharePoint 2013, the phenomenon grows -- you can build business intelligence, content management, public website, automated workflow, and administrative solutions on a full-featured platform. You need a guide to walk you through the almost endless possibilities and show you the tricks of the SharePoint application development trade. Pro SharePoint 2013 Development is that guide. Written by one of the world’s foremost experts on SharePoint development, Sahil Malik, this book takes you through practical, real-world scenarios for building solutions on top of the SharePoint platform. With an extensive focus on new features in the 2013 release applied with an expert hands-on treatment of how to solve programming challenges and deployment obstacles, you’ll find inside this book the best strategies and secrets for unlocking the power of the SharePoint promise.

Features
► SharePoint is a proven seller at retail, garnering huge interest over its history ► SharePoint 2013 includes new platform-esque features that broaden and increase the size and depth of the potential book-buying audience ► Our team of experts and complementary line of books provide a solution for all levels of SharePoint developers

Fields of interest
Computer Science, general; Document Preparation and Text Processing

Target groups
Popular/general

Product category
Professional book
**Pro Puppet**

Pro Puppet, Second Edition, now updated for Puppet 3, is an in-depth guide to installing, using, and developing the popular configuration management tool Puppet. Puppet provides a way to automate everything from user management to server configuration. You’ll learn how Puppet has changed in the latest version, how to use it on a variety of platforms, including Windows, how to work with Puppet reporters, and how to use Hiera. Puppet is a must-have tool for system administrators, and Pro Puppet will teach you how to maximize its capabilities and customize it for your environment. Install and configure Puppet to immediately start automating tasks and create reporting solutions. Learn insider tricks and techniques to better manage your infrastructure. Become a Puppet expert!

**Feature**
- Updated for Puppet 3

**Field of interest**
Computer Science, general

**Target groups**
Popular/general

**Product category**
Professional book

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**SQL Server 2012 DBA Recipes**

SQL Server 2012 DBA Recipes is chock-full of task-oriented examples for database administrators faced with more tasks on their to-do lists than fit into a day’s work. Examples are couched in Apress’ popular, problem/solution format, and cover the gamut from small-business to enterprise database environments. You’ll provided with effective and proven solutions to accomplish just about any DBA task that you may encounter during your daily work. You can feel confident taking the reliable solutions that are demonstrated in this book and applying them in your own working or testing environment. The solutions in SQL Server 2012 DBA Recipes have been built and tested using the most current SQL Server 2012 software. Robust coverage is given to important new features such as SQL Server AlwaysOn. You also get solid-coverage of DBA-amplification features such as Policy-Based Management and PowerShell that serve as long levers by which you can move the world, or at least do more in less time, and with less effort. SQL Server 2012 DBA Recipes is the perfect lever by which you can extend your productivity as a DBA. Archimedes would be proud. Covers the latest release, including new features such as SQL Server AlwaysOn and FileStream. Shows the use of performance-amplifying tools such as PowerShell and Policy-Based Management.

**Features**
- The only expressly example-driven book on SQL Server administration
- Built around the popular, problem/solution format
- Strong coverage of new features such as AlwaysOn and FileStream

**Field of interest**
Database Management

**Target groups**
Popular/general

**Product category**
Professional book

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**Learn Java for Web Development**

Web development is still one of today’s most popular, active and important programming and development activities. Whether it’s a web page to an e-commerce-enabled web site to a fully-fledged web application, the Java programming language and its frameworks allow you great flexibility and productivity for your web application development. Learn Java for Web Development gives today’s web developers who are new to Java to use the key and most relevant Java skills and frameworks allowing them to quickly learn and build simple to powerful web sites and applications, such as a book store e-commerce application. After picking up this book, Vishal Layka’s experience guides you on a very practical learning, then building, journey. First, you learn Java nuts and bolts necessary to build a simple “HelloWorld” Java (native) application. Next, you learn to build a “HelloWorld” Java-based web application example that utilizes Servlets and JavaServer Pages (JSPs). Then you’ll start the building blocks of your first real-world case study – a book store e-commerce application – by learning more about Servlets, JSPs and adding JavaServer Faces (JSPs) and the Expressions found in each of these to the mix.

**Feature**
- Aims to be first and contemporary Java skills accumulation book of its kind for learning and building Java-based Web pages, sites and e-commerce applications. Vishal Layka is an experienced Apress author on Groovy and is experienced at Java Web development. Web development remains a popular applied activity using Java technologies, languages and frameworks.

**Field of interest**
Computer Science, general

**Target groups**
Popular/general

**Product category**
Professional book

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**Learn Java for Web Development**

Web development is still one of today’s most popular, active and important programming and development activities. Whether it’s a web page to an e-commerce-enabled web site to a fully-fledged web application, the Java programming language and its frameworks allow you great flexibility and productivity for your web application development. Learn Java for Web Development gives today’s web developers who are new to Java to use the key and most relevant Java skills and frameworks allowing them to quickly learn and build simple to powerful web sites and applications, such as a book store e-commerce application. After picking up this book, Vishal Layka’s experience guides you on a very practical learning, then building, journey. First, you learn Java nuts and bolts necessary to build a simple “HelloWorld” Java (native) application. Next, you learn to build a “HelloWorld” Java-based web application example that utilizes Servlets and JavaServer Pages (JSPs). Then you’ll start the building blocks of your first real-world case study – a book store e-commerce application – by learning more about Servlets, JSPs and adding JavaServer Faces (JSPs) and the Expressions found in each of these to the mix.

**Feature**
- Aims to be first and contemporary Java skills accumulation book of its kind for learning and building Java-based Web pages, sites and e-commerce applications. Vishal Layka is an experienced Apress author on Groovy and is experienced at Java Web development. Web development remains a popular applied activity using Java technologies, languages and frameworks.

**Field of interest**
Computer Science, general

**Target groups**
Popular/general

**Product category**
Professional book

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**Field of interest**
Computer Science, general

**Target groups**
Popular/general

**Product category**
Professional book
A. Ludin

Learn BlackBerry 10 Apps Development

The purpose of this book is to teach you how to leverage the BlackBerry 10 Cascades framework in order to create rich native applications. Key points: - BB10 Cascades Programming using QML and JavaScript. - Strait to the point approach to BB10 application development. - Visually enticing user interface creation using Cascades and QML.

Features
- Aims to be First or one of the first BlackBerry 10 books to market
- Tech reviewed by Blackberry to make definitive
- No BlackBerry 10 platform books - yet - forthcoming from Apress competitors
- BlackBerry is a prominent mobile apps development and eco

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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D. Mabbutt, A. Freeman, M. MacDonald

Pro ASP.NET 4.5 in VB

ASP.NET 4.5 remains Microsoft’s preferred technology for creating dynamic websites, providing developers with unrivalled power and flexibility. This comprehensive book will teach you everything you need to know in order to create well architected ASP.NET websites. Beginning with core concepts such as the structure of the .NET Framework and how ASP.NET is founded upon it, the book progresses steadily through key professional skills. You’ll be shown how to query databases in detail, consider the myriad applications of XML, and step through all the considerations you need to be aware of when securing your site from intruders. Finally, you’ll consider advanced topics such as using ASP.NET with MVC 4, ASP.NET AJAX, HTML5 and Silverlight. By the time you have read this book you will have learned all the skills you need to use ASP.NET 4.5 with confidence.

Features
- The first ASP.NET 4.5 title to offer a full coverage of the key new ASP.NET 4.5 features, including ASP.NET MVC 4, Silverlight 5 and ASP.NET Dynamic Data
- Written by the same highly successful author team as the previous editions, ensuring the same quality of content and explanation
- Shows how to bring the many technology concepts within ASP.NET together to produce well-constructed and easily maintainable applications with plentiful fully-worked examples to demonstrate good practice

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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D. Mackintosh

Pro Object-Oriented JavaScript

Pro Object-Orientated JavaScript teaches you how to utilize this versatile language in an object-oriented way. Intended for developers familiar with JavaScript, you can now learn to create fully object-oriented JavaScript programs perfect for scalable web applications, and highly portable and distributable Node.js applications. Look behind almost every large program and large-scale website, and you will find object-oriented code powering it and delivering what you want. This book will teach you: What object-oriented JavaScript (OOJS) is and how best to apply it to your workflow Where we find object-oriented applications and frameworks in the real world How to build your first object-oriented JavaScript application

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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Apress®
Due October 2013

2013. 300 p. Softcover
- * € (D) 32,05 | € (A) 32,94 | sFr 40,00
- € 29,95 | £23.50

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Apress®
Due September 2013

- * € (D) 56,49 | € (A) 58,07 | sFr 70,50
- € 52,79 | £47.49

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Apress®
Due September 2013

2014. 380 p. Softcover
- * € (D) 32,05 | € (A) 32,94 | sFr 40,00
- € 29,95 | £23.50
ISBN 978-1-4302-5749-3
Beginning HTML5 Apps

Beginning HTML5 Apps teaches you how to make apps using this exciting cross-platform technology. Expanding on your basic knowledge of HTML, CSS and JavaScript, this book teaches you how to build apps that you can deploy and make money from. In the past, creating applications has typically involved learning a different language for each device, but now you can harness the power of HTML5 across all platforms. You will learn: How to efficiently plan, build and deploy an HTML5 app Ways to use form enhancements, offline storage, multimedia elements, geolocation, device features and canvas in real-world app examples How to use varied tools and frameworks such as Titanium and PhoneGap What testing you should implement on your apps, and why Why you should follow best practices, and how to implement them Beginning HTML5 Apps not only teaches you all you need to know about HTML5 app building, but also how to utilize PhoneGap, Titanium, Chrome Web Store and Firefox Marketplace in order to monetize your app.

Features
► Teaches the reader how to make an app in HTML5 from start to finish - focussing on all the important aspects that will be key for them to succeed as app developers, rather than just a base explanation of the language ► The book will discuss deployment options available to the developer, covering some of the popular methods (PhoneGap and Appcelerator Titanium) to deploy across seven mobile platforms, browser based ecosystems (Chrome Web Store & Firefox Marketplace) and desktop deployment (Windows 8) ► With analysts predicting one billion HTML5 phones sold this year alone, many are viewing 2013 as a breakout year for HTML5

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

Concurrent Application Development using Akka with Scala

Building scalable, concurrent systems is hard. Think parallelism and we think about threads. Using threads for parallelism is not only difficult but also not scalable. You can only create a certain number of threads on a box. On the other hand you can create a million Akka actors on a box. Also it is difficult to scale out (parallel scaling) using threads. Any multi threaded application likely has the keyword synchronized peppered throughout the code base. It does not follow any pattern which makes the code base and application difficult to manage and it also indicates the difficulty in managing threads. The Akka framework has brought Actors to the Java virtual machine.

Features
► This book serves as a bridge between business and technology. It not only explains the technical stack but also describes the business situations where it can be applied. The book utilizes a practical experiential mode of coverage with code examples, which helps understanding of Akka and Scala Scala is rapidly gaining popularity as a modern programming language. It is JVM based and is both functional and object oriented language. It is the language of choice for Akka creators Akka actors are being combined in the standard Scala language with the new release of Scala. This would be the first book covering the merger of the two technology sets. The book introduces and covers the new concept of Akka clustering, which is a big bet and has gained popularity as an up and coming feature

Fields of interest
Computer Science, general; Programming Languages, Compilers, Interpreters

Target groups
Popular/general

Product category
Professional book

Beginning Dart

With Beginning Dart, discover a new way to take a web project rapidly from prototype to scale of a large application like Gmail and beyond. Understand how Dart breaks through the limits of the existing web browser and JavaScript. Learn the Dart language by following the complete development of a fun, realtime web app tracking customer@146's beer mugs. “JavaScript is great, but...” You hear that sentence a lot from developers...it's not object-oriented,...it doesn't scale well,...there's no type checking, and so on. Dart changes all that. JavaScript is a lightweight scripting language that was not intended for the large-scale applications that people are building with it today. From the outset, Google set out to make Dart the language that web developers need today. It is better structured, more secure, and more powerful than JavaScript, yet it remains easy to learn and start programming with. Beginning Dart collects all the information developers will need to hit the ground running using this exciting Google technology. Beginning Dart encourages Dart best practice from the start, showing you how to write extensible and truly modular code. You'll see how to use unit testing and test-driven development in your projects, as well as the best ways to write performant web applications. In addition to learning the Dart language, you'll cover more advanced topics such as programming the Dart VM and contributing to the Dart project.

Features
► A complete introduction to Dart for web developers ► The only current book to cover the full Dart 1.0 release ► Written by a Dart contributor

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book
Beginning Git

Beginning Git not only covers Git basics, but it also gives you a thorough walk-through of two of the most important Git communities, GitHub and Bitbucket. If you’re just getting started with coding or using version control, you’ll quickly find that being able to use Git is an extremely valuable skill. Many major software projects, and even some non-software projects use Git for version control, and GitHub is the biggest Git community. Plus Bitbucket now supports Git and even allows import of GitHub repositories. Learning how to use Git in both of these communities is an invaluable skill, and Beginning Git not only covers both, it also introduces the SourceTree client, usable with both GitHub and Bitbucket. Learn why version control is important and how Git can help you with it; Git doesn’t exist in a vacuum: learn how to use GitHub to take full advantage of what Git offers. See how Bitbucket differs from GitHub and how to make yourself at home there.

Feature
► Aims to be first or one of the very first explicit examples-driven Git tutorial book to market. The author is an experienced instructor and author who takes a very real-world, practical approach. Git is one of the most popular if not most popular version control tools for today’s Linux/Android and electronics programmers, system admins and users.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

Being Agile

Your Roadmap to Successful Adoption of Agile

Being Agile is your roadmap to successfully adopting Agile methods. Veteran ScrumMaster and Agile Coach Mario Moreira teaches new adopters how to implement a robust Agile methodology for the first time. Agile is a ubiquitous watchword in the corporate world, but only a minority of companies understand and practice what they pay lip service to. Too many content themselves with half-baked approximations such as Fragile (fragile Git), ScrumBut (Scrum but not the practices), and ScrumFall (mini-waterfalls in the sprints). Moreira shows maturing early adopters how to bridge the chasm between going through the motions of doing Agile and genuinely being Agile. After a high-level synopsis of Agile, its methodologies (including Scrum, Kanban, Scrum-ban, and XP), and its business benefits, Moreira plunges into the nitty-gritty of the Agile short release and iteration cycle.

Feature
► This book presents an Agile adoption model and practical techniques for applying and adapting the model in a wide variety of real situations. Being Agile is timely because the software industry has entered a phase in which the &quote;good&quo; majority is adopting Agile and genuinely being Agile. After a high-level synopsis of Agile, its methodologies (including Scrum, Kanban, Scrum-ban, and XP), and its business benefits, Moreira plunges into the nitty-gritty of the Agile short release and iteration cycle.

Android Best Practices

Android Best Practices by Godfrey Nolan shows you how to make your Android apps stand out from the crowd with stronger reviews for your apps. Why settle for just making any Android app? Build a brilliant, standout Android app instead that lets your users praise it for ease of use, better performance and more. Better praise means better, higher placement in the app stores for increased app sales. Using a series of reference apps as examples which gradually evolve throughout this book, Android Best Practices brings together current Android best practices from User Interface (UI)/User Experience (UX) design, test driven development (TDD), and design patterns (i.e., MVC) to help you take your app to the next level, especially on these areas. &quot;Understanding Agile Android&quot; &quot;Mastering UX and Development Best Practices&quot; &quot;Overcoming device fragmentation&quot; &quot;Designing and developing on app that runs well on many if not all the leading Android smartphones and tablets today can be one of the most daunting challenges for Android developers. Well, this book takes much of the mystery out of that for you. After reading and using this book, you’ll become a much better Android app designer and developer, which in turn can make your apps better placed and more successful in the market place.

Feature
► This aims to be first Android best practices book to book market, which deals with design patterns but much more, too. Godfrey Nolan is an Android and Java expert. Android market is one of the two leading apps development platforms and apps eco.
A. Onishi

Pro WordPress Theme Development

Pro WordPress Theme Development is a comprehensive guide to creating advanced WordPress themes, for professional web designers and developers who are comfortable with PHP and WordPress. You will learn how to build themes from scratch, and how to monetize the themes you create. WordPress is one of the most successful open source blogging and content management systems available, and theme development has become a major part of the WordPress ecosystem. Learn how to capitalize on this by creating advanced themes for your clients or to sell as premium themes.

Feature
- Author has an increasingly well-known profile as he runs several projects and blogging communities. Recently had very good reaction to WordPress article which was run as part of his 12devsofxmas project: http://www.12devsofxmas.co.uk/. Will be supported by author's workshops which he is starting this year so the content will be repeatedly sold/targeted at an audience that will be wanting to pick up advanced knowledge. Will be fully up-to-date with current versions unlike nearest competitors.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

N. D. Patnaik

Developing Secure Applications

Developing Secure Applications is targeted towards all developers and security programmers. Mobile apps, website applications, and enterprise applications developers would especially benefit from dedicated tools and case studies covered in the book. Written for the reader with no prior knowledge of how to build secure mobile and web-based applications and to test for their security, the book explains all the necessary concepts, tips and tricks, and practical real-life security threats. The book has been logically organized into 4 units: Fundamentals of security engineering, security testing, and development methodologies Security testing recipes Secure development guidelines and recipes Case studies: the latest and interesting attack vectors The highlights of the book are its coverage of the latest trends in attacks against web or mobile applications and the best practices for developing secure mobile applications.

Features
- Hands-on approach based content for immediate results
- Step by step approach to test the security of applications using diverse collection of tools
- Programming language independent secure coding best practices
- Dedicated case studies on iOS and Android for mobile application developers citing development and testing secure mobile applications

Field of interest
Data Encryption; Information Systems and Communication Service

Target groups
Popular/general

Product category
Professional book

A. Patzer

Beginning Big Data with Java

Analysis of so-called “Big Data” is becoming increasingly important for the competitive advantage it confers to businesses as they increasingly base decisions upon hidden trends and other factors that are teased out by successful application of statistics. Beginning Big Data with Java is written for Java programmers who want to build their skill set in this burgeoning and profitable new area. Beginning Big Data with Java begins with the big picture and then quickly moves into getting set up with a productive development environment and toolset. You’ll learn about NoSQL technologies and the advantages they confer. You’ll learn about Hadoop, and how to run MapReduce processing locally on your desktop or server hardware. Then take it to the cloud where you can scale your processing to new heights using EC2 servers and S3 storage from Amazon Web Services, and also Google’s App Engine. Today’s cloud-providers give the ability to parallelize Big Data processing well beyond what many businesses can support in house. But what if you do want to run your processing in house? Beginning Big Data with Java has you covered there too, with a solid chapter on creating your own, in house private cloud. Whatever your needs, Beginning Big Data with Java is the right book to get you started in applying your Java knowledge to the fast-growing field of Big Data analysis.

Feature
- Provides Java programmers a bridge into Big Data. Provides a heavy focus on the cloud, thus playing simultaneously to the growing trends of Big Data analysis and cloud-based computing. Written by a well-reviewed author. Will be day-and-date with Java 8.

Field of interest
Computer Science, general; Data Mining and Knowledge Discovery

Target groups
Popular/general

Product category
Professional book
A. Peck  
**Beginning GIMP**  
**From Novice to Professional**

From first installation to advanced image manipulation techniques, the third edition of Beginning GIMP explains how beginners can use the newly released GIMP 2.8, and allows experts to learn more about its new filters, tools and features. GIMP is the most popular open source image manipulation and digital drawing program in the world, and Beginning GIMP’s third edition is an excellent resource for those working towards expertise in image processing. The GIMP runs on Windows, Linux, and Mac OS X platforms, and it looks remarkably similar on all three. Beginning GIMP first explains the new single-window interface and configuration options and proceeds to guide you through quick and simple projects to familiarize yourself with the new environment. With four-color graphics and screenshots throughout, you’ll learn how to prepare camera images for display on web pages using non-destructive manipulation and digital drawing techniques. The third edition also covers server administration topics dealing with both local networks and cloud servers. Some of the new topics in this edition: Updated and clarified coverage of network protocol layers and data encodings. How Python 3 works with network exception handling. Concrete examples of packet interception and sniffing with Python. How to use the increasingly popular Tornado framework. How to use the requests library instead of urllib2. Expanded coverage of Python web frameworks. If you’re a Python programmer who needs a deep understanding of how to use Python for network-related tasks and applications, this is the book you want by your side.

**Features**
- First comprehensive GIMP 2.8 book
- Written by bestselling author Akkana Peck
- Covers the all-new single window management (SWM) interface
- Dives into non-destructive image editing using the GEGL tool, or just program new scripts using the GEGL library
- Join the cool kids using cage warping and brush dynamics
- Learn to move inside GIMP with confidence and on all platforms

**Fields of interest**
Image Processing and Computer Vision; Computer Graphics

**Target groups**
Popular/general

**Product category**
Professional book

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B. Rhodes, J. Goerzen  
**Foundations of Python Network Programming**

Completely updated for Python 3, Foundations of Python Network Programming, Third Edition, covers all the classic topics you’d expect, like network protocols, network data and errors, email, server architecture, and HTTP and web applications, plus it also addresses how all of these topics have evolved in relation to Python 3. The third edition also covers server administration topics dealing with both local networks and cloud servers. Some of the new topics in this edition: Updated and clarified coverage of network protocol layers and data encodings. How Python 3 works with network exception handling. Concrete examples of packet interception and sniffing with Python. How to use the increasingly popular Tornado framework. How to use the requests library instead of urllib2. Expanded coverage of Python web frameworks. If you’re a Python programmer who needs a deep understanding of how to use Python for network-related tasks and applications, this is the book you want by your side.

**Feature**
- An update to the thorough and essential guide Python network programming
- Updated for Python 3, with many new libraries and modules
- Addressed Updated coverage of the network stack and Python as a server administration tool
- More new, clear figures to illustrate key concepts

**Field of interest**
Computer Science, general

**Target groups**
Popular/general

**Product category**
Professional book

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M. Rochkind  
**Expert PHP and MySQL**  
**Application Design and Development**

Expert PHP and MySQL is about bringing commercial-grade practices to PHP and MySQL projects. You’re a competent PHP developer, so you’re comfortable in working with the language and the database; you’ve even implemented a few projects using them; now is the time to focus on successful practices for organizing your projects, setting mutually agreeable targets with clients, modelling and managing data, always with the end goal of delivering polished and robust applications that will stand the test of time and reliably deliver on customer needs. Developers of real-world applications face numerous problems that seem trivial on the surface, but really do take some skill to get right. Error handling is about more than just the mechanics in the PHP syntax, but also about handling MySQL errors, logging those errors, and about hiding information about application internals that error messages sometimes can expose. We all know that password encryption is desirable, but what's the best method to use? And then there is the bugaboo of converging data from the old system to the new. These are just some of the issues that any serious developer routinely faces. Meet the challenges head-on! Author Marc Rochkind shows how to begin a project right, with clear contract and set of written requirements.

**Feature**
- PHP and MySQL form one of the most commonly-employed development environments.
- Author Marc Rochkind is a known good quantity whose book on Advanced Unix Programming garners excellent reviews.
- The burgeoning need for web-apps aimed at tablets and smart-phones helps ensure strong demand for high-end content such as this book.

**Field of interest**
Computer Science, general

**Target groups**
Popular/general

**Product category**
Professional book
V. Sarda
Pro SharePoint 2013 Performance Optimization

SharePoint is a complex platform with a lot of moving parts, and tuning them all for best performance and response time can be a real challenge. Without attention and care, your SharePoint deployment with suffer from slow responses, latency, performance problems, and other errors. You can’t afford to ignore these issues. Your solution - Pro SharePoint 2013 Performance Optimization.

Inside this hands-on book, author Veena Sarda solves your SharePoint performance problems and guides you through how to ward off future issues. Learn how to design the best-performing platform architecture, discover which useful utilities to run to diagnose and identify trouble spots in your SharePoint infrastructure, identify settings to tweak for various scenarios and loads, and deploy your own performance monitoring system to keep your SharePoint implementation humming along smoothly. Optimize, enhance, and speed up your SharePoint system today with Pro SharePoint 2013 Performance Optimization.

Feature
► Architecture and Configuration considerations for maximizing performance
Understanding usage of Tools for maximizing performance
Leaves readers with valuable skills in SharePoint 2013 performance that will save them money and contribute to healthy SharePoint Farm.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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P. Sunderaraman
Practical Ext JS 4

Ext JS 4 is a JavaScript framework used to build rich internet applications. The core strength of Ext JS 4 is in building a complete application in a single page using component-based, modularized, and proficient JavaScript code that can run seamlessly in all major browsers. Practical Ext JS 4 is written for developers, and has up-to-date coverage of all of the features of Ext JS 4.2. The objective of the book is to get you up and running using the Ext JS 4 framework for your projects as quickly as possible. In the book, you will rapidly be brought up to speed on some of the advanced features of JavaScript, such as mixins, closures, and hoisting, and how you can take advantage of these combined with the power of Ext JS to create powerful applications. You’ll learn all of the core features of the Ext JS framework, such as its MVC architecture, theming your applications, and working with and displaying data effectively. You’ll also extensively use the Ext JS components throughout the practical examples in the book. Finally, you’ll learn about unit testing and packaging to build and deploy better applications. Provides you with a solid foundation on the building blocks of Ext JS 4. Takes you through developing applications using MVC architecture. Teaches extending and unit testing. Ext JS 4 applications Completely up-to-date for the latest Ext JS 4.2

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book

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B. Sutherland
Beginning Android C++ Game Development

Beginning Android C++ Game Development introduces general and Android game developers like you to Android’s powerful Native Development Kit (NDK). The Android NDK platform allows you to build the most sophisticated, complex and best performing game apps that leverage C++. In short, you learn to build professional looking and performing game apps like the book’s case study, Droid Runner. The techniques contained in this book have been learned by the author, Bruce Sutherland, over a career which has lasted 7 years to date and involved programming on several AAA titles. Versions of these techniques have been used towards shipping game titles on hardware sold by all of the major console manufacturers: Sony, Microsoft and Nintendo. In this book, you’ll have a grasp of all the major aspects of game design and programming using the Android NDK and be ready to submit your first professional video game app to Google Play and Amazon Appstore for today’s Android smartphones and tablet users to download and play.

Feature
► Aims to be first Android C++ Games tutorial book to market (other Android game books are on Android Java). Android C++ lets game developers build more complex, sophisticated games that make more money than simple, less sophisticated games. Android remains the second most popular mobile app dev platform for today’s app developers.

Field of interest
Computer Science, general

Target groups
Popular/general

Product category
Professional book
P. Vogel

**ASP.NET Web API Recipes**

**A Problem-Solution Approach**

ASP.NET Web API Recipes gives you the code and the confidence to work with the Web API successfully in any .NET environment. ASP.NET Web API Recipes shows you how to use the Web API with the full range of .NET application development tools to solve common business problems. Find out how this technology allows you to build real world, line-of-business applications more efficiently than ever before. The first chapters of ASP.NET Web API Recipes provide you with the key solutions you’ll reach for when you’re integrating the Web API with applications from your chosen technology—a library that’s ASP.NET, SharePoint, WPF, or Windows Phone. Then later chapters will show you a wide range of solutions to the critical problems that you’re most likely to face on any of these platforms. You’ll learn how to handle input and output issues, test your web services, and how to bypass IIS when you need to. You’ll learn how to preempt your extensibility problems ahead of time, and how to solve typical problems of performance, efficiency and flexibility while working with the Web API. Throughout ASP.NET Web API Recipes, you’ll find the solutions you need to key the situations you’ve already met or are likely to meet, with the insights and configuration code to adapt them to your own scenarios. ASP.

**Feature**

- Shows how the Web API is used to solve the real world problems developers face in creating business applications. Integrates the Web API with the rest of the .NET developer’s toolkit. Supports modern development practices to create applications that are testable, maintainable, and extendable.

**Field of interest**

Computer Science, general

**Target groups**

Popular/general

**Product category**

Professional book

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Z. Wadia, H. Saleh, A. Christensen

**Pro JSF and HTML5**

**Building Rich Internet Components with Java EE 7**

Pro JSF and Ajax shows you how to leverage the full potential of JavaServer Faces (JSF) and Ajax. This is not an entry-level tutorial, but a book about building Ajax-enabled JSF components for sophisticated, enterprise-level rich Internet applications. Written by JSF experts and verified by established community figures, this book provides reliable and groundbreaking JSF components to help you exploit the power of JSF in your Java web applications. This book provides a blueprint for building custom JSF user interface components and shows how to leverage the best browser technologies, such as Ajax, Mozilla XUL and Microsoft HTC, to deliver rich Internet applications. This book also covers standard best practices for behavioral and renderer-specific component classes, renderers, events and event listeners, and JSF tag handlers for each. It also covers advanced techniques such as dynamic content type negotiation, JAR-based resource delivery, and dynamic render kit selection. This book serves as an advanced tutorial and reference. So, it’s a must-have if you’re a Java EE or Web applications developer.

**Feature**

- Strong selling book updated for Java EE 7 and its newest JSF APIs. No competition being updated for Java EE 7 announced. JSF is still a relevant and key Java Web API. The authors are known in Java and HTML5 web application development communities.

**Field of interest**

Computer Science, general

**Target groups**

Popular/general

**Product category**

Professional book

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H. Walch

**Pro IIS**

**Internet Information Services in the Data Center and the Cloud**

Pro IIS guides you through the many challenges and opportunities that developers and architects face when building websites and web services for an increasingly dynamic web. If you need to set up IIS as the foundation for your web application this book will teach you everything you need to know. You will be walked through the key facts you need to be aware of when setting up a modern IIS installation. Whether you’re starting from scratch or migrating a pre-IIS 7 web application this book will help you make the right choices and give you peace of mind every step of the way. Because of the rapid evolution of the web the modern IIS user is faced with fundamental challenges that previous users have not had to answer. Is it better to host your applications locally or place them in the cloud? Are your security protocols sufficient for the task yet flexible enough to allow your web applications to grow? Are you using tools such as PowerShell to their full advantage? Will your maintenance routines provide the reliability that you need? Pro IIS will answer all of these questions and more.

**Feature**

- Provides a concise definitive guide to using the latest IIS versions in a modern setting. Includes coverage of PowerShell and how it can be used to increase automation and save readers substantial amounts of time. A unique emphasis on the community best-practices that have grown up around IIS and how readers can use them to ensure their applications run smoothly and are in line with the latest security guidelines.

**Field of interest**

Computer Science, general

**Target groups**

Popular/general

**Product category**

Professional book
J.-D. Warren, B. Katz

Run, Roll, Fly: Arduino Bots and Tools

Quadcopters, desktop-sized Segway clones, tree-climbing bots, bots that draw, bots controlled with IR, bluetooth, and even your mind, and even a digital cane to help people without sight get around safely. These projects and more await you in Run, Roll, Fly: Arduino Bots, Tools, and Toys. JD Warren, the author of Arduino Robotics, walks you through how to construct an amazing set of robots and robotic gadgets that can do everything from impressing your office mates to making life easier for you or your friends. You even get instructions for building a tree-climbing bot from Ben Katz. You’ll find detailed parts lists, assembly instructions, code, and explanations of how it all works together for every project.

Features
► A mix of serious and fun projects from JD Warren, the builder of the LawnBot 400 and author of Arduino Robotics ◄ Bonus tree-climbing bot from Ben Katz ◄ Detailed parts lists, clear assembly instructions, and code explanation

Field of interest
Computer Science, general

Target groups
Popular/general

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</tr>
</thead>
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<td>Biomedical and Life Sciences</td>
</tr>
<tr>
<td>Business Management</td>
<td>Business and Economics</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry and Materials Science</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Dentistry</td>
<td>Medicine</td>
</tr>
<tr>
<td>Earth Sciences</td>
<td>Earth and Environmental Science</td>
</tr>
<tr>
<td>Economics/Management Science</td>
<td>Business and Economics</td>
</tr>
<tr>
<td>Education</td>
<td>Humanities, Social Sciences and Law</td>
</tr>
<tr>
<td>Energy</td>
<td>Energy</td>
</tr>
<tr>
<td>Engineering</td>
<td>Engineering</td>
</tr>
<tr>
<td>Environmental Sciences</td>
<td>Earth and Environmental Science</td>
</tr>
<tr>
<td>General Science</td>
<td>Humanities, Social Sciences and Law</td>
</tr>
<tr>
<td>Geography</td>
<td>Earth and Environmental Science</td>
</tr>
<tr>
<td>Humanities / Arts / Design</td>
<td>Humanities, Social Sciences and Law</td>
</tr>
<tr>
<td>Law</td>
<td>Humanities, Social Sciences and Law</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>Biomedical and Life Sciences</td>
</tr>
<tr>
<td>Linguistics</td>
<td>Humanities, Social Sciences and Law</td>
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<td>Management/Business for Professionals</td>
<td>Business and Economics</td>
</tr>
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<td>Materials Science</td>
<td>Chemistry and Materials Science</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics and Statistics</td>
</tr>
<tr>
<td>Medicine &amp; Public Health</td>
<td>Medicine</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Medicine</td>
</tr>
<tr>
<td>Philosophy</td>
<td>Humanities, Social Sciences and Law</td>
</tr>
<tr>
<td>Physics</td>
<td>Physics and Astronomy</td>
</tr>
<tr>
<td>Popular Science</td>
<td>The corresponding subject</td>
</tr>
<tr>
<td>Professional Computing</td>
<td>Professional and Applied Computing</td>
</tr>
<tr>
<td>Psychology</td>
<td>Behavioral Science</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>Humanities, Social Sciences and Law</td>
</tr>
<tr>
<td>Statistics</td>
<td>Mathematics and Statistics</td>
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