# Springer NEWS Subject List

Download any time! springer.com/NEWSonline

Go directly to the web site and download whatever files you want. Each issue remains online for six months.

Our subjects and files are listed here for your reference.

## PDF CHAPTERS
- Biomedicine
- Business for Professionals/Management
- Chemistry
- Computer Science
- Dentistry
- Earth Sciences
- Economics/Management Science
- Education
- Energy
- Engineering
- Environmental Sciences
- Geography
- Humanities/Arts/Design
- Law
- Life Sciences
- Linguistics
- Materials Science
- Mathematics
- Medicine & Public Health
- Pharmacy
- Philosophy
- Physics
- Popular Science
- Proceedings
- Psychology
- Social Sciences
- Statistics

## ADDITIONAL FILES
- Author Index
- Title Index

## ONLINE FILE NAMES*

*xx is replaced by the number of the month. For example, 1108 means the August 2011 issue.

- news11xx_biomedicine
- news11xx_business_management
- news11xx_chemistry
- news11xx_computer_science
- news11xx_dentistry
- news11xx_earth_sciences
- news11xx_economics
- news11xx_education
- news11xx_energy
- news11xx_engineering
- news11xx_environment
- news11xx_geography
- news11xx_humanities
- news11xx_law
- news11xx_life_sciences
- news11xx_linguistics
- news11xx_materials
- news11xx_mathematics
- news11xx_medicine
- news11xx_pharmacy
- news11xx_philosophy
- news11xx_physics
- news11xx_popular_science
- news11xx_proceedings
- news11xx_psychology
- news11xx_social_sciences
- news11xx_statistics

## ONLINE FILE NAMES

- news11xx_author
- news11xx_title
Author Index .................................................. III
Title Index ................................................... XVII
Proceedings .................................................. 215

Biomedicine .................................................. 1
Business for Professionals/Management .................. 16
Chemistry ..................................................... 21
Computer Science .......................................... 31
Earth Sciences .............................................. 47
Economics/Management Science ......................... 54
Education .................................................... 61
Engineering .................................................. 66
Environment ................................................ 97
Geography ................................................... 102
Humanities/Arts/Design .................................. 103
Law ............................................................. 104
Life Sciences ............................................... 109
Linguistics .................................................. 127
Materials Science ......................................... 128
Mathematics ................................................ 131
Medicine & Public Health ................................ 151
Philosophy .................................................. 174
Physics ....................................................... 181
Popular Science ........................................... 200
Psychology .................................................. 201
Social Sciences ............................................. 204
Statistics ..................................................... 210

All titles are included in Springer’s eBook Collections on SpringerLink.com. Exceptions are marked “Only available in print.”
### A

216 Abraham (Eds), Advances in Computing and Communications, Part I. ACC 2011 (Communications in Computer and Information Science 190)

216 Abraham (Eds), Advances in Computing and Communications, Part II. ACC 2011 (Communications in Computer and Information Science 191)

216 Abraham (Eds), Advances in Computing and Communications, Part III. ACC 2011 (Communications in Computer and Information Science 192)

216 Abraham (Eds), Advances in Computing and Communications, Part IV. ACC 2011 (Communications in Computer and Information Science 193)

217 Aceto (Eds), Automata, Languages and Programming. ICALP 2011 (Lecture Notes in Computer Science, LNCS 6755)

217 Aceto (Eds), Automata, Languages and Programming. ICALP 2011 (Lecture Notes in Computer Science, LNCS 6756)

16 Acs (Eds), Handbook of Entrepreneurship Research (International Handbook Series on Entrepreneurship) 2nd ed.

151 Adamec (Eds), Practical ECG Holter

151 Advances and Technical Standards in Neurosurgery 38

21 Advances in Polymer Science 241

21 Advances in Polymer Science 242

128 Advances in Polymer Science 243

21 Advances in Polymer Science 244

181 Advances in the Physics of Particles and Nuclei 31

217 Agon (Eds), Mathematics and Computation in Music. MCM 2011 (Lecture Notes in Computer Science, LNAI 6726)

109 Ahmad (Eds), Abiotic Stress Responses in Plants

109 Ahmad (Eds), Environmental Adaptations and Stress Tolerance of Plants in the Era of Climate Change

66 Alberer (Eds), Identification for Automotive Systems (Lecture Notes in Control and Information Sciences 418)

210 Albert/Rizzo, R by Example (Use R)

217 Alcaraz Calero (Eds), Autonomic and Trusted Computing. ATC 2011 (Lecture Notes in Computer Science, LNPSE 6906)

215 Alem (Eds), Recent Trends of Mobile Collaborative Augmented Reality Systems

109 Allan (Eds), Regenerative Therapy Using Blood-Derived Stem Cells (Stem Cell Biology and Regenerative Medicine)

22 Alpas (Eds), Strategies for Achieving Food Security in Central Asia (NATO Science for Peace and Security Series C)

110 Alterman (Eds), Amino Acid Analysis (Methods in Molecular Biology 828)

216 Aliuru (Eds), Contemporary Computing. IC3 2011 (Communications in Computer and Information Science 168)

66 Alvarado et al., Low Power RF Circuit Design in Standard CMOS Technology (Lecture Notes in Electrical Engineering 104)

131 Ambrosi (Eds), Modelling of Physiological Flows (MS&A 5)

131 Ammari (Ed) Mathematical Modeling in Biomedical Imaging II (Lecture Notes in Mathematics, Mathematical Biosciences Subse 2035)

217 Andersen (Eds), Electronic Government and the Information Systems Perspective. EGOVIS 2011 (Lecture Notes in Computer Science, LNISA 6866)

151 Anderson (Eds), Iron Physiology and Pathophysiology in Humans (Nutrition and Health)

66 Anderson/Felici, Emerging Technological Risk

217 Andrews (Eds), Conceptual Structures for Discovering Knowledge. ICCS 2011 (Lecture Notes in Computer Science, LNAI 6828)

104 Andrews, The Three Paths of Justice (ius Gentium: Comparative Perspectives on Law and Justice 10)

1 Antkiwicz-Michaluk (Eds), Isoquinolines And Beta-Carboline As Neurotoxins And Neuroprotectants (Current Topics in Neurotoxicity 1)

201 Apps (Eds), Pediatric and Adolescent Concussion

54 Arcidiacono et al., Leading processes to lead companies: Lean Six Sigma

47 Arndt/Ganino, Economic Geology

47 Arsanjani, Dynamic land use/cover change modelling (Springer Theses)

54 Ashinov et al., Macroeconomic Analysis and Economic Policy Based on Parametric Control

110 Ashton (Eds), Managing Forest Carbon in a Changing Climate

22 Atanasov (Eds), Vibronic Interactions and the Jahn-Teller Effect (Progress in Theoretical Chemistry and Physics 23)

217 Atzmueller (Eds), Analysis of Social Media and Ubiquitous Data. MSM 2010 (Lecture Notes in Computer Science, LNAI 6904)

47 Aubinet (Eds), Eddy Covariance (Springer Atmospheric Sciences)

131 Audin, Remembering Sofya Kovalevskaya

152 Aygok (Eds), Hydrocephalus. Selected papers from the International Workshop in Crete. 2010 (Acta Neurochirurgica Supplementum 113)

### B

31 Bai et al., Distributed Multiple Description Coding

22 Bajpai, Biotechnology for Pulp and Paper Processing

217 Balandin (Eds), Smart Spaces and Next Generation Wired/Wireless Networking. NEW2AN 2011/RuSMART 2011 (Lecture Notes in Computer Science, LNCCN 6869)

61 Barabasch (Eds), Work and Education in America (Technical and Vocational Education and Training 15)

216 Barbosa (Eds), The Square Kilometre Array: Paving the way for the new 21st century radio astronomy paradigm. JENAM 2010 (Astrophysics and Space Science Proceedings)

132 Barbuc/Precupanu, Convexity and Optimization in Banach Spaces (Springer Monographs in Mathematics) 3rd ed.

1 Baron (Ed), Computational Drug Discovery and Design (Methods in Molecular Biology 819)

152 Barsness (Ed), Coronary Artery Disease

152 Baumgart (Ed), Crohn’s Disease and Ulcerative Colitis

174 Baur, NGOs as Legitimate Partners of Corporations (Issues in Business Ethics 36)

217 Bayard Cushing (Eds), Scientific and Statistical Database Management. SSDBM 2011 (Lecture Notes in Computer Science, LNISA 6809)

67 Baños/Barreiro, Reset Control Systems (Advances in Industrial Control)

217 Becker (Eds), VLSI-SoC: Technologies for Systems Integration (IFIP Advances in Information and Communication Technology 360)

174 Belkind, Physical Systems (Boston Studies in the Philosophy of Science 264)

201 Belli (Ed), True and False Recovered Memories (Nebraska Symposium on Motivation)
<table>
<thead>
<tr>
<th>Author Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>201 Belzen (Ed), Psychology of Religion (Path in Psychology)</td>
</tr>
<tr>
<td>132 Benenti, Hamiltonian Structures and Generating Families (Universitext)</td>
</tr>
<tr>
<td>67 Benesty et al, A Perspective on Stereophonic Acoustic Echo Cancellation (Springer Topics in Signal Processing 4)</td>
</tr>
<tr>
<td>67 Benesty et al, Speech Enhancement in the STFT Domain (SpringerBriefs in Electrical and Computer Engineering)</td>
</tr>
<tr>
<td>153 Benndorf, Dural Cavernous Sinus Fistulas (Medical Radiology, Diagnostic Imaging)</td>
</tr>
<tr>
<td>204 Bennett (Eds), Adult Attachment in Clinical Social Work (Essential Clinical Social Work Series)</td>
</tr>
<tr>
<td>153 Benson (Eds), Children's Spinal Disorders and Fractures</td>
</tr>
<tr>
<td>153 Benson (Eds), Children's Upper and Lower Limb Fractures</td>
</tr>
<tr>
<td>132 Berglund, The Vexing Case of Igor Shafarevich, a Russian Political Thinker</td>
</tr>
<tr>
<td>31 Bernardo (Eds), Formal Methods for Eternal Networked Software Systems. SFM 2011 (Lecture Notes in Computer Science, LNPS 6639)</td>
</tr>
<tr>
<td>68 Bertels (Ed), Hardware/Software Co-design for Heterogeneous Multi-core Platforms</td>
</tr>
<tr>
<td>181 Bertin, A Concise Introduction to the Statistical Physics of Complex Systems (SpringerBriefs in Complexity)</td>
</tr>
<tr>
<td>68 Beutler, The Digital Dividend of Terrestrial Broadcasting</td>
</tr>
<tr>
<td>154 Bezak/Marcu, Radiotherapy from Radiobiology and Physics Perspective</td>
</tr>
<tr>
<td>218 Bezhanihsivili (Eds), Logic, Language, and Computation. Tbilisi 2009 (Lecture Notes in Computer Science, LNAI 6618)</td>
</tr>
<tr>
<td>128 Bianchi, Multiscale Fabrication of Functional Materials for Regenerative Medicine (Springer Theses)</td>
</tr>
<tr>
<td>133 Bianchini et al., Nonlinear PDE's and Applications (Lecture Notes in Mathematics, C.I.M.E. Foundation Subseries 2028)</td>
</tr>
<tr>
<td>68 Biba (Eds), Learning Structure and Schemas from Documents (Studies in Computational Intelligence 375)</td>
</tr>
<tr>
<td>174 Blair, Groundwork in the Theory of Argumentation (Argumentation Library 21)</td>
</tr>
<tr>
<td>31 Blockeel et al., Predictive Clustering</td>
</tr>
<tr>
<td>133 Blomer (Eds), Contributions in Analytic and Algebraic Number Theory (Springer Proceedings in Mathematics 9)</td>
</tr>
<tr>
<td>133 Blowey (Eds), Frontiers in Numerical Analysis - Durham 2010 (Lecture Notes in Computational Science and Engineering 85)</td>
</tr>
<tr>
<td>97 Blum, Education, Community Engagement and Sustainable Development</td>
</tr>
<tr>
<td>2 Boddington, Ethical Challenges in Genomics Research</td>
</tr>
<tr>
<td>134 Boginski (Eds), Sensors: Theory, Algorithms, and Applications (Springer Optimization and Its Applications 61)</td>
</tr>
<tr>
<td>182 Boiko et al., Physics of Transitional Shear Flows (Fluid Mechanics and Its Applications 98)</td>
</tr>
<tr>
<td>54 Bolay (Eds), Technologies and Innovations for Development: Scientific Collaboration for a Sustainable Future</td>
</tr>
<tr>
<td>48 Bonaventura et al., Earth System Modelling - Volume 2 (SpringerBriefs in Earth System Sciences)</td>
</tr>
<tr>
<td>204 Booth (Eds), Early Adulthood in a Family Context (National Symposium on Family Issues 2)</td>
</tr>
<tr>
<td>182 Bordeleau, Flags of the Night Sky</td>
</tr>
<tr>
<td>218 Bouchachia (Ed), Adaptive and Intelligent Systems. ICARIS 2011 (Lecture Notes in Computer Science, LNAI 6943)</td>
</tr>
<tr>
<td>202 Bouchain, Electrodermal Activity 2nd ed.</td>
</tr>
<tr>
<td>69 Boukas/Al-Sunni, Mechatronic Systems</td>
</tr>
<tr>
<td>218 Boykov (Eds), Energy Minimization Methods in Computer Vision and Pattern Recognition (Lecture Notes in Computer Science, LNIP 6819)</td>
</tr>
<tr>
<td>69 Brabazon (Eds), Natural Computing in Computational Finance. Volume 4 (Studies in Computational Intelligence 380)</td>
</tr>
<tr>
<td>154 Braunstein (Ed), Thyroid Cancer (Endocrine Updates 30)</td>
</tr>
<tr>
<td>154 Bravo-Rodriguez (Eds), Learning Neuroimaging (Learning Imaging)</td>
</tr>
<tr>
<td>69 Brazier (Eds), Intelligent Distributed Computing V (Studies in Computational Intelligence 382)</td>
</tr>
<tr>
<td>103 Brosius (Eds), Transcultural Turbulences (Transcultural Research – Heidelberg Studies on Asia and Euro)</td>
</tr>
<tr>
<td>104 Brown (Ed), A Comparative Look at Regulation of Corporate Tax Avoidance (Ius Gentium: Comparative Perspectives on Law and Justice 12)</td>
</tr>
<tr>
<td>104 Brown (Eds), General Reports of the XVIIIth Congress of the International Academy of Comparative Law/Rapports Généraux du XVIIIème Congrès de l'Académie Internationale de Droit Comparé</td>
</tr>
<tr>
<td>32 Browne, Evolutionary Game Design (SpringerBriefs in Computer Science)</td>
</tr>
<tr>
<td>55 Brucker/Knust, Complex Scheduling (GOR-Publications) 2nd ed.</td>
</tr>
<tr>
<td>32 Brun (Eds), From the Web to the Grid and Beyond (The Frontiers Collection)</td>
</tr>
<tr>
<td>134 Brändén (Eds), Notions of Positivity and the Geometry of Polynomials (Trends in Mathematics)</td>
</tr>
<tr>
<td>70 Buechel/Pappas, Principles of Human Joint Replacement</td>
</tr>
<tr>
<td>70 Buljak, Inverse Analyses with Model Reduction (Computational Fluid and Solid Mechanics)</td>
</tr>
<tr>
<td>110 Bullerwell (Ed), Organelle Genetics</td>
</tr>
<tr>
<td>215 Burgay (Eds), Radio Pulsars: An Astrophysical Key to Unlock the Secrets of the Universe (AIP Conference Proceedings, Astronomy and Astrophysics 1357)</td>
</tr>
<tr>
<td>218 Böhm (Eds), Information Technology in Bio- and Medical Informatics. ITBAM 2011, (Lecture Notes in Computer Science, LNISA 6865)</td>
</tr>
<tr>
<td>128 Böllinghaus (Eds), Materials Challenges in Energy, Resources and Testing</td>
</tr>
<tr>
<td>32 Böttcher, Haptic Interaction with Deformable Objects (Springer Series on Touch and Haptic Systems)</td>
</tr>
<tr>
<td>105 Bünger, Deficits in EU and US Mandatory Environmental Information Disclosure</td>
</tr>
</tbody>
</table>

**C**

| 23 Callaway (Eds), Direct-Fed Microbials and Prebiotics for Animals |
| 218 Camenisch (Eds), Public Key Infrastructures, Services and Applications. EuroPKI 2010 (Lecture Notes in Computer Science, LNSC 6711) |
| 33 Campanoni, Guide to ILDJIT (SpringerBriefs in Computer Science) |
| 218 Campos (Eds), Human-Computer Interaction -- INTERACT 2011 (Lecture Notes in Computer Science, LNISA 6946) |
| 218 Campos (Eds), Human-Computer Interaction -- INTERACT 2011 (Lecture Notes in Computer Science, LNISA 6949) |
34 Cheng, Autonomous Intelligent Vehicles (Advances in Computer Vision and Pattern Recognition)
71 Chesi, Domain of Attraction (Lecture Notes in Control and Information Sciences 415)
55 Chevalier, Econometric Analysis of Carbon Markets
34 Chiang, Grammars for Language and Genes (Theory and Applications of Natural Language Processing)
155 Chiappelli (Ed), Comparative Effectiveness and Efficacy Research and Analysis for Practice (CEERAP)
71 Chiong (Eds), Variants of Evolutionary Algorithms for Real-World Applications
34 Chivers/Sleightholme, Introduction to Programming with Fortran 2nd ed.
215 Chorai (Ed), Image Processing & Communications Challenges 3 (Advances in Intelligent and Soft Computing 102)
3 Chouker (Ed), Stress Challenges and Immunity in Space
218 Christianson (Eds), Security Protocols XVI (Lecture Notes in Computer Science, LNSCI 6615)
215 Chung (Eds), The 8th International Conference and Workshop on Numerical Simulation of 3D Sheet Metal Forming Processes (Numisheet 2011) (AIP Conference Proceedings 1833)
105 Clark, Lawyers and Mediation
111 Clarke (Eds), SELDI-TOF Mass Spectrometry (Methods in Molecular Biology 818)
155 Cleveland (Ed), Imaging in Pediatric Pulmonology
111 Cliff (Eds), Chemical and Physical Signatures for Microbial Forensics (Infectious Disease)
135 Coen (Ed), Mathematicians in Bologna 1861–1960
71 Cohen (Eds), Classical, Semi-classical and Quantum Noise
218 Cohen (Eds), Search Based Software Engineering: SSBESE 2011 (Lecture Notes in Computer Science, LNPSSE 6936)
218 Cooper (Eds), Haptic and Audio Interaction Design, HAID 2011 (Lecture Notes in Computer Science, LNSCI 6851)
175 Corradetti (Ed), Philosophical Dimensions of Human Rights

218 Corradini (Eds), Algebra and Coalgebra in Computer Science. CALCO 2011 (Lecture Notes in Computer Science, LNTCS 6859)
183 Cristóbal López (Eds), Next Generation of Photovoltaics (Springer Series in Optical Sciences 165)
3 Current Topics in Microbiology and Immunology 351
3 Current Topics in Microbiology and Immunology 354
4 Current Topics in Microbiology and Immunology 356
135 Cveticovski, Inequalities
215 Czachorski (Eds), Man-Machine Interactions 2 (Advances in Intelligent and Soft Computing 103)

D

72 Dai (Eds), Nonlinear Approaches in Engineering Applications
72 Dal magkidis/Valavanis, On Integrating Unmanned Aircraft Systems into the National Airspace System (Intelligent Systems, Control and Automation: Science and Eng 54) 2nd ed
156 Dammacco (Ed), HCV Infection and Cryoglobulinemia
73 Das/Pan, Fractional Order Signal Processing (SpringBriefs in Applied Sciences and Technology)
218 Dastani (Eds), Languages, Methodologies, and Development Tools for Multi-Agent Systems. LADS 2010 (Lecture Notes in Computer Science, LNAI 6822)
218 Davenport (Eds), Intelligent Computer Mathematics. MKM 2011 (Lecture Notes in Computer Science, LNAI 6824)
202 Dayan/Kwook-bun, Charismatic Leadership in Singapore
215 De Baets (Eds), Eurofuse 2011 (Advances in Intelligent and Soft Computing)
16 De Bonis (Eds), The Financial Systems of Industrial Countries
112 De Ley (Ed), Cytokine Protocols (Methods in Molecular Biology 820) 2nd ed.
218 Declerck (Eds), Semantic Multimedia. SAMT 2010 (Lecture Notes in Computer Science, LNISA 6725)
Author Index

218 Delgado Kloos (Eds), Towards Ubiquitous Learning. EC-TEL 2011 (Lecture Notes in Computer Science, LNIPSE 6964)

210 Desai, Analysis of Randomly Complete Data Without Imputation (SpringerBriefs in Statistics)


136 Deuschel (Eds), Probability in Complex Physical Systems. In Honour of Erwin Bolthausen and Jürgen Gärtner (Springer Proceedings in Mathematics 11)

136 Di Pietro/Ern, Mathematical Aspects of Discontinuous Galerkin Methods (Mathématiques et Applications 69)

156 Diamanti-Kandarakis (Eds), Endocrine Disruptors and Puberty (Contemporary Endocrinology)

215 Dicheva (Eds), Third International Conference on Software, Services & Semantic Technologies S3T 2011 (Advances in Intelligent and Soft Computing 101)

218 Dickmann (Eds), Smart Graphics. 11th International Symposium on Smart Graphics (Lecture Notes in Computer Science, LNIP 6815)

73 Dong, Recognizing Variable Environments (Studies in Computational Intelligence 388)

4 Dougherty (Eds), Antibiotic Discovery and Development

112 Douthwaite (Eds), Ribosome Display and Related Technologies (Methods in Molecular Biology 805)

136 Dragomir, Operator Inequalities of the Jensen, Ćebyšev and Grüss Type (SpringerBriefs in Mathematics)

35 Draheim, Pathways in Software Engineering

112 Dubitzky (Eds), Encyclopedia of Systems Biology (Reference)

73 Ducré/Zengerle, Microfluidics (Microtechnology and MEMS)

156 Dunphy (Ed), Frozen Section Library: Lymph Nodes (Frozen Section Library 10)

35 Dustdar (Eds), Socially Enhanced Services Computing

137 Dym (Eds), A Panorama of Modern Operator Theory and Related Topics (Operator Theory: Advances and Applications 218)

113 Egel (Eds), Origins of Life: The Primal Self-Organization

218 Egenhofer (Eds), Spatial Information Theory. COSIT 2011 (Lecture Notes in Computer Science, LNCTS 6899)

157 Ehrenpreiss (Eds), Anal and Rectal Diseases

35 El Saddik et al., Haptics Technologies (Springer Series on Touch and Haptic Systems)

215 ELMaraghy (Ed), Enabling Manufacturing Competitiveness and Economic Sustainability

157 Elmaoûgui/Celik, MRI Handbook

175 Engelhardt (Ed), Bioethics Critically Reconsidered (Philosophy and Medicine 100)

217 Enquist (Eds), Numerical Analysis of Multiscale Computations. Proceedings of a Winter Workshop at the Banff International Research Station 2009 (Lecture Notes in Computational Science and Engineering 82)

220 Ermoliev (Eds), Managing Safety of Heterogeneous Systems (Lecture Notes in Economics and Mathematical Systems 658)

36 Escalera et al., Traffic Sign Recognition Systems (SpringerBriefs in Computer Science)

4 Espina (Eds), Molecular Profiling (Methods in Molecular Biology 823)

106 European Yearbook of International Economic Law 3

74 Evans, At Home in Space (Springer Praxis Books, Space Exploration)

F

158 Falter (Ed), Bedside Procedures in the ICU

5 Fan (Ed), Next-Generation MicroRNA Expression Profiling Technology (Methods in Molecular Biology 822)

158 Faro (Eds), Functional Neuroradiology

16 Farschtschian, The Reality of M&A Governance

5 Fatatis (Ed), Signaling Pathways and Molecular Mediators in Metastasis

158 Feld (Eds), Fluid and Electrolytes in Pediatrics (Nutrition and Health)

55 Felsenthal (Eds), Electoral Systems (Studies in Choice and Welfare)

74 Fernandez Camacho et al., Control of Solar Energy Systems (Advances in Industrial Control) 2nd ed.

97 Fernandez (Eds), National Security and Human Health Implications of Climate Change (NATO Science for Peace and Security Series C)

17 Fichter (Eds), Innovation Communities

218 Fichtinger (Eds), Medical Image Computing and Computer-Assisted Intervention – MICCAI 2011 (Lecture Notes in Computer Science, LNIP 6891)

218 Fichtinger (Eds), Medical Image Computing and Computer-Assisted Intervention – MICCAI 2011 (Lecture Notes in Computer Science, LNIP 6893)


217 Filipe (Eds), Web Information Systems and Technologies. WEBIST 2010 (Lecture Notes in Business Information Processing 75)

74 Fischer-Cripps, Nanoindentation (Mechanical Engineering Series) 3rd ed.

216 Fleischmann (Eds), Subject-Oriented Business Process Management (Communications in Computer and Information Science 138)

36 Flesca et al., Repairing and Querying Databases under Aggregate Constraints (SpringerBriefs in Computer Science)

75 Fodor (Eds), Recent Advances in Intelligent Engineering Systems (Studies in Computational Intelligence 378)

159 Folio, Chest Imaging


48 Ford, Earth System Modelling - Volume 5 (SpringerBriefs in Earth System Sciences)

218 Former (Eds), Multilingual and Multimodal Information Access Evaluation. CLEF 2011 (Lecture Notes in Computer Science, LNIS 6941)

75 Fossor (Eds), Parametric Resonance in Dynamical Systems

5 Frank (Ed), Signaling Pathways in Cancer Pathogenesis and Therapy

183 François et al., Mechanical Behaviour of Materials: Volume 1: Micro- and Macroscopic Constitutive Behaviour (Solid Mechanics and Its Applications 180)

210 Fraser, Business Statistics for Competitive Advantage with Excel 2010 2nd ed.

23 Fraser-Reid, From Sugar to Splenda

97 Freitas/Perry, New Environmentalism

184 Fridman, The Quality of Measurements

6 Fryer (Eds), Muscarinic Receptors (Handbook of Experimental Pharmacology 208)
<table>
<thead>
<tr>
<th>Author Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>219 GUNOPULOS (Eds), Machine Learning and Knowledge Discovery in Databases, Part II (Lecture Notes in Computer Science, LNAI 6912)</td>
</tr>
<tr>
<td>219 GUNOPULOS (Eds), Machine Learning and Knowledge Discovery in Databases, Part III. ECML PKDD 2010 (Lecture Notes in Computer Science, LNAI 6913)</td>
</tr>
<tr>
<td>219 GUNOPULOS (Eds), Machine Learning and Knowledge Discovery in Databases. ECML PKDD 2010 (Lecture Notes in Computer Science, LNAI 6911)</td>
</tr>
<tr>
<td>220 Gabrielli (Eds), Ambient Media and Systems. AMBI-SYS 2011 (Lecture Notes of the Institute for Computer Sciences, Social 70)</td>
</tr>
<tr>
<td>200 Gaither (Eds), Gaither’s Dictionary of Scientific Quotations 2nd ed.</td>
</tr>
<tr>
<td>159 Gajewski (Eds), Targeted Therapeutics in Melanoma (Current Clinical Oncology)</td>
</tr>
<tr>
<td>75 Gasch (Eds), Wind Power Plants 2nd ed.</td>
</tr>
<tr>
<td>101 Gatrell et al., Research Design and Proposal Writing in Spatial Science 2nd ed.</td>
</tr>
<tr>
<td>137 Gautschi, Numerical Analysis 2nd ed.</td>
</tr>
<tr>
<td>113 Gebelein, A Geographic Perspective of Cuban Landscapes (Landscape Series 15)</td>
</tr>
<tr>
<td>215 Gengnagel (Eds), Computational Design Modeling</td>
</tr>
<tr>
<td>218 Geva (Eds), Comparative Evaluation of Focused Retrieval. INEX 2010 (Lecture Notes in Computer Science, LNISA 6932)</td>
</tr>
<tr>
<td>76 Ghasemi et al., Propagation Engineering in Wireless Communications</td>
</tr>
<tr>
<td>220 Giambene (Eds), Personal Satellite Services. PSATS 2011 (Lecture Notes of the Institute for Computer Sciences 71)</td>
</tr>
<tr>
<td>159 Giannoudis (Ed), Practical Procedures in Elective Orthopaedic Surgery</td>
</tr>
<tr>
<td>160 Giannoudis (Ed), Practical Procedures in Orthopaedic Surgery</td>
</tr>
<tr>
<td>160 Gilsanz/Ratib, Hand Bone Age 2nd ed.</td>
</tr>
<tr>
<td>17 Goddard/Marcum, Real Estate Investment (Springer Texts in Business and Economics)</td>
</tr>
<tr>
<td>137 Goldfeld (Eds), Number Theory, Analysis and Geometry</td>
</tr>
<tr>
<td>37 Goldreich (Ed), Studies in Complexity and Cryptography (Lecture Notes in Computer Science, LNTCS 6650)</td>
</tr>
<tr>
<td>138 Gorelik/Frenkel, Matvei Petrovich Bronstein (Modern Birkhäuser Classics)</td>
</tr>
<tr>
<td>49 Gorokhovski, Effective Parameters of Hydrological Models (SpringerBriefs in Earth Sciences)</td>
</tr>
<tr>
<td>215 Goryanin (Eds), Advances in Systems Biology (Advances in Experimental Medicine and Biology 736)</td>
</tr>
<tr>
<td>106 Goudappel (Eds), The Future of Asylum in the European Union</td>
</tr>
<tr>
<td>61 Griffin (Eds), Assessment and Teaching of 21st Century Skills</td>
</tr>
<tr>
<td>106 Grover, Child Soldier Victims of Genocidal Forcible Transfer</td>
</tr>
<tr>
<td>219 Groß (Eds), Towards Autonomous Robotic Systems. TAROS 2011 (Lecture Notes in Computer Science, LNAI 6856)</td>
</tr>
<tr>
<td>160 Grunwald et al., How to set up an Acute Stroke Service</td>
</tr>
<tr>
<td>138 Hedges (Ed), Complex Monge–Ampère Equations and Geodesics in the Space of Kähler Metrics (Lecture Notes in Mathematics 2038)</td>
</tr>
<tr>
<td>76 Guirrez (Eds), Advances in Robotics and Virtual Reality (Intelligent Systems Reference Library 26)</td>
</tr>
<tr>
<td>113 Gupta (Ed), Technological Innovations in Major World Oil Crops, Volume 2</td>
</tr>
<tr>
<td>23 Gupta Bhowon (Eds), Chemistry for Sustainable Development</td>
</tr>
<tr>
<td>184 Gupta, Mass Metrology (Springer Series in Materials Science 155)</td>
</tr>
<tr>
<td>184 Guseva, Formation and Cooperative Behaviour of Protein Complexes on the Cell Membrane (Springer Theses)</td>
</tr>
<tr>
<td>138 Gustafson, The Crossing of Heaven</td>
</tr>
<tr>
<td>7 Gutkin (Eds), Computational Neuroscience of Drug Addiction (Springer Series in Computational Neuroscience 10)</td>
</tr>
<tr>
<td>211 Guttorm (Eds), Selected Works of David Brillinger (Selected Works in Probability and Statistics)</td>
</tr>
<tr>
<td>98 Götz, Global Change (SpringerBriefs in Earth System Sciences)</td>
</tr>
<tr>
<td>219 Habernal (Eds), Text, Speech and Dialogue. TSD 2011 (Lecture Notes in Computer Science, LNAI 6836)</td>
</tr>
<tr>
<td>114 Hallenbeck (Ed), Microbial Technologies in Advanced Biofuels Production</td>
</tr>
<tr>
<td>219 Hameurlain (Eds), Data Management in Grid and Peer-to-Peer Systems. Globe 2011 (Lecture Notes in Computer Science, LNISA 6864)</td>
</tr>
<tr>
<td>76 Hansen (Eds), Digital Signal Processing for In-Vehicle Systems and Safety</td>
</tr>
<tr>
<td>217 Harmens (Eds), Practice-Driven Research on Enterprise Transformation. PRET 2011 (Lecture Notes in Business Information Processing 89)</td>
</tr>
<tr>
<td>37 Harper (Ed), The Connected Home: The Future of Domestic Life</td>
</tr>
<tr>
<td>37 Hartanto, A Hybrid Deliberative Layer for Robotic Agents (Lecture Notes in Computer Science, LNAI 6798)</td>
</tr>
<tr>
<td>185 Hashimoto, D-Brane</td>
</tr>
<tr>
<td>114 Hatfield (Eds), Selenium 3rd ed.</td>
</tr>
<tr>
<td>6 Hayat (Ed), Pediatric Cancer, Volume 1, Neuroblastoma (Pediatric Cancer)</td>
</tr>
<tr>
<td>7 Hayat (Ed), Stem Cells and Cancer Stem Cells, Volume 3 (Stem Cells and Cancer Stem Cells)</td>
</tr>
<tr>
<td>7 Hayes (Ed), Marine Bioactive Compounds</td>
</tr>
<tr>
<td>18 Hebb (Ed), The Next Generation of Responsible Investing (Advances in Business Ethics Research 1)</td>
</tr>
<tr>
<td>56 Heinrichs (Eds), Risk Habitat Megacity</td>
</tr>
<tr>
<td>77 Heinroth (Eds), Next Generation Intelligent Environments</td>
</tr>
</tbody>
</table>
# Author Index

<table>
<thead>
<tr>
<th>Page</th>
<th>Author(s), Title/Book Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>Heinzl (Eds), Theory-Guided Modeling and Empiricism in Information System Research</td>
</tr>
<tr>
<td>185</td>
<td>Helbing, Social Self-Organization (Understanding Complex Systems)</td>
</tr>
<tr>
<td>114</td>
<td>Helfrich (Eds), Bone Research Protocols (Methods in Molecular Biology 816) 2nd ed.</td>
</tr>
<tr>
<td>185</td>
<td>Helrich, The Classical Theory of Fields (Graduate Texts in Physics)</td>
</tr>
<tr>
<td>186</td>
<td>Hemmick/Shakur, Bell's Theorem and Quantum Realism (SpringerBriefs in Physics)</td>
</tr>
<tr>
<td>205</td>
<td>Heppenstall (Eds), Agent-Based Models of Geographical Systems</td>
</tr>
<tr>
<td>215</td>
<td>Herdeiro (Eds), XIX International Fall Workshop on Geometry and Physics (AIP Conference Proceedings 1360)</td>
</tr>
<tr>
<td>139</td>
<td>Herrmann, The Beauty of Everyday Mathematics</td>
</tr>
<tr>
<td>98</td>
<td>Higgitt (Ed), Perspectives on Environmental Management and Technology in Asian River Basins (SpringerBriefs in Geography)</td>
</tr>
<tr>
<td>18</td>
<td>Hillb, New Corporate Governance (Management for Professionals) 4th ed.</td>
</tr>
<tr>
<td>77</td>
<td>Hippe (Eds), Human – Computer Systems Interaction: Backgrounds and Applications 2 (Advances in Intelligent and Soft Computing 98)</td>
</tr>
<tr>
<td>77</td>
<td>Hippe (Eds), Human – Computer Systems Interaction: Backgrounds and Applications 2 (Advances in Intelligent and Soft Computing 99)</td>
</tr>
<tr>
<td>161</td>
<td>Hofmann-Wellenhof (Eds), Reflectance Confocal Microscopy for Skin Diseases</td>
</tr>
<tr>
<td>161</td>
<td>Hoggan/Heitner, Cardiology in Family Practice (Current Clinical Practice) 2nd ed.</td>
</tr>
<tr>
<td>78</td>
<td>Holmes (Eds), Data Mining: Foundations and Intelligent Paradigms (Intelligent Systems Reference Library 23)</td>
</tr>
<tr>
<td>78</td>
<td>Holmes (Eds), Data Mining: Foundations and Intelligent Paradigms (Intelligent Systems Reference Library 25)</td>
</tr>
<tr>
<td>219</td>
<td>Holzer (Eds), Descriptive Complexity of Formal Systems. DCFS 2011 (Lecture Notes in Computer Science, LNTCS 6808)</td>
</tr>
<tr>
<td>38</td>
<td>Homer/Selman, Computability and Complexity Theory (Texts in Computer Science) 2nd ed.</td>
</tr>
<tr>
<td>139</td>
<td>Howard/Yang, Intersections of Hirzebruch–Zagier Divisors and CM Cycles (Lecture Notes in Mathematics 2041)</td>
</tr>
<tr>
<td>219</td>
<td>Hsu (Eds), Ubiquitous Intelligence and Computing. UIC 2011 (Lecture Notes in Computer Science, LNCS 6905)</td>
</tr>
<tr>
<td>219</td>
<td>Hu (Eds), Brain Informatics. BI 2011 (Lecture Notes in Computer Science, LNAI 6889)</td>
</tr>
<tr>
<td>78</td>
<td>Huang, A Concise Introduction to Mechanics of Rigid Bodies</td>
</tr>
<tr>
<td>217</td>
<td>Huemer (Eds), E-Commerce and Web Technologies. EC-Web 2011 (Lecture Notes in Business Information Processing 85)</td>
</tr>
<tr>
<td>161</td>
<td>Hui (Ed), Gestational Trophoblastic Disease (Current Clinical Pathology)</td>
</tr>
<tr>
<td>162</td>
<td>Hutson (Eds), Disorders of Sex Development</td>
</tr>
<tr>
<td>202</td>
<td>Huang, Foundations of Chinese Psychology (International and Cultural Psychology)</td>
</tr>
</tbody>
</table>

## I

| 107 | Iancu, Legislative Delegation |
| 61  | Ifenthaler (Eds), Research Methods in e-Learning Systems |
| 162 | Ignacio (Eds), Women's Health in Interventional Radiology |
| 217 | Impagliazzo (Eds), Perspectives on Soviet and Russian Computing. SoRuCom 2006 (IFIP Advances in Information and Communication Technology 357) |
| 215 | In (Eds), International Conference on Applications in Nonlinear Dynamics (ICAND 2010) (AIP Conference Proceedings 1339) |
| 186 | Inglis, A Field Guide to Deep-Sky Objects (Patrick Moore's Practical Astronomy Series) 2nd ed. |
| 79  | Issariyakul/Hossain, Introduction to Network Simulator NS2 2nd ed. |
| 139 | Itenber (Eds), Perspectives in Analysis, Geometry, and Topology (Progress in Mathematics 296) |

## J

| 215 | Jabłoński (Eds), Mechatronics |
| 99  | Jain (Eds), Fiber Reinforced Polymer (FRP) Composites for Infrastructure Applications (Strategies for Sustainability) |
| 162 | Jain, Dermatology |
| 38  | Jajodia (Eds), Moving Target Defense (Advances in Information Security 54) |
| 140 | Janno/Engelbrecht, Microstructured Materials: Inverse Problems (Springer Monographs in Mathematics) |
| 219 | Janssen (Eds), Electronic Government. EGOV 2011 (Lecture Notes in Computer Science, LNCS 6846) |
| 8   | Jasmin (Eds), Caveolins and Caveolae (Advances in Experimental Medicine and Biology 729) |
| 219 | Jeannot (Eds), Euro-Par 2011 Parallel Processing (Lecture Notes in Computer Science, LNTCS 6853) |
| 219 | Jeannot (Eds), Euro-Par 2011 Parallel Processing (Lecture Notes in Computer Science, LNTCS 6852) |
| 62  | Jeynes (Eds), International Handbook of Protestant Education (International Handbooks of Religion and Education 6) |
| 62  | Jimoyiannis (Ed), Research on e-Learning and ICT in Education |
| 215 | Jin (Eds), Advances in Computer Science, Intelligent Systems and Environment (Advances in Intelligent and Soft Computing) |
| 217 | Jobbágy (Ed), 5th European Conference of the International Federation for Medical and Biological Engineering 14 – 18 September 2011, Budapest, Hungary (IFMBE Proceedings 37) |
| 79  | Johansson (Eds), Distributed Decision Making and Control (Lecture Notes in Control and Information Sciences 417) |
| 62  | Johansson (Eds), Educational Research with Our Youngest (International perspectives on early childhood education and 5) |
| 215 | Jokinen (Eds), TCP 2010 |
| 103 | Joll, Muslim Merit-making in Thailand’s Far-South (Muslims in Global Societies Series 4) |
| 24  | Jung (Ed), Fluorescent Proteins I (Springer Series on Fluorescence 11) |
| 56  | Just (Eds), Understanding German Real Estate Markets (Management for Professionals) |
| 163 | Juth/Munthe, The Ethics of Screening in Health Care and Medicine (International Library of Ethics, Law, and the New Medicine 51) |

## K

| 38  | Kaiser, Logic and Games on Automatic Structures (Lecture Notes in Computer Science, LNAI 6810) |
| 211 | Kaltenbach, A Concise Guide to Statistics (SpringerBriefs in Statistics) |
| 186 | Kalvius (Eds), The Rudolf Mössbauer Story |
| 79  | Kamat et al., Harnessing VLSI System Design with EDA Tools |
| 219 | Kamel (Eds), Image Analysis and Recognition. ICIAR 2011 (Lecture Notes in Computer Science, LNIP 6753) |
Author Index

203 L'Abate (Eds), Paradigms in Theory Construction
215 LaVail (Eds), Retinal Degenerative Diseases (Advances in Experimental Medicine and Biology 723)
219 Laaksonen (Eds), Advances in Self-Organizing Maps. WSO 2011 (Lecture Notes in Computer Science, LNTCS 6731)

141 Labazin/Guay, Viability of Hybrid Systems (Intelligent Systems, Control and Automation: Science and Eng 55)
99 Lagutov (Ed), Environmental Security in Watersheds: The Sea of Azov (NATO Science for Peace and Security Series C)
220 Lai (Eds), Forensics in Telecommunications, Information and Multimedia. e-Forensics 2010 (Lecture Notes of the Institute for Computer Sciences 56)
116 Lal (Eds), Carbon Sequestration in Urban Ecosystems
205 Land (Eds), Handbook of Social Indicators and Quality of Life Research
188 Landolt-Börnstein: Numerical Data and Functional Relationships, Advanced Materials and Technologies 7A
188 Landolt-Börnstein: Numerical Data and Functional Relationships, Elementary Particles, Nuclei and Nuclear Physics 20C1alpha
189 Landolt-Börnstein: Numerical Data and Functional Relationships, Elementary Particles, Nuclei and Nuclear Physics 25B1
189 Landolt-Börnstein: Numerical Data and Functional Relationships, Elementary Particles, Nuclei and Nuclear Physics 25A1
190 Landolt-Börnstein: Numerical Data and Functional Relationships, Elementary Particles, Nuclei and Nuclear Physics 20C1beta
190 Landolt-Börnstein: Numerical Data and Functional Relationships, Elementary Particles, Nuclei and Nuclear Physics 31
64 Landreau (Eds), Queer Masculinities (Explorations of Educational Purpose 21)
81 Lee (Ed), Software Engineering Research, Management and Applications 2011 (Studies in Computational Intelligence 377)
164 Lefere (Eds), Virtual Colonoscopy (Medical Radiology, Diagnostic Imaging) 2nd ed.
219 Lehner (Ed), Energy-Aware Communications. EUINICE 2011 (Lecture Notes in Computer Science, LNISA 6955)
206 Leicht (Eds), Handbook of Politics (Handbooks of Sociology and Social Research)
127 Leikin (Eds), Current Issues in Bilingualism (Literacy Studies 5)
190 Leitner, Studying Atomic Dynamics with Coherent X-rays (Springer Theses)
24 Leszczynski (Eds), Practical Aspects of Computational Chemistry I
<table>
<thead>
<tr>
<th>Author Index</th>
<th>Springer.de</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leung, VLSI for Wireless Communication 2nd ed.</td>
<td>81</td>
</tr>
<tr>
<td>Lever (Eds), Heparin - A Century of Progress (Handbook of Experimental Pharmacology 207)</td>
<td>9</td>
</tr>
<tr>
<td>Lewerenz, Photons in Natural and Life Sciences (Springer Series in Optical Sciences 157)</td>
<td>191</td>
</tr>
<tr>
<td>Li (Eds), Injury Research</td>
<td>164</td>
</tr>
<tr>
<td>Li (Eds), Next Wave in Robotics. FIRA 2011 (Communications in Computer and Information Science 212)</td>
<td>39</td>
</tr>
<tr>
<td>Li (Eds), Nonlinear Mathematics for Uncertainty and its Applications (Advances in Intelligent and Soft Computing 100)</td>
<td>215</td>
</tr>
<tr>
<td>Li, Speaker Authentication (Signals and Communication Technology)</td>
<td>81</td>
</tr>
<tr>
<td>Li/Baron, Behavioral Research Data Analysis with R (Use R)</td>
<td>211</td>
</tr>
<tr>
<td>Li/Gao, Precipitation Modeling and Quantitative Analysis (Springer Atmospheric Sciences)</td>
<td>49</td>
</tr>
<tr>
<td>Li/Klette, Euclidean Shortest Paths</td>
<td>39</td>
</tr>
<tr>
<td>Lim, Edible Medicinal And Non Medicinal Plants. Volume 3: Fruits</td>
<td>116</td>
</tr>
<tr>
<td>Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education (Communications in Computer and Information Science 214)</td>
<td>216</td>
</tr>
<tr>
<td>Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education, Part III. CSEE 2011 (Communications in Computer and Information Science 216)</td>
<td>216</td>
</tr>
<tr>
<td>Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education, Part IV. CSEE 2011 (Communications in Computer and Information Science 217)</td>
<td>216</td>
</tr>
<tr>
<td>Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education, Part V (Communications in Computer and Information Science 218)</td>
<td>216</td>
</tr>
<tr>
<td>Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education. CSEE 2011, Part II (Communications in Computer and Information Science 215)</td>
<td>212</td>
</tr>
<tr>
<td>Lin (Eds), Modeling Dose-response Microarray Data in Early Drug Development Experiments Using R (Use R)</td>
<td>220</td>
</tr>
<tr>
<td>Linsen (Eds), Visualization in Medicine and Life Sciences II (Mathematics and Visualization)</td>
<td>219</td>
</tr>
<tr>
<td>Lio (Eds), Artificial Immune Systems. ICARIS 2011 (Lecture Notes in Computer Science, LNTCS 6825)</td>
<td>82</td>
</tr>
<tr>
<td>Liu (Eds), Water Resource Science &amp; Technology in China: A Roadmap to 2050</td>
<td>57</td>
</tr>
<tr>
<td>Liu/Gao, Industrial Process Identification and Control Design (Advances in Industrial Control)</td>
<td>82</td>
</tr>
<tr>
<td>Logg (Eds), Automated Solution of Differential Equations by the Finite Element Method (Lecture Notes in Computational Science and Engineering 84)</td>
<td>142</td>
</tr>
<tr>
<td>Lorence (Ed), Recombinant Gene Expression (Methods in Molecular Biology 824) 3rd ed.</td>
<td>10</td>
</tr>
<tr>
<td>Lucking (Eds), Pediatric Critical Care Study Guide</td>
<td>165</td>
</tr>
<tr>
<td>Ludu, Nonlinear Waves and Solitons on Contours and Closed Surfaces (Springer Series in Synergetics) 2nd ed.</td>
<td>191</td>
</tr>
<tr>
<td>Luo (Ed), Cooperative Design, Visualization, and Engineering. CDVE 2011 (Lecture Notes in Computer Science, LNISA 6784)</td>
<td>219</td>
</tr>
<tr>
<td>Luo, Evolutionary Foundations of Equilibria in Irrational Markets (Studies in Economic Theory 28)</td>
<td>58</td>
</tr>
<tr>
<td>Léry (Eds), European Success Stories in Industrial Mathematics</td>
<td>141</td>
</tr>
<tr>
<td>Lóczy (Eds), Recent Landform Evolution (Springer Geography)</td>
<td>101</td>
</tr>
<tr>
<td>López-Larrea (Ed), Self and Nonself (Advances in Experimental Medicine and Biology 738)</td>
<td>9</td>
</tr>
<tr>
<td>Lönroth/Miller, Laparoscopic Gastric Bypass (Operation Primers 9)</td>
<td>165</td>
</tr>
<tr>
<td>López-Larrea (Ed), Self and Nonself (Advances in Experimental Medicine and Biology 738)</td>
<td>141</td>
</tr>
<tr>
<td>Marín-Peña (Ed), Femoroacetabular Impingement</td>
<td>165</td>
</tr>
<tr>
<td>Marín-Peña (Ed), Femoroacetabular Impingement</td>
<td>165</td>
</tr>
<tr>
<td>Martínez-Trinidad (Ed), Pattern Recognition, MCPR 2011 (Lecture Notes in Computer Science, LNIP 6718)</td>
<td>219</td>
</tr>
<tr>
<td>Mary, Extraction and Representation of Prosody for Speaker, Speech and Language Recognition (SpringerBriefs in Speech Technology)</td>
<td>83</td>
</tr>
<tr>
<td>Mary, Extraction and Representation of Prosody for Speaker, Speech and Language Recognition (SpringerBriefs in Speech Technology)</td>
<td>83</td>
</tr>
<tr>
<td>Matter, Chemical Evolution of Galaxies (Astronomy and Astrophysics Library)</td>
<td>192</td>
</tr>
<tr>
<td>Mauri (Eds), Development in Language Theory, DLT 2011 (Lecture Notes in Computer Science, LNTCS 6795)</td>
<td>219</td>
</tr>
<tr>
<td>Mayer et al., Distance Expanding Random Mappings, Thermodynamical Formalism, Gibbs Measures and Fractal Geometry (Lecture Notes in Mathematics 2036)</td>
<td>142</td>
</tr>
<tr>
<td>Mazur, O.P., Informed Consent, Proxy Consent, and Catholic Bioethics (Philosophy and Medicine 112)</td>
<td>166</td>
</tr>
<tr>
<td>Malik (Eds), Holonic and Multi-Agent Systems for Manufacturing, HoloMAS 2011 (Lecture Notes in Computer Science, LNIS 6867)</td>
<td>219</td>
</tr>
<tr>
<td>McCandless, Epilepsy</td>
<td>10</td>
</tr>
<tr>
<td>McCormack (Ed), Yearbook of International Humanitarian Law - 2010 (Yearbook of International Humanitarian Law 13)</td>
<td>107</td>
</tr>
<tr>
<td>McCown et al., Teaching Mindfulness</td>
<td>166</td>
</tr>
<tr>
<td>McElhatton (Eds), Novel Technologies in Food Science (Integrating Safety and Environmental Knowledge Into Food Studies 7)</td>
<td>24</td>
</tr>
<tr>
<td>McEnery (Eds), Gamma Ray Bursts 2010 (AIP Conference Proceedings, Astronomy and Astrophysics 1358)</td>
<td>215</td>
</tr>
<tr>
<td>McInerney (Eds), Gamma Ray Bursts 2010 (AIP Conference Proceedings, Astronomy and Astrophysics 1358)</td>
<td>215</td>
</tr>
<tr>
<td>McLaurin et al., Reconstructing Human-Landscape Interactions - Volume 1 (SpringerBriefs in Earth System Sciences)</td>
<td>50</td>
</tr>
<tr>
<td>Mehta (Eds), Experiencing Grandparenthood (Social Indicators Research Series 47)</td>
<td>207</td>
</tr>
<tr>
<td>Author Index</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>12 Nijkamp (Eds), Principles of Immunopharmacology 3rd ed.</td>
<td></td>
</tr>
<tr>
<td>107 Nistor, Public Services and the European Union (Legal Issues of Services of General Interest)</td>
<td></td>
</tr>
<tr>
<td>85 Norberg (Eds), Human Spaceflight and Exploration (Springer Praxis Books)</td>
<td></td>
</tr>
<tr>
<td>220 Noberto de Souza (Eds), Advances in Bioinformatics and Computational Biology. BSB 2011 (Lecture Notes in Computer Science, LNBI 6832)</td>
<td></td>
</tr>
<tr>
<td>177 Normandin (Eds), Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800-2010 (History, Philosophy and Theory of the Life Sciences 2)</td>
<td></td>
</tr>
<tr>
<td>85 Nosonovsky (Eds), Green Tribology (Green Energy and Technology)</td>
<td></td>
</tr>
<tr>
<td>25 Nyokong (Eds), Photosensitizers in Medicine, Environment, and Security</td>
<td></td>
</tr>
<tr>
<td>143 Némethi/Szlárd, Milnor Fiber Boundary of a Non-isolated Surface Singularity (Lecture Notes in Mathematics 2037)</td>
<td></td>
</tr>
<tr>
<td>O</td>
<td></td>
</tr>
<tr>
<td>193 O'Regan, Optimised Projections for the Ab Initio Simulation of Large and Strongly Correlated Systems (Springer Theses)</td>
<td></td>
</tr>
<tr>
<td>117 Ochiya (Ed), Liver Stem Cells (Methods in Molecular Biology 826)</td>
<td></td>
</tr>
<tr>
<td>86 Ogiela (Eds), Computational Intelligence Paradigms in Advanced Pattern Classification (Studies in Computational Intelligence 386)</td>
<td></td>
</tr>
<tr>
<td>86 Okun (Eds), Ensembles in Machine Learning Applications (Studies in Computational Intelligence 373)</td>
<td></td>
</tr>
<tr>
<td>64 Orey (Eds), Educational Media and Technology Yearbook (Educational Media and Technology Yearbook 36)</td>
<td></td>
</tr>
<tr>
<td>193 Osellame (Eds), Femtosecond Laser Micromachining (Topics in Applied Physics 123)</td>
<td></td>
</tr>
<tr>
<td>220 Owe (Eds), Fundamentals of Computation Theory. FCT 2011 (Lecture Notes in Computer Science, LNCS)</td>
<td></td>
</tr>
<tr>
<td>167 Owens (Eds), Handbook of Endovascular Peripheral Interventions</td>
<td></td>
</tr>
<tr>
<td>220 Ozok (Eds), Online Communities and Social Computing. OCSC 2011 (Lecture Notes in Computer Science, LNISA 6778)</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td></td>
</tr>
<tr>
<td>86 Pachnicke, Fiber-Optic Transmission Networks (Signals and Communication Technology)</td>
<td></td>
</tr>
</tbody>
</table>
Author Index

50 Pais, The Paleogene and Neogene of Western Iberia (Portugal) (SpringerBriefs in Earth Sciences)

117 Palmeira (Eds), Mitochondrial Bioenergetics (Methods in Molecular Biology 810)

118 Palo/Lehto, Private or Socialistic Forestry? (World Forests 10)

87 Pang, Lead Free Soldier

220 Parampilli (Eds), Information Security and Privacy, ACISP 2011 (Lecture Notes in Computer Science, LNCS 6812)

12 Pardon (Eds), Behavioral Neurobiology of Aging (Current Topics in Behavioral Neurosciences 10)

58 Parodi (Eds), Social Exclusion (AIEL Series in Labour Economics)

220 Parr (Eds), Sensor Systems and Software. S-Cube 2010 (Lecture Notes of the Institute for Computer Science 57)

87 Parra-Montesinos/Reinhardt, High Performance Fiber Reinforced Cement Composites 6. HPFRCC 6 (RILEM Bookseries 2)

13 Parry (Eds), Genetic Toxicology (Methods in Molecular Biology 817)

40 Paulheim, Ontology-based Application Integration

127 Pawlak (Ed), New Perspectives on Individual Differences in Language Learning and Teaching (Second Language Learning and Teaching)

129 Pearton (Ed), GaN and ZnO-based Materials and Devices (Springer Series in Materials Science 156)

143 Peikert (Eds), Topological Methods in Data Analysis and Visualization II (Mathematics and Computer Science)

87 Pelta (Eds), Nature Inspired Cooperative Strategies for Optimization ( NICSO 2011) (Studies in Computational Intelligence 387)

118 Perera (Eds), Expert Knowledge and Its Application in Landscape Ecology

88 Perlovsky et al., Emotional Cognitive Neural Algorithms with Engineering Applications (Studies in Computational Intelligence 371)

144 Perna (Eds), Mathematical and Statistical Methods for Actuarial Sciences and Finance

220 Perner (Ed), Advances on Data Mining: Applications and Theoretical Aspects. ICDM 2011 (Lecture Notes in Computer Science, LNAI 6870)

119 Perotto (Eds), Signaling and Communication in Plant Symbiosis (Signaling and Communication in Plants 11)

41 Peters et al., Multilingual Information Retrieval (Managing Forest Ecosystems 23) 2nd ed

41 Petrov, Coarse-to-Fine Natural Language Processing (Theory and Applications of Natural Language Processing)

41 Pfeiffer, Interactive Decision Aids in E-Commerce (Contributions to Management Science)

26 Piccolo (Ed), Carbon Sequestration in Agricultural Soils

119 Pietzsch, Pathobiocchemistry and Molecular Biology of the Metabolic Syndrome

207 Piquero (Eds), Handbook of Quantitative Criminology

177 Plaisance (Eds), Philosophy of Behavioral Biology (Boston Studies in the Philosophy of Science 282)

88 Plemens (Eds), Intelligent Computer Graphics 2011 (Studies in Computational Intelligence 374)

42 Piotz/Fink, Markov Models for Handwriting Recognition (SpringerBriefs in Computer Science)

193 Pokrovskii, Econodynamics (New Economic Windows 12) 2nd ed.

42 Polleres (Eds), Reasoning Web. Semantic Technologies for the Web of Data. 7th International Summer School 2011 (Lecture Notes in Computer Science, LNISA 6848)

168 Ponsky (Eds), Robotic Radiosurgery Treating Prostate Cancer and Related Genitourinary Applications

220 Popescu-Zeletin (Eds), E-Infrastructure and E-Services for Developing Countries. AFRICOM 2010 (Lecture Notes of the Institute for Computer Sciences 64)

215 Popper (Eds), The Effects of Noise on Aquatic Life (Advances in Experimental Medicine and Biology 730)

59 Porter/Guth, Redefining German Health Care

144 Post, Spectral Analysis on Graph-Like Spaces (Lecture Notes in Mathematics 2039)

144 Prakasa Rao, Associated Sequences, Demmartingales and Nonparametric Inference (Probability and its Applications)

220 Przytycka (Eds), Algorithms in Bioinformatics. WABI 2011 (Lecture Notes in Computer Science, LNBI 6833)

119 Pukkala (Eds), Continuous Cover Forestry (Managing Forest Ecosystems 23) 2nd ed.

212 Punutanen et al., Matrix Tricks for Linear Statistical Models

19 Pérez Rios, Design and Diagnosis for Sustainable Organizations

118 Pérez-Martín (Eds), Morphogenesis and Pathogenicity in Fungi (Topics in Current Genetics 22)

Q

216 Qi (Ed), Parallel and Distributed Computing and Networks (Communications in Computer and Information Science 137)

13 Quinn (Eds), Reproductive Health and Cancer in Adolescents and Young Adults (Advances in Experimental Medicine and Biology 732)

R

194 Radi/Rasmussen, Principles of Physics (Undergraduate Lecture Notes in Physics)

42 Raghavan (Eds), An Investigation into the Detection and Mitigation of Denial of Service (DoS) Attacks

100 Rajagopal (Eds), Operational and Environmental Consequences of Large Industrial Cooling Water Systems

88 Rajamani, Vehicle Dynamics and Control (Mechanical Engineering Series) 2nd ed.

216 Rauch (Eds), Urban Environment. Proceedings of the 10th Urban Environment Symposium (Alliance for Global Sustainability Bookseries 19)

168 Reeve (Eds), Mitochondrial Dysfunction in Neurodegenerative Disorders

89 Ren et al., Modeling, Control and Coordination of Helicopter Systems

194 Renk, Basics of Laser Physics (Graduate Texts in Physics)

215 Resch (Eds), High Performance Computing on Vector Systems 2011

120 Reviews in Fluorescence 2009

100 Reviews of Environmental Contamination and Toxicology 215

203 Reynolds (Eds), Detection of Malingering during Head Injury Litigation 2nd ed.

89 Richter, Advanced Control of Turbofan Engines

145 Riesel, Prime Numbers and Computer Methods for Factorization (Modern Birkhäuser Classics) 2nd ed.

220 Rinderle-Ma (Eds), Business Process Management. BPM 2011 (Lecture Notes in Computer Science, LNISA 6896)

194 Rivas/Huelga, Open Quantum Systems (SpringerBriefs in Physics)
<table>
<thead>
<tr>
<th>Author Index</th>
<th>Springer.de</th>
</tr>
</thead>
<tbody>
<tr>
<td>196 Stefanita, Magnetism</td>
<td></td>
</tr>
<tr>
<td>217 Stix (Ed), The Arithmetic of Fundamental Groups. PIA 2010 (Contributions in Mathematical and Computational Sciences 2)</td>
<td></td>
</tr>
<tr>
<td>171 Stoker (Ed), MRI of the Gastrointestinal Tract (Medical Radiology, Diagnostic Imaging)</td>
<td></td>
</tr>
<tr>
<td>59 Stolleis, Origins of the German Welfare State (German Social Policy 2)</td>
<td></td>
</tr>
<tr>
<td>60 Strangio, The Reasons for Underdevelopment (Contributions to Economics)</td>
<td></td>
</tr>
<tr>
<td>178 Streffler et al., Radioactive Waste (Ethics of Science and Technology Assessment 38)</td>
<td></td>
</tr>
<tr>
<td>27 Structure and Bonding 141</td>
<td></td>
</tr>
<tr>
<td>123 Suter (Eds), Two Hybrid Technologies (Methods in Molecular Biology 812)</td>
<td></td>
</tr>
<tr>
<td>220 Szomszor (Eds), Electronic Healthcare (Lecture Notes of the Institute for Computer Sciences 69)</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td></td>
</tr>
<tr>
<td>14 Takayama, Lactoferrin and Its Role in Wound Healing</td>
<td></td>
</tr>
<tr>
<td>91 Tamin (Ed), Damage and Fracture of Composite Materials and Structures (Advanced Structured Materials 17)</td>
<td></td>
</tr>
<tr>
<td>146 Tapp, Symmetry</td>
<td></td>
</tr>
<tr>
<td>216 Tarasenko (Eds), Biology, Nanotechnology, Toxicology, and Applications (AIP Conference Proceedings, Materials Physics and App licat 1326)</td>
<td></td>
</tr>
<tr>
<td>208 Tasan-Kok (Eds), Contradictions of Neoliberal Planning (GeoJournal Library 102)</td>
<td></td>
</tr>
<tr>
<td>123 Tax (Eds), Receptor-like Kinases in Plants (Signaling and Communication in Plants 13)</td>
<td></td>
</tr>
<tr>
<td>197 Teichmann, Adiabatic Logic (Springer Series in Advanced Microelectronics 34)</td>
<td></td>
</tr>
<tr>
<td>147 Thai (Eds), Handbook of Optimization in Complex Networks (Springer Optimization and Its Applications 57)</td>
<td></td>
</tr>
<tr>
<td>147 Thai, Group Testing Theory in Network Security (SpringerBriefs in Optimization)</td>
<td></td>
</tr>
<tr>
<td>197 Thomas/McMann, U. S. Spacesuits (Springer Praxis Books, Space Exploration) 2nd ed.</td>
<td></td>
</tr>
<tr>
<td>220 Tjoa (Eds), Availability, Reliability and Security for Business, Enterprise and Health Information Systems. IFIP WG 8.4/8.9 (Lecture Notes in Computer Science, LNISA 6908)</td>
<td></td>
</tr>
<tr>
<td>148 Tobies, Iris Runge (Science Networks. Historical Studies)</td>
<td></td>
</tr>
<tr>
<td>27 Topics in Current Chemistry 303</td>
<td></td>
</tr>
<tr>
<td>28 Topics in Current Chemistry 305</td>
<td></td>
</tr>
<tr>
<td>28 Topics in Medicinal Chemistry 7</td>
<td></td>
</tr>
<tr>
<td>29 Topics in Organometallic Chemistry 38</td>
<td></td>
</tr>
<tr>
<td>148 Torres del Castillo, Differentiable Manifolds</td>
<td></td>
</tr>
<tr>
<td>216 Tou (Eds), Malaysia Annual Physics Conference 2010 (PERFIFIX 2010) (AIP Conference Proceedings 1328)</td>
<td></td>
</tr>
<tr>
<td>91 Tricaud/Chen, Optimal Mobile Sensing and Actuation Policies in Cyber-Physical Systems</td>
<td></td>
</tr>
<tr>
<td>92 Trinh/Fernando, Functional Observers for Dynamical Systems (Lecture Notes in Control and Information Sciences 420)</td>
<td></td>
</tr>
<tr>
<td>178 Trobok (Eds), Between Logic and Reality (Logic, Epistemology, and the Unity of Science 25)</td>
<td></td>
</tr>
<tr>
<td>15 Turner, Key Statistical Concepts in Clinical Trials for Pharma (SpringerBriefs in Pharmaceutical Science &amp; Drug Development)</td>
<td></td>
</tr>
<tr>
<td>92 Tweedale/Jain, Embedded Automation in Human-Agent Environment (Adaptation, Learning, and Optimization 10)</td>
<td></td>
</tr>
<tr>
<td>179 Tymieniecka, The Fullness of the Logos in the Key of Life. Book II. Christo-Logos (Analecta Husserliana 111)</td>
<td></td>
</tr>
<tr>
<td>U</td>
<td></td>
</tr>
<tr>
<td>197 Unterberger/Roger, The Schrödinger-Virasoro Algebra (Theoretical and Mathematical Physics)</td>
<td></td>
</tr>
<tr>
<td>208 Uysal (Eds), Handbook of Tourism and Quality-of-Life Research (International Handbooks of Quality-of-Life)</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
</tr>
<tr>
<td>52 Valcke, Earth System Modelling - Volume 3 (SpringerBriefs in Earth System Sciences)</td>
<td></td>
</tr>
<tr>
<td>220 Van Eekelen (Eds), Interactive Theorem Proving. ITP 2011 (Lecture Notes in Computer Science, LNICTS 6898)</td>
<td></td>
</tr>
<tr>
<td>214 Van Keilegom (Eds), Exploring Research Frontiers in Contemporary Statistics and Econometrics. A Festschrift for Léopold Simar</td>
<td></td>
</tr>
<tr>
<td>216 Vanin (Ed), XXXIII Brazilian Workshop on Nuclear Physics (AIP Conference Proceedings, High Energy Physics 1351)</td>
<td></td>
</tr>
<tr>
<td>198 Vaseashta (Eds), Technological Innovations in Sensing and Detection of Chemical, Biological, Radiological, Nuclear Threats and Ecological Terrorism (NATO Science for Peace and Security)</td>
<td></td>
</tr>
<tr>
<td>124 Venkateshwarulu (Eds), Crop Stress and its Management: Perspectives and Strategies</td>
<td></td>
</tr>
<tr>
<td>216 Venugopal (Eds), Computer Networks and Intelligent Computing. ICP 2011 (Communications in Computer and Information Science 157)</td>
<td></td>
</tr>
<tr>
<td>220 Vilhjálmsson (Eds), Intelligent Virtual Agents. IVA 2011 (Lecture Notes in Computer Science, LNAI 6895)</td>
<td></td>
</tr>
<tr>
<td>52 Vithanage, Tsunami and Groundwater Contamination (Environmental Earth Sciences)</td>
<td></td>
</tr>
<tr>
<td>220 Vivacqua (Eds), Collaboration and Technology. CRIWG 2011 (Lecture Notes in Computer Science, LNISA 6969)</td>
<td></td>
</tr>
<tr>
<td>124 Vivanco (Eds), Secretions and Exudates in Biological Systems (Signaling and Communication in Plants 12)</td>
<td></td>
</tr>
<tr>
<td>217 Vlad (Eds), International Conference on Advancements of Medicine and Health Care through Technology; 29th August - 2nd September 2011, Cluj-Napoca, Romania (IFMBE Proceedings 36)</td>
<td></td>
</tr>
<tr>
<td>171 Vlodaver (Eds), Coronary Heart Disease</td>
<td></td>
</tr>
<tr>
<td>220 Voros (Eds), VLSI 2010 Annual Symposium (Lecture Notes in Electrical Engineering 105)</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>209 Wade (Eds), A War on Terror?</td>
<td></td>
</tr>
<tr>
<td>124 Wang (Ed), Bones, Genetics, and Behavior of Rhesus Macaques (Developments in Primatology: Progress and Prospects)</td>
<td></td>
</tr>
<tr>
<td>93 Wang (Ed), Modeling and Control of Sustainable Power Systems (Green Energy and Technology)</td>
<td></td>
</tr>
<tr>
<td>125 Wang (Eds), Next Generation Microarray Bioinformatics (Methods in Molecular Biology 802)</td>
<td></td>
</tr>
<tr>
<td>93 Wang (Eds), System Identification, Environmental Modelling, and Control System Design</td>
<td></td>
</tr>
<tr>
<td>220 Wang (Eds), Web-Age Information Management. WAIM 2011 (Lecture Notes in Computer Science, LNISA 6897)</td>
<td></td>
</tr>
<tr>
<td>93 Wanhill/Barter, Fatigue of Beta Processed and Beta Heat-treated Titanium Alloys (SpringerBriefs in Applied Sciences and Technology)</td>
<td></td>
</tr>
<tr>
<td>172 Warady (Eds), Pediatric Dialysis 2nd ed.</td>
<td></td>
</tr>
<tr>
<td>94 Warminski (Eds), Nonlinear Dynamic Phenomena in Mechanics (Solid Mechanics and Its Applications 178)</td>
<td></td>
</tr>
<tr>
<td>52 Warneck/Williams, The Atmospheric Chemist's Companion</td>
<td></td>
</tr>
<tr>
<td>Page</td>
<td>Author Index</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
</tr>
<tr>
<td>29</td>
<td>Weidenbörner, Mycotoxins in Feedstuffs 2nd ed.</td>
</tr>
<tr>
<td>94</td>
<td>Weichhart (Ed), mTOR (Methods in Molecular Biology 821)</td>
</tr>
<tr>
<td>215</td>
<td>Williams (Ed), Nexus Network Journal 13,1 (Nexus Network Journal 13)</td>
</tr>
<tr>
<td>198</td>
<td>Wilkinson, New Eyes on the Sun (Astronomers' Universe)</td>
</tr>
<tr>
<td>220</td>
<td>Yahav (Ed), Static Analysis. SAS 2011 (Lecture Notes in Computer Science, LNPS 6887)</td>
</tr>
<tr>
<td>53</td>
<td>Woo, Permafrost Hydrology</td>
</tr>
<tr>
<td>29</td>
<td>Woolf, The Double [3+2] Photocycloaddition Reaction (Springer Theses)</td>
</tr>
<tr>
<td>108</td>
<td>Wright (Eds), Privacy Impact Assessment (Law, Governance and Technology Series 6)</td>
</tr>
<tr>
<td>64</td>
<td>Yang, Guide to Effective Grant Writing 2nd ed.</td>
</tr>
<tr>
<td>198</td>
<td>Yao/Wang, Nonlinear Optics and Solid-State Lasers (Springer Series in Optical Sciences 164)</td>
</tr>
<tr>
<td>149</td>
<td>Yeung/Petrosyan, Subgame Consistent Economic Optimization (Static &amp; Dynamic Game Theory: Foundations &amp; Applications)</td>
</tr>
<tr>
<td>95</td>
<td>Yu/Ampadu, Transient and Permanent Error Control for Networks-on-Chip</td>
</tr>
<tr>
<td>95</td>
<td>Yun/Bliault, High Performance Marine Vessels</td>
</tr>
<tr>
<td>60</td>
<td>Zacher, Social Policy in the Federal Republic of Germany (German Social Policy 3)</td>
</tr>
<tr>
<td>126</td>
<td>Zaidi (Eds), Toxicity of Heavy Metals to Legumes and Bioaccumulation Potential of Rhizosphere Microbes</td>
</tr>
<tr>
<td>216</td>
<td>Zatloukal (Ed), Novel Trends in Rheology IV (AIP Conference Proceedings, Materials Physics and Application 1375)</td>
</tr>
<tr>
<td>216</td>
<td>Zeng (Ed), Applied Informatics and Communication, Part I. ICAIC 2011 (Communications in Computer and Information Science 224)</td>
</tr>
<tr>
<td>216</td>
<td>Zeng (Ed), Applied Informatics and Communication, Part II (Communications in Computer and Information Science 225)</td>
</tr>
<tr>
<td>53</td>
<td>Zentner, Design and impact of water treaties (Springer Theses)</td>
</tr>
<tr>
<td>46</td>
<td>Zisman (Eds), Software and Systems Traceability</td>
</tr>
<tr>
<td>65</td>
<td>Zohar (Eds), Metacognition in Science Education (Contemporary Trends and Issues in Science Education 40)</td>
</tr>
<tr>
<td>65</td>
<td>Zuss, The Practice of Theoretical Curiosity (Explorations of Educational Purpose 20)</td>
</tr>
</tbody>
</table>
Author Index

105 du Plessis et al., German Corporate Governance in International and European Context 2nd ed.

213 van de Geer (Eds), Selected Works of Willem van Zwet (Selected Works in Probability and Statistics)

92 van de Krol/Grätzel, Photoelectrochemical Hydrogen Production (Electronic Materials: Science & Technology 102)

179 van der Schyff, Judicial Review of Legislation (Ius Gentium: Comparative Perspectives on Law and Justice 5)

Ž

30 Žel et al., How to Reliably Test for GMOs (SpringerBriefs in Food, Health, and Nutrition)
A

104 A Comparative Look at Regulation of Corporate Tax Avoidance
211 A Concise Guide to Statistics
78 A Concise Introduction to Mechanics of Rigid Bodies
181 A Concise Introduction to the Statistical Physics of Complex Systems
186 A Field Guide to Deep-Sky Objects
113 A Geographic Perspective of Cuban Landscapes
37 A Hybrid Deliberative Layer for Robotic Agents
137 A Panorama of Modern Operator Theory and Related Topics
67 A Perspective on Stereophonic Acoustic Echo Cancellation
209 A War on Terror?
109 Abiotic Stress Responses in Plants
2 Activation and Detoxification Enzymes
220 Active Media Technology
123 Adaption of Microbial Life to Environmental Extremes
80 Adaptive Feed-Forward Control of Low Frequency Interior Noise
218 Adaptive and Intelligent Systems
197 Adiabatic Logic
204 Adult Attachment in Clinical Social Work
216 Advanced Communication and Networking
89 Advanced Control of Turbofan Engines
151 Advances and Technical Standards in Neurosurgery
217 Advances in Applied Economics, Business and Development
220 Advances in Bioinformatics and Computational Biology
217 Advances in Computer Science and Education Applications
216 Advances in Computer Science, Environment, Bioinformatics, and Education
216 Advances in Computer Science, Environment, Bioinformatics, and Education, Part II
216 Advances in Computer Science, Environment, Bioinformatics, and Education, Part III
216 Advances in Computer Science, Environment, Bioinformatics, and Education, Part IV
216 Advances in Computer Science, Environment, Ecoinformatics, and Education, Part V
215 Advances in Computer Science, Intelligent Systems and Environment
216 Advances in Computing and Communications, Part I
216 Advances in Computing and Communications, Part II
216 Advances in Computing and Communications, Part III
216 Advances in Computing and Communications, Part IV
220 Advances in Cryptology -- CRYPTO 2011
216 Advances in Digital Image Processing and Information Technology
217 Advances in Education and Management
63 Advances in Nature of Science Research
72 Advances in Numerical Modeling of Adhesive Joints
216 Advances in Parallel, Distributed Computing
76 Advances in Robotics and Virtual Reality
219 Advances in Self-Organizing Maps
215 Advances in Systems Biology
181 Advances in the Physics of Particles and Nuclei - Volume 31
220 Advances on Data Mining: Applications and Theoretical Aspects
205 Agent-Based Models of Geographical Systems
218 Algebra and Coalgebra in Computer Science
220 Algorithms in Bioinformatics
220 Ambient Media and Systems
110 Amino Acid Analysis
42 An Investigation into the Detection and Mitigation of Denial of Service (DoS) Attacks
157 Anal and Rectal Diseases
210 Analysis of Randomly Incomplete Data Without Imputation
217 Analysis of Social Media and Ubiquitous Data
4 Antibiotic Discovery and Development
145 Anticipatory Systems
217 Applied Economics, Business and Development
216 Applied Informatics and Communication, Part I
216 Applied Informatics and Communication, Part II
217 Applied Informatics and Communication, Part III
217 Applied Informatics and Communication, Part IV
217 Applied Informatics and Communication, Part V
218 Approximation, Randomization, and Combinatorial Optimization. Algorithms and Techniques
220 Artificial General Intelligence
219 Artificial Immune Systems
102 Aspects of African Ecology and their Historical Perspectives
61 Assessment and Teaching of 21st Century Skills
144 Associated Sequences, Demimartingales and Nonparametric Inference
11 Astrocytes
74 At Home in Space
2 Atlas of Genetic Diagnosis and Counseling
163 Atlas of Sectional Radiological Anatomy for PET/CT
217 Automata, Languages and Programming
142 Automated Solution of Differential Equations by the Finite Element Method
217 Autonomic and Trusted Computing
34 Autonomous Intelligent Vehicles
220 Availability, Reliability and Security for Business, Enterprise and Health Information Systems

B

8 Bacteria and Cancer
194 Basics of Laser Physics
158 Bedside Procedures in the ICU
12 Behavioral Neurobiology of Aging
211 Behavioral Research Data Analysis with R
186 Bell's Theorem and Quantum Realism
120 Beneficial Microorganisms in Multicellular Life Forms
178 Between Logic and Reality
140 Bifurcation Theory
175 Bioethics Critically Reconsidered
216 Biology, Nanotechnology, Toxicology, and Applications
213 Biostatistics with R
22 Biotechnology for Pulp and Paper Processing
<table>
<thead>
<tr>
<th>Title Index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>114 Bone Research Protocols</td>
<td>138 Complex Monge–Ampere Equations and</td>
</tr>
<tr>
<td>124 Bones, Genetics, and Behavior of Rhesus</td>
<td>Geodesics in the Space of Kähler Metrics</td>
</tr>
<tr>
<td>Macaques</td>
<td></td>
</tr>
<tr>
<td>219 Brain Informatics</td>
<td>55 Complex Scheduling</td>
</tr>
<tr>
<td>220 Business Process Management</td>
<td>38 Computability and Complexity Theory</td>
</tr>
<tr>
<td>210 Business Statistics for Competitive Advantage with Excel 2010</td>
<td>215 Computational Design Modeling</td>
</tr>
<tr>
<td></td>
<td>1 Computational Drug Discovery and Design</td>
</tr>
<tr>
<td></td>
<td>86 Computational Intelligence Paradigms in Advanced Pattern Classification</td>
</tr>
<tr>
<td></td>
<td>7 Computational Neuroscience of Drug Addiction</td>
</tr>
<tr>
<td></td>
<td>220 Computational Science and its Applications - ICCSA 2011</td>
</tr>
<tr>
<td></td>
<td>216 Computer Networks and Intelligent Computing</td>
</tr>
<tr>
<td></td>
<td>83 Computer-aided Nonlinear Control System Design</td>
</tr>
<tr>
<td></td>
<td>218 Computing and Combinatorics</td>
</tr>
<tr>
<td></td>
<td>215 Concepts and Trends in Medical Radiation Dosimetry:</td>
</tr>
<tr>
<td></td>
<td>217 Conceptual Structures for Discovering Knowledge</td>
</tr>
<tr>
<td></td>
<td>216 Contemporary Computing</td>
</tr>
<tr>
<td></td>
<td>119 Continuous Cover Forestry</td>
</tr>
<tr>
<td></td>
<td>208 Contradictions of Neoliberal Planning</td>
</tr>
<tr>
<td></td>
<td>133 Contributions in Analytic and Algebraic Number Theory</td>
</tr>
<tr>
<td></td>
<td>70 Control and Optimization Methods for Electric Smart Grids</td>
</tr>
<tr>
<td></td>
<td>74 Control of Solar Energy Systems</td>
</tr>
<tr>
<td></td>
<td>132 Convexity and Optimization in Banach Spaces</td>
</tr>
<tr>
<td></td>
<td>219 Cooperative Design, Visualization, and Engineering</td>
</tr>
<tr>
<td></td>
<td>26 Copper Zinc Tin Sulfide Thin Films for Photovoltaics</td>
</tr>
<tr>
<td></td>
<td>170 Coronary Artery CTA</td>
</tr>
<tr>
<td></td>
<td>152 Coronary Artery Disease</td>
</tr>
<tr>
<td></td>
<td>171 Coronary Heart Disease</td>
</tr>
<tr>
<td></td>
<td>172 Critical Issues for the Development of Sustainable E-health Solutions</td>
</tr>
<tr>
<td></td>
<td>152 Crohn’s Disease and Ulcerative Colitis</td>
</tr>
<tr>
<td></td>
<td>124 Crop Stress and its Management: Perspectives and Strategies</td>
</tr>
<tr>
<td></td>
<td>127 Current Issues in Bilingualism</td>
</tr>
<tr>
<td></td>
<td>112 Cytokine Protocols</td>
</tr>
</tbody>
</table>

| D                                                                         |                                        |
|                                                                           | 185 D-Brane                          |
|                                                                           | 218 DNA Computing and Molecular Programming |
|                                                                           | 91 Damage and Fracture of Composite Materials and Structures |
|                                                                           | 33 Dark Web                          |
|                                                                           | 219 Data Management in Grid and Peer-to-Peer Systems |
|                                                                           | 78 Data Mining: Foundations and Intelligent Paradigms |
|                                                                           | 90 Data-driven Controller Design      |
|                                                                           | 105 Deficits in EU and US Mandatory Environmental Information Disclosure |
|                                                                           | 162 Dermatology                      |
|                                                                           | 219 Descriptive Complexity of Formal Systems |
|                                                                           | 84 Design Technology for Heterogeneous Embedded Systems |
|                                                                           | 19 Design and Diagnosis for Sustainable Organizations |
|                                                                           | 53 Design and impact of water treaties |
|                                                                           | 94 Detection and Identification of Rare Audiovisual Cues |
|                                                                           | 203 Detection of Malingering during Head Injury Litigation |
|                                                                           | 219 Development in Language Theory    |
|                                                                           | 170 Diabetes & C-Peptide              |
|                                                                           | 168 Diagnostic, Prognostic and Therapeutic Value of Gene Signatures |
|                                                                           | 148 Differentiable Manifolds          |
|                                                                           | 76 Digital Signal Processing for In-Vehicle Systems and Safety |
|                                                                           | 217 Direct and Large-Eddy Simulation VIII |
|                                                                           | 23 Direct-Fed Microbials and Prebiotics for Animals |
|                                                                           | 162 Disorders of Sex Development      |
|                                                                           | 142 Distance Expanding Random Mappings, Thermodynamical Formalism, Gibbs Measures and Fractal Geometry |
|                                                                           | 79 Distributed Decision Making and Control |
|                                                                           | 31 Distributed Multiple Description Coding |
|                                                                           | 71 Domain of Attraction               |
|                                                                           | 157 Dupuytren's Disease and Related Hyperproliferative Disorders |
|                                                                           | 153 Dural Cavernous Sinus Fistulas    |
47 Dynamic land use/cover change modelling

217 E-Commerce and Web Technologies

220 E-Infrastructure and E-Services for Developing Countries

204 Early Adulthood in a Family Context

175 Early Stoic Epistemology

48 Earth System Modelling - Volume 2

52 Earth System Modelling - Volume 3

48 Earth System Modelling - Volume 5

100 Ecologist-Developed Spatially-Explicit Dynamic Landscape Models

193 Econodynamics

55 Econometric Analysis of Carbon Markets

47 Economic Geology

47 Eddy Covariance

116 Edible Medicinal And Non Medicinal Plants

217 Education and Management

63 Education for Self-transformation

97 Education, Community Engagement and Sustainable Development

64 Educational Media and Technology Yearbook

62 Educational Research with Our Youngest

218 Edutainment Technologies. Educational Games and Virtual Reality/Augmented Reality Applications

49 Effective Parameters of Hydrological Models

55 Electoral Systems

202 Electrodermal Activity

219 Electronic Government

217 Electronic Government and the Information Systems Perspective

220 Electronic Healthcare

92 Embedded Automation in Human-Agent Environment

169 Emergencies in Pediatric Oncology

66 Emerging Technological Risk

88 Emotional Cognitive Neural Algorithms with Engineering Applications

58 Empirical Modelling in Regional Science

215 Enabling Manufacturing Competitiveness and Economic Sustainability

217 Enabling Real-Time Business Intelligence

112 Encyclopedia of Systems Biology

156 Endocrine Disruptors and Puberty

129 Energetic Materials at Extreme Conditions

218 Energy Minimization Methods in Computer Vision and Pattern Recognition

219 Energy-Aware Communications

86 Ensembles in Machine Learning Applications

109 Environmental Adaptations and Stress Tolerance of Plants in the Era of Climate Change

99 Environmental Security in Watersheds: The Sea of Azov

164 Epidemiology

11 Epigenetic Epidemiology

4 Epigenetic Regulation of Lymphocyte Development

10 Epilepsy

2 Ethical Challenges in Genomics Research

39 Euclidean Shortest Paths

219 Euro-Par 2011 Parallel Processing

215 Eurofuse 2011

141 European Success Stories in Industrial Mathematics

106 European Yearbook of International Economic Law (EYIEL), Vol. 3 (2012)

206 Evidence-Based Counterterrorism Policy

58 Evolutionary Foundations of Equilibria in Irrational Markets

32 Evolutionary Game Design

207 Experiencing Grandparenthood

118 Expert Knowledge and Its Application in Landscape Ecology

214 Exploring Research Frontiers in Contemporary Statistics and Econometrics

83 Extraction and Representation of Prosody for Speaker, Speech and Language Recognition

195 Extreme States of Matter in Strong Interaction Physics

95 Extremum-Seeking Control and Applications

93 Fatigue of Beta Processed and Beta Heat-treated Titanium Alloys

90 Fault Detection and Flight Data Measurement

165 Femoroacetabular Impingement

193 Femtosecond Laser Micromachining

122 Fencing for Conservation

99 Fiber Reinforced Polymer (FRP) Composites for Infrastructure Applications

86 Fiber-Optic Transmission Networks

182 Flags of the Night Sky

158 Fluid and Electrolytes in Pediatrics

24 Fluorescent Proteins I

220 Forensics in Telecommunications, Information and Multimedia

122 Forests in Development: A Vital Balance

31 Formal Methods for Eternal Networked Software Systems

184 Formation and Cooperative Behaviour of Protein Complexes on the Cell Membrane

15 Formulating Poorly Water Soluble Drugs

202 Foundations of Chinese Psychology

89 Fractal Analysis in Machining

73 Fractional Order Signal Processing

91 Fractional Processes and Fractional-Order Signal Processing

19 Freight Forwarder’s Intermediary Role in Multimodal Transport Chains

23 From Sugar to Splenda

32 From the Web to the Grid and Beyond

133 Frontiers in Numerical Analysis - Durham 2010

156 Frozen Section Library: Lymph Nodes

27 Fuel Cells and Hydrogen Storage

8 Functional Genomics

158 Functional Neuroradiology

92 Functional Observers for Dynamical Systems

219 Functional and Constraint Logic Programming

182 Fundamental Aspects of Plasma Chemical Physics

14 Fundamentals and Applications of Controlled Release Drug Delivery
<table>
<thead>
<tr>
<th>Title Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>220 Fundamentals of Computation Theory</td>
</tr>
<tr>
<td>187 Fundamentals of Shallow Water Acoustics</td>
</tr>
<tr>
<td>192 Fundamentals of Time-Dependent Density Functional Theory</td>
</tr>
<tr>
<td>19 GaN and ZnO-based Materials and Devices</td>
</tr>
<tr>
<td>200 Gaither’s Dictionary of Scientific Quotations</td>
</tr>
<tr>
<td>215 Gamma Ray Bursts 2010</td>
</tr>
<tr>
<td>104 General Reports of the XVIIIth Congress of the International Academy of Comparative Law/Rapports Généraux du XVIIIème Congrès de l’Academie Internationale de Droit Comparé</td>
</tr>
<tr>
<td>13 Genetic Toxicology</td>
</tr>
<tr>
<td>105 German Corporate Governance in International and European Context</td>
</tr>
<tr>
<td>111 Germline Development</td>
</tr>
<tr>
<td>161 Gestational Trophoblastic Disease</td>
</tr>
<tr>
<td>98 Global Change</td>
</tr>
<tr>
<td>34 Grammars for Language and Genes</td>
</tr>
<tr>
<td>25 Green Solvent Properties and Applications in Chemistry</td>
</tr>
<tr>
<td>85 Green Tribology</td>
</tr>
<tr>
<td>174 Groundwork in the Theory of Argumentation</td>
</tr>
<tr>
<td>147 Group Testing Theory in Network Security</td>
</tr>
<tr>
<td>64 Guide to Effective Grant Writing</td>
</tr>
<tr>
<td>33 Guide to ILDJIT</td>
</tr>
<tr>
<td>189 H2O (HOH), Part alpha</td>
</tr>
<tr>
<td>190 H2O (HOH), Part beta</td>
</tr>
<tr>
<td>156 HCV Infection and Cryoglobulinemia</td>
</tr>
<tr>
<td>132 Hamiltonian Structures and Generating Families</td>
</tr>
<tr>
<td>160 Hand Bone Age</td>
</tr>
<tr>
<td>178 Handbook of Analytic Philosophy of Medicine</td>
</tr>
<tr>
<td>36 Handbook of Data Intensive Computing</td>
</tr>
<tr>
<td>167 Handbook of Endovascular Peripheral Interventions</td>
</tr>
<tr>
<td>16 Handbook of Entrepreneurship Research</td>
</tr>
<tr>
<td>84 Handbook of Memetic Algorithms</td>
</tr>
<tr>
<td>147 Handbook of Optimization in Complex Networks</td>
</tr>
<tr>
<td>206 Handbook of Politics</td>
</tr>
<tr>
<td>207 Handbook of Quantitative Criminology</td>
</tr>
<tr>
<td>205 Handbook of Social Indicators and Quality of Life Research</td>
</tr>
<tr>
<td>208 Handbook of Tourism and Quality-of-Life Research</td>
</tr>
<tr>
<td>32 Haptic Interaction with Deformable Objects</td>
</tr>
<tr>
<td>218 Haptic and Audio Interaction Design</td>
</tr>
<tr>
<td>35 Haptics Technologies</td>
</tr>
<tr>
<td>33 Hard Real-Time Computing Systems</td>
</tr>
<tr>
<td>68 Hardware/Software Co-design for Heterogeneous Multi-core Platforms</td>
</tr>
<tr>
<td>79 Harnessing VLSI System Design with EDA Tools</td>
</tr>
<tr>
<td>9 Heparin - A Century of Progress</td>
</tr>
<tr>
<td>121 Herpetological Osteopathology</td>
</tr>
<tr>
<td>215 High Performance Computing on Vector Systems 2011</td>
</tr>
<tr>
<td>87 High Performance Fiber Reinforced Cement Composites 6</td>
</tr>
<tr>
<td>95 High Performance Marine Vessels</td>
</tr>
<tr>
<td>213 History of Statistics</td>
</tr>
<tr>
<td>219 Holonic and Multi-Agent Systems for Manufacturing</td>
</tr>
<tr>
<td>30 How to Reliably Test for GMOs</td>
</tr>
<tr>
<td>160 How to set up an Acute Stroke Service</td>
</tr>
<tr>
<td>126 Human Auditory Development</td>
</tr>
<tr>
<td>85 Human Spaceflight and Exploration</td>
</tr>
<tr>
<td>77 Human – Computer Systems Interaction: Backgrounds and Applications 2</td>
</tr>
<tr>
<td>218 Human-Computer Interaction -- INTERACT 2011</td>
</tr>
<tr>
<td>219 Hybrid Learning</td>
</tr>
<tr>
<td>152 Hydrocephalus</td>
</tr>
<tr>
<td>188 Hyperbolic Chaos</td>
</tr>
<tr>
<td>66 Identification for Automotive Systems</td>
</tr>
<tr>
<td>219 Image Analysis and Recognition</td>
</tr>
<tr>
<td>215 Image Processing &amp; Communications Challenges 3</td>
</tr>
<tr>
<td>177 Imagined Causes: Hume's Conception of Objects</td>
</tr>
<tr>
<td>155 Imaging in Pediatric Pulmonology</td>
</tr>
<tr>
<td>189 Index Compounds reg. in Volumes A-L; Comprehensive CAS-Index for all Subvolumes A-L</td>
</tr>
<tr>
<td>82 Industrial Process Identification and Control Design</td>
</tr>
<tr>
<td>135 Inequalities</td>
</tr>
<tr>
<td>169 Infection Control in the Intensive Care Unit</td>
</tr>
<tr>
<td>96 Information Modeling for Interoperable Dimensional Metrology</td>
</tr>
<tr>
<td>216 Information Security and Assurance</td>
</tr>
<tr>
<td>220 Information Security and Privacy</td>
</tr>
<tr>
<td>218 Information Technology in Bio- and Medical Informatics</td>
</tr>
<tr>
<td>166 Informed Consent, Proxy Consent, and Catholic Bioethics</td>
</tr>
<tr>
<td>164 Injury Research</td>
</tr>
<tr>
<td>17 Innovation Communities</td>
</tr>
<tr>
<td>94 Innovations in Intelligent Machines -2</td>
</tr>
<tr>
<td>108 Insider Dealing and Criminal Law</td>
</tr>
<tr>
<td>218 Intelligence and Security Informatics</td>
</tr>
<tr>
<td>88 Intelligent Computer Graphics 2011</td>
</tr>
<tr>
<td>218 Intelligent Computer Mathematics</td>
</tr>
<tr>
<td>220 Intelligent Data Engineering and Automated Learning -- IDEAL 2011</td>
</tr>
<tr>
<td>69 Intelligent Distributed Computing V</td>
</tr>
<tr>
<td>220 Intelligent Virtual Agents</td>
</tr>
<tr>
<td>41 Interactive Decision Aids in E-Commerce</td>
</tr>
<tr>
<td>220 Interactive Theorem Proving</td>
</tr>
<tr>
<td>143 Interfacial Convection in Multilayer Systems</td>
</tr>
<tr>
<td>217 International Conference on Advancements of Medicine and Health Care through Technology; 29th August - 2nd September 2011, Cluj-Napoca, Romania</td>
</tr>
<tr>
<td>215 International Conference on Applications in Nonlinear Dynamics (ICAND 2010)</td>
</tr>
<tr>
<td>215 International Conference on Magnetic Materials (ICMM-2010)</td>
</tr>
<tr>
<td>216 Interventional Oncology</td>
</tr>
<tr>
<td>3 Intradermal Immunization</td>
</tr>
<tr>
<td>Title Index</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>207 Mortality and Causes of Death in 20th-Century Ukraine</td>
</tr>
<tr>
<td>176 Moses Mendelssohn's Metaphysics and Aesthetics</td>
</tr>
<tr>
<td>38 Moving Target Defense</td>
</tr>
<tr>
<td>3 Mucosal Vaccines</td>
</tr>
<tr>
<td>41 Multilingual Information Retrieval</td>
</tr>
<tr>
<td>218 Multilingual and Multimodal Information Access Evaluation</td>
</tr>
<tr>
<td>128 Multiscale Fabrication of Functional Materials for Regenerative Medicine</td>
</tr>
<tr>
<td>6 Muscarinic Receptors</td>
</tr>
<tr>
<td>103 Muslim Merit-making in Thailand's Far-South</td>
</tr>
<tr>
<td>29 Mycotoxins in Feedstuffs</td>
</tr>
</tbody>
</table>

| N |
| 218 NETWORKING 2011 Workshops |
| 174 NGOs as Legitimate Partners of Corporations |
| 74 Nanoindentation |
| 25 Nanotechnology in Regenerative Medicine |
| 97 National Security and Human Health Implications of Climate Change |
| 69 Natural Computing in Computational Finance |
| 87 Nature Inspired Cooperative Strategies for Optimization (NICSO 2011) |
| 206 Neighbourhood Effects Research: New Perspectives |
| 166 Neonatal Cranial Ultrasonography |
| 85 New Approaches in Modeling Multiphase Flows and Dispersion in Turbulence, Fractal Methods and Synthetic Turbulence |
| 18 New Corporate Governance |
| 97 New Environmentalism |
| 141 New Essays on Leibniz Reception |
| 198 New Eyes on the Sun |
| 127 New Perspectives on Individual Differences in Language Learning and Teaching |
| 135 Newton Methods for Nonlinear Problems |
| 77 Next Generation Intelligent Environments |
| 125 Next Generation Microarray Bioinformatics |
| 183 Next Generation of Photovoltaics |
| 39 Next Wave in Robotics |

| O |
| 72 On Integrating Unmanned Aircraft Systems into the National Airspace System |
| 220 Online Communities and Social Computing |
| 40 Ontology-based Application Integration |
| 194 Open Quantum Systems |
| 100 Operational and Environmental Consequences of Large Industrial Cooling Water Systems |
| 136 Operator Inequalities of the Jensen, Čebyšev and Grüss Type |
| 195 Optical Properties of Nanostructured Metallic Systems |
| 91 Optimal Mobile Sensing and Actuation Policies in Cyber-Physical Systems |

| 193 Optimised Projections for the Ab Initio Simulation of Large and Strongly Correlated Systems |
| 20 Optimization of Temporal Networks under Uncertainty |
| 110 Organelle Genetics |
| 39 Organizational Interoperability in E-Government |
| 113 Origins of Life: The Primal Self-Organization |
| 59 Origins of the German Welfare State |
| 122 Oxidative Stress in Cancer Biology and Therapy |
| 215 Oxygen Transport to Tissue XXXIII |

<p>| P |
| 203 Paradigms in Theory Construction |
| 219 Parallel Computing Technologies |
| 216 Parallel and Distributed Computing and Networks |
| 75 Parametric Resonance in Dynamical Systems |
| 119 Pathobichemistry and Molecular Biology of the Metabolic Syndrome |
| 35 Pathways in Software Engineering |
| 6 Pediatric Cancer, Volume 1, Neuroblastoma |
| 165 Pediatric Critical Care Study Guide |
| 172 Pediatric Dialysis |
| 9 Pediatric Palliative Care: Global Perspectives |
| 201 Pediatric and Adolescent Concussion |
| 53 Permafrost Hydrology |
| 220 Personal Satellite Services |
| 139 Perspectives in Analysis, Geometry, and Topology |
| 98 Perspectives on Environmental Management and Technology in Asian River Basins |
| 63 Perspectives on Scientific Argumentation |
| 217 Perspectives on Soviet and Russian Computing |
| 175 Philosophical Dimensions of Human Rights |
| 179 Philosophical Faith and the Future of Humanity |
| 177 Philosophy of Behavioral Biology |
| 27 Photocatalysis |
| 92 Photoelectrochemical Hydrogen Production |
| 191 Photons in Natural and Life Sciences |</p>
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photosensitizers in Medicine, Environment, and Security</td>
<td>25</td>
</tr>
<tr>
<td>Physical Systems</td>
<td>174</td>
</tr>
<tr>
<td>Physicomimetics</td>
<td>44</td>
</tr>
<tr>
<td>Physics of Transitional Shear Flows</td>
<td>182</td>
</tr>
<tr>
<td>Planetary Systems Beyond the Main Sequence</td>
<td>216</td>
</tr>
<tr>
<td>Post-Fire Management and Restoration of Southern European Forests</td>
<td>24</td>
</tr>
<tr>
<td>Practical Aspects of Computational Chemistry I</td>
<td>151</td>
</tr>
<tr>
<td>Practical Handbook for Small-Gauge Vitrectomy</td>
<td>171</td>
</tr>
<tr>
<td>Practical Procedures in Elective Orthopaedic Surgery</td>
<td>160</td>
</tr>
<tr>
<td>Practical Procedures in Orthopaedic Surgery</td>
<td>217</td>
</tr>
<tr>
<td>Practice-Driven Research on Enterprise Transformation</td>
<td>49</td>
</tr>
<tr>
<td>Precipitation Modeling and Quantitative Analysis</td>
<td>31</td>
</tr>
<tr>
<td>Predictive Clustering</td>
<td>145</td>
</tr>
<tr>
<td>Prime Numbers and Computer Methods for Factorization</td>
<td>70</td>
</tr>
<tr>
<td>Principles of Human Joint Replacement</td>
<td>12</td>
</tr>
<tr>
<td>Principles of Immunopharmacology</td>
<td>194</td>
</tr>
<tr>
<td>Principles of Physics</td>
<td>28</td>
</tr>
<tr>
<td>Prion Proteins</td>
<td>108</td>
</tr>
<tr>
<td>Privacy Impact Assessment</td>
<td>118</td>
</tr>
<tr>
<td>Private or Socialistic Forestry?</td>
<td>136</td>
</tr>
<tr>
<td>Probability in Complex Physical Systems</td>
<td>76</td>
</tr>
<tr>
<td>Propagation Engineering in Wireless Communications</td>
<td>201</td>
</tr>
<tr>
<td>Psychology of Religion</td>
<td>218</td>
</tr>
<tr>
<td>Public Key Infrastructures, Services and Applications</td>
<td>218</td>
</tr>
<tr>
<td>Public Services and the European Union</td>
<td>107</td>
</tr>
<tr>
<td>Queer Masculinities</td>
<td>64</td>
</tr>
<tr>
<td>Radio Pulsars: An Astrophysical Key to Unlock the Secrets of the Universe</td>
<td>210</td>
</tr>
<tr>
<td>Radioactive Waste</td>
<td>178</td>
</tr>
<tr>
<td>Radiology Illustrated: Uroradiology</td>
<td>163</td>
</tr>
<tr>
<td>Radiotherapy from Radiobiology and Physics Perspective</td>
<td>154</td>
</tr>
<tr>
<td>Real Estate Investment</td>
<td>17</td>
</tr>
<tr>
<td>Reasoning Web. Semantic Technologies for the Web of Data</td>
<td>42</td>
</tr>
<tr>
<td>Recent Advances in Intelligent Engineering Systems</td>
<td>75</td>
</tr>
<tr>
<td>Recent Advances in Intrusion Detection</td>
<td>220</td>
</tr>
<tr>
<td>Recent Advances in System Reliability</td>
<td>82</td>
</tr>
<tr>
<td>Recent Advances on Model Hosts</td>
<td>215</td>
</tr>
<tr>
<td>Recent Freshwater Ostracods of the World</td>
<td>115</td>
</tr>
<tr>
<td>Recent Landform Evolution</td>
<td>101</td>
</tr>
<tr>
<td>Recent Trends of Mobile Collaborative Augmented Reality Systems</td>
<td>215</td>
</tr>
<tr>
<td>Receptor-like Kinases in Plants</td>
<td>123</td>
</tr>
<tr>
<td>Recognizing Variable Environments</td>
<td>73</td>
</tr>
<tr>
<td>Recombinant Gene Expression</td>
<td>10</td>
</tr>
<tr>
<td>Reconstructing Human-Landscape Interactions - Volume I</td>
<td>50</td>
</tr>
<tr>
<td>Redefining German Health Care</td>
<td>59</td>
</tr>
<tr>
<td>Reflectance Confocal Microscopy for Skin Diseases</td>
<td>161</td>
</tr>
<tr>
<td>Regenerative Therapy Using Blood-Derived Stem Cells</td>
<td>109</td>
</tr>
<tr>
<td>Remembering Sofya Kovalevskaya</td>
<td>131</td>
</tr>
<tr>
<td>Repairing and Querying Databases under Aggregate Constraints</td>
<td>36</td>
</tr>
<tr>
<td>Representing Finite Groups</td>
<td>146</td>
</tr>
<tr>
<td>Reproductive Health and Cancer in Adolescents and Young Adults</td>
<td>13</td>
</tr>
<tr>
<td>Research Design and Proposal Writing in Spatial Science</td>
<td>101</td>
</tr>
<tr>
<td>Research Methods in e-Learning Systems</td>
<td>61</td>
</tr>
<tr>
<td>Research on e-Learning and ICT in Education</td>
<td>62</td>
</tr>
<tr>
<td>Reset Control Systems</td>
<td>67</td>
</tr>
<tr>
<td>Rethinking Virtue Ethics</td>
<td>180</td>
</tr>
<tr>
<td>Retinal Degenerative Diseases</td>
<td>215</td>
</tr>
<tr>
<td>Reviews in Fluorescence 2009</td>
<td>120</td>
</tr>
<tr>
<td>Reviews of Environmental Contamination and Toxicology</td>
<td>100</td>
</tr>
<tr>
<td>Rho GTPases</td>
<td>120</td>
</tr>
<tr>
<td>Ribosome Display and Related Technologies</td>
<td>112</td>
</tr>
<tr>
<td>Risk Habitat Megacity</td>
<td>56</td>
</tr>
<tr>
<td>Robert Recorde</td>
<td>45</td>
</tr>
<tr>
<td>Robotic Radiosurgery Treating Prostate Cancer and Related Genitourinary Applications</td>
<td>168</td>
</tr>
<tr>
<td>Robotic Sailing</td>
<td>215</td>
</tr>
<tr>
<td>Russian Arctic Seas</td>
<td>49</td>
</tr>
<tr>
<td>S-BPM ONE - Learning by Doing - Doing by Learning</td>
<td>216</td>
</tr>
<tr>
<td>SELDI-TOF Mass Spectrometry</td>
<td>111</td>
</tr>
<tr>
<td>Scientific and Statistical Database Management</td>
<td>217</td>
</tr>
<tr>
<td>Search Based Software Engineering</td>
<td>218</td>
</tr>
<tr>
<td>Second International Ulaanbaatar Conference on Nuclear Physics and Applications</td>
<td>215</td>
</tr>
<tr>
<td>Secretions and Exudates in Biological Systems</td>
<td>124</td>
</tr>
<tr>
<td>Security Protocols XVI</td>
<td>218</td>
</tr>
<tr>
<td>Seismic Wave Propagation and Scattering in the Heterogenous Earth</td>
<td>51</td>
</tr>
<tr>
<td>Selected Works of David Brillinger</td>
<td>211</td>
</tr>
<tr>
<td>Selected Works of E. L. Lehmann</td>
<td>212</td>
</tr>
<tr>
<td>Selected Works of Willem van Zwet</td>
<td>213</td>
</tr>
<tr>
<td>Selenium</td>
<td>114</td>
</tr>
<tr>
<td>Self Organized Nanostructures of Amphiphilic Block Copolymers I</td>
<td>21</td>
</tr>
<tr>
<td>Self Organized Nanostructures of Amphiphilic Block Copolymers II</td>
<td>21</td>
</tr>
<tr>
<td>Self and Nonself</td>
<td>9</td>
</tr>
<tr>
<td>Semantic Methods for Knowledge Management and Communication</td>
<td>80</td>
</tr>
<tr>
<td>Semantic Multimedia</td>
<td>218</td>
</tr>
<tr>
<td>Semantics in Data and Knowledge Bases</td>
<td>220</td>
</tr>
<tr>
<td>Sensor Systems and Software</td>
<td>220</td>
</tr>
<tr>
<td>Sensors: Theory, Algorithms, and Applications</td>
<td>134</td>
</tr>
<tr>
<td>Serious Games Development and Applications</td>
<td>219</td>
</tr>
<tr>
<td>Shock Waves Science and Technology Library, Vol. 6</td>
<td>199</td>
</tr>
<tr>
<td>Short and Long Distance Signaling</td>
<td>115</td>
</tr>
<tr>
<td>Signaling Pathways and Molecular Mediators in Metastasis</td>
<td>5</td>
</tr>
</tbody>
</table>
Title Index

5  Signaling Pathways in Cancer Pathogenesis and Therapy
119 Signaling and Communication in Plant Symbiosis
150 Singularities in Elliptic Boundary Value Problems and Elasticity and Their Connection with Failure Initiation
218 Smart Graphics
217 Smart Spaces and Next Generation Wired/ Wireless Networking
58 Social Exclusion
60 Social Policy in the Federal Republic of Germany
185 Social Self-Organization
35 Socially Enhanced Services Computing
81 Software Engineering Research, Management and Applications 2011
46 Software and Systems Traceability
218 Spatial Information Theory
81 Speaker Authentication
144 Spectral Analysis on Graph-Like Spaces
67 Speech Enhancement in the STFT Domain
102 Springer Handbook of Geographic Information
220 Static Analysis
7  Stem Cells and Cancer Stem Cells, Volume 3
134 Stochastic Models, Information Theory, and Lie Groups, Volume 2
140 Stochastic Stability of Differential Equations
22 Strategies for Achieving Food Security in Central Asia
3  Stress Challenges and Immunity in Space
37 Studies in Complexity and Cryptography
190 Studying Atomic Dynamics with Coherent X-rays
149 Subgame Consistent Economic Optimization
216 Subject-Oriented Business Process Management
209 Subjective Well-Being and Security
84 Supercavitation
19 Switchpoints for the Future of Logistics
146 Symmetry
125 Synthetic Gene Networks
93 System Identification, Environmental Modelling, and Control System Design
216 Systems and Frameworks for Computational Morphology

T

215 T(r)topical QCD II Workshop
215 TCP 2010
159 Targeted Therapeutics in Melanoma
166 Teaching Mindfulness
113 Technological Innovations in Major World Oil Crops, Volume 2
198 Technological Innovations in Sensing and Detection of Chemical, Biological, Radiological, Nuclear Threats and Ecological Terrorism
54 Technologies and Innovations for Development: Scientific Collaboration for a Sustainable Future
170 Telemedicine in Dermatology
219 Text, Speech and Dialogue
215 The 14th International Conference on Material Forming: ESAFORM 2011 Proceedings
215 The 8th International Conference and Workshop on Numerical Simulation of 3D Sheet Metal Forming Processes (Numisheet 2011)
217 The Arithmetic of Fundamental Groups
192 The Arrows of Time
52 The Atmospheric Chemist’s Companion
139 The Beauty of Everyday Mathematics
185 The Classical Theory of Fields
37 The Connected Home: The Future of Domestic Life
138 The Crossing of Heaven
176 The Development of Quine’s Philosophy
68 The Digital Dividend of Terrestrial Broadcasting
29 The Double [3+2] Photocycloaddition Reaction
215 The Effects of Noise on Aquatic Life
204 The Ethics of Anthropology and Amerindian Research
163 The Ethics of Screening in Health Care and Medicine
16 The Financial Systems of Industrial Countries
196 The Formation and Early Evolution of Stars
179 The Fullness of the Logos in the Key of Life
106 The Future of Asylum in the European Union
108 The Law of Business Organizations
219 The Mathematics of Language
50 The New Uranium Mining Boom
18 The Next Generation of Responsible Investing
50 The Paleogene and Neogene of Western Iberia (Portugal)
65 The Practice of Theoretical Curiosity
184 The Quality of Measurements
16 The Reality of M&A Governance
60 The Reasons for Underdevelopment
59 The Rise and Fall of a Socialist Welfare State
186 The Rudolf Mössbauer Story
197 The Schrödinger-Virasoro Algebra
216 The Square Kilometre Array: Paving the way for the new 21st century radio astronomy paradigm
104 The Three Paths of Justice
191 The Universe as Automaton
132 The Vexing Case of Igor Shafarevich, a Russian Political Thinker
218 Theoretical Aspects of Computing — ICTAC 2011
80 The Theory of Arched Structures
187 Theory of Nuclear Fission
56 Theory-Guided Modeling and Empiricism in Information System Research
57 Thinking About Social Policy
215 Third International Conference on Software, Services & Semantic Technologies S3T 2011
28 Third World Diseases
154 Thyroid Cancer
215 Topical Workshop on Low Radioactivity Techniques – LRT 2010
143 Topological Methods in Data Analysis and Visualization II
219 Towards Autonomous Robotic Systems
218 Towards Ubiquitous Learning
218 Towards a Service-Based Internet. ServiceWave 2010 Workshops
126 Toxicity of Heavy Metals to Legumes and Bioremediation Potential of Rhizosphere Microbes
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>36</td>
<td>Traffic-Sign Recognition Systems</td>
</tr>
<tr>
<td>40</td>
<td>Transactions on Computational Collective Intelligence V</td>
</tr>
<tr>
<td>44</td>
<td>Transactions on Computational Science XII</td>
</tr>
<tr>
<td>45</td>
<td>Transactions on Computational Science XIII</td>
</tr>
<tr>
<td>45</td>
<td>Transactions on Large-Scale Data- and Knowledge-Centered Systems III</td>
</tr>
<tr>
<td>93</td>
<td>Transcultural Turbulences</td>
</tr>
<tr>
<td>95</td>
<td>Transient and Permanent Error Control for Networks-on-Chip</td>
</tr>
<tr>
<td>29</td>
<td>Transition Metal Catalyzed Enantioselective Allylic Substitution in Organic Synthesis</td>
</tr>
<tr>
<td>216</td>
<td>Trends in Computer Science, Engineering and Information Technology</td>
</tr>
<tr>
<td>201</td>
<td>True and False Recovered Memories</td>
</tr>
<tr>
<td>218</td>
<td>Trust, Privacy and Security in Digital Business</td>
</tr>
<tr>
<td>52</td>
<td>Tsunami and Groundwater Contamination</td>
</tr>
<tr>
<td>51</td>
<td>Tsunamis in the World Ocean</td>
</tr>
<tr>
<td>11</td>
<td>Twenty Years of G-CSF</td>
</tr>
<tr>
<td>123</td>
<td>Two Hybrid Technologies</td>
</tr>
<tr>
<td>27</td>
<td>Two Studies in Gas-Phase Ion Spectroscopy</td>
</tr>
<tr>
<td>197</td>
<td>U. S. Spacesuits</td>
</tr>
<tr>
<td>196</td>
<td>UV Astronomy 2011</td>
</tr>
<tr>
<td>219</td>
<td>Ubiquitous Intelligence and Computing</td>
</tr>
<tr>
<td>26</td>
<td>Ultrasound Technology in Green Chemistry</td>
</tr>
<tr>
<td>56</td>
<td>Understanding German Real Estate Markets</td>
</tr>
<tr>
<td>216</td>
<td>Urban Environment</td>
</tr>
<tr>
<td>220</td>
<td>Virtual Colonoscopy</td>
</tr>
<tr>
<td>220</td>
<td>Visualization in Medicine and Life Sciences II</td>
</tr>
<tr>
<td>177</td>
<td>Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800-2010</td>
</tr>
<tr>
<td>57</td>
<td>Water Science &amp; Technology in China: A Roadmap to 2050</td>
</tr>
<tr>
<td>217</td>
<td>Web Information Systems and Technologies</td>
</tr>
<tr>
<td>220</td>
<td>Web-Age Information Management</td>
</tr>
<tr>
<td>83</td>
<td>Wind Energy Conversion System</td>
</tr>
<tr>
<td>75</td>
<td>Wind Power Plants</td>
</tr>
<tr>
<td>218</td>
<td>Wireless Algorithms, Systems, and Applications</td>
</tr>
<tr>
<td>162</td>
<td>Women's Health in Interventional Radiology</td>
</tr>
<tr>
<td>61</td>
<td>Work and Education in America</td>
</tr>
<tr>
<td>215</td>
<td>XIX International Fall Workshop on Geometry and Physics</td>
</tr>
<tr>
<td>216</td>
<td>XXXIII Brazilian Workshop on Nuclear Physics</td>
</tr>
<tr>
<td>107</td>
<td>Yearbook of International Humanitarian Law - 2010</td>
</tr>
<tr>
<td>90</td>
<td>Yearbook on Space Policy 2009/2010</td>
</tr>
<tr>
<td>188</td>
<td>Z = 1-29. Excited Nuclear States</td>
</tr>
<tr>
<td>189</td>
<td>Z = 30-47. Excited Nuclear States</td>
</tr>
<tr>
<td>125</td>
<td>mTOR</td>
</tr>
</tbody>
</table>
Isoquinolines And Beta-Carbolines As Neurotoxins And Neuroprotectants
New Vistas In Parkinson's Disease Therapy

The specific topic, "Isoquinolines And Beta-Carbolines As Neurotoxins And Neuroprotectants – New Perspectives In Parkinson's Disease Therapy," was chosen in light of accumulating neurobiological evidence indicating that, in addition to exogenous neurotoxins (e.g.,

Features
- Contains up-to-date research
- Written by field experts
- In-depth look at a complex topic

Contents
Two faces of 1,2,3,4-tetrahydroisoquinoline mode of action in the mammalian brain: is it an endogenous neurotoxin or a neuromodulator?. - Isoquinolines as neurotoxins: action and molecular mechanism. - 1-Methyl-1,2,3,4-tetrahydroisoquinoline – a potent neuroprotecting agent. - 1-Methyl-1,2,3,4-tetrahydroisoquinoline and addiction: experimental studies. - Beta-carbolines as neurotoxins. - Neuroprotective β-carbolines: occurrence, formation and biodegradation. - Beta-carbolines and neuroprotection: inhibition of monoamine oxidase. - Beta-carbolines increase the efficiency of the respiratory chain in mitochondria. - Antioxidant properties of β-carbolines. - Restoration of neuronal functions in damaged dopamine neurons: in vitro and in vivo studies. - Prospects for new treatment options in neurodegenerative diseases.

Fields of interests
Neurosciences; Neurochemistry; Pharmacy

Target groups
Professional/practitioner

Product Category
Contributed volume
Biomedicine

P. Boddington, Oxford University, UK

Ethical Challenges in Genomics Research
A Guide to Understanding Ethics in Context

New developments in science and technology have resulted in shifting ethical challenges in many areas including in genomics research. This book enables those who are involved in genomics research, whether as researcher, participant or policy maker, to understand the ethical issues currently developing in this field and to participate actively in these important debates. A clear account is given of how science and technology are outstripping the capacity of previous ethical regulations to cope with current issues, together with practical illustrations of possible ways forward.

Features
► Written by an experienced expert in the field
► Provides a clear explanation of key ethical concepts
► Enables the reader to understand and apply complex issues
► An extensive glossary explains all relevant terms

Contents
The 'ethics job'. - Why ethics in genetics? - Why ethics in research? - The case of genomics research - What ethics is, and how we are going to proceed - Starting analysis in ethics: a practical guide - Research ethics and challenges from genomics: an overview of the issues - Autonomy and its limits: the view from genetics - The social and institutional context of ethics - Respect for persons in research and in genetics - Responsibilities of researchers in genomics - Data sharing in genomics - Glossary - Abbreviations - Index of text boxes - Subject index

Fields of interests
Human Genetics; Theory of Medicine/Bioethics; Fields of interests
Philosophy of Medicine

Target groups
Research

Product Category
Monograph

C. Chen, University at Albany, NY, USA (Ed.)

Activation and Detoxification Enzymes
Functions and Implications

Humans are exposed to foreign compounds such as drugs, household products and environmental chemicals by swallowing or breathing. Also, food is considered a foreign compound. Such foreign compounds can be non-essential and non-functional to life, and commonly are referred to as xenobiotics. Some xenobiotics are not toxic; however, many of them are potentially toxic or become toxic after conversion to metabolic intermediates. A considerable number of foreign compounds belong to non-polar, lipophilic substances. Lipophilic compounds are not soluble in water.

Features
► Incorporates cutting-edge research
► Features chapters written by renowned experts
► Contains helpful, full-color figures

Contents

Fields of interests
Human Genetics; Cytogenetics; Molecular Medicine

Target groups
Professional/practitioner

Product Category
Reference work

Due November 2011
► $189.00
ISBN 978-3-642-23698-3

Due December 2011
2012. X, 256 p. 41 illus., 2 in color. Hardcover
► $189.00

H. Chen, LSU Health Sciences Center, Shreveport, LA, USA (Ed.)

Atlas of Genetic Diagnosis and Counseling

Contents
**Stress Challenges and Immunity in Space**

From Mechanisms to Monitoring and Preventive Strategies

**Contents**


**Fields of interests**

Human Physiology; Medicine/Public Health, general; Immunology

**Target groups**

Research

**Product Category**

Contributed volume

---

**Intradermal Immunization**

This volume of Current Topics in Microbiology and Immunology covers diverse topics related to intradermal immunization. The chapters highlight the effectiveness of intradermal immunization in experimental animal models or in clinical practice, all supporting the view that intradermal immunization is at least as good as other immunization routes. Keeping in mind that current vaccines are not specially designed for intradermal immunization, but show comparable efficiency even at reduced dosages, this underlines the great potential for the skin as a vaccination site. Hopefully, the overview in this volume will encourage vaccine designers to focus on this promising immunization route, and in addition, to inspire them to develop vaccines that are especially optimized for intradermal immunization.

**Contents**

Preface.- Understanding the murine cutaneous dendritic cell network to improve intradermal vaccination strategies.- Insight into the immunobiology of human skin and cutaneous dendritic cell subsets to perfection intradermal vaccination design.- Delivery systems for intradermal vaccination.- Targeting skin dendritic cells to improve intradermal immunization.- Intradermal Rabies vaccination: the evolution and future of pre- and post-exposure prophylaxis.- Intradermal vaccination to protect against yellow fever and influenza.- The dermis as a portal for dendritic cell-targeted immunotherapy of cutaneous melanoma.- DNA vaccines and intradermal vaccination by DNA tattooing.- Subject index

**Fields of interests**

Vaccine; Immunology; Dermatology

**Target groups**

Research

**Product Category**

Contributed volume

---

**Mucosal Vaccines**

Modern Concepts, Strategies, and Challenges

This volume is focused on the development of vaccines which generate immune effectors capable of blocking mucosal entry or peripheral pathogen spread. A critical first step in the design of mucosal vaccines is the selection of administration route. Not all mucosal immunization routes are created equally when it comes to eliciting immune responses in multiple body compartments. This subject and situations when a mucosal route may not be required for vaccine delivery are reviewed here with an emphasis on the sublingual immunization route, which may offer a safer alternative to the nasal route for induction of broadly disseminated immune responses. External host defenses that inhibit entry of microorganisms at mucosal surfaces also pose obstacles to the efficient internalization of mucosally-applied vaccines.

**Contents**


**Fields of interests**

Vaccine; Immunology; Antibodies

**Target groups**

Research

**Product Category**

Handbook

---

**Due October 2011**

2011. X. 250 p. 19 illus., 15 in color. (Current Topics in Microbiology and Immunology, Volume 351) Hardcover

$239.00

ISBN 978-3-642-22271-9

**Due October 2011**

2011. X, 588 p. 74 illus., 50 in color. Hardcover

$189.00

ISBN 978-3-642-23689-1

**Due September 2011**

2011. X, 200 p. 17 illus., 6 in color. (Current Topics in Microbiology and Immunology, Volume 354) Hardcover

$189.00

ISBN 978-3-642-23692-1
Epigenetic Regulation of Lymphocyte Development

The studies described in this volume serve as a starting point to familiarize one self with the multifarious differences in epigenetic designs that orchestrate the progression of developing blood cells. They also may serve as a general paradigm for the mechanisms that underpin the control of eukaryotic gene expression.

Features
- Chapters written by experts in their fields
- Contains helpful, full-color illustrations
- Features up-to-date research

Contents

Fields of interests
Medical Microbiology; Pharmacology/Toxicology; Physical Chemistry

Target groups
Professional/practitioner

Product Category
Contributed volume

V. Espina, L. A. Liotta, George Mason University, Manassas, VA USA (Eds)

Molecular Profiling Methods and Protocols

Contents
**Molecular Mediators in Metastasis**

**Contents**

**Fields of interest**
- Human Genetics; Gene Expression

**Target groups**
- Professional/practitioner

**Product Category**
- Contributed volume

**Due December 2011**
- J. Fan, Illumina, Inc., San Diego, CA, USA (Ed.)
- **Next-Generation MicroRNA Expression Profiling Technology Methods and Protocols**

**Contents**

**Fields of interest**
- Human Genetics; Gene Expression

**Target groups**
- Professional/practitioner

**Product Category**
- Contributed volume

**Due January 2012**
- A. Fatatis, Drexel University College of Medicine, Philadelphia, PA, USA (Ed.)
- **Signaling Pathways and Molecular Mediators in Metastasis**

**Contents**

**Fields of interest**
- Cancer Research; Oncology; Gene Function

**Target groups**
- Research

**Product Category**
- Contributed volume

**Due December 2011**
- D. Frank, Dana-Farber Cancer Institute, Boston, MA, USA (Ed.)
- **Signaling Pathways in Cancer Pathogenesis and Therapy**

In recent years, increasing evidence has suggested that abnormal activation of signaling pathways is a critical event in cancer pathogenesis. In particular, activation of these pathways can lead to inappropriate cellular survival, proliferation, pluripotency, invasion, metastasis, and angiogenesis. Thus, understanding the mechanisms by which signaling pathways become subverted in a cancer cell can provide insight into critical events in cancer pathogenesis. Furthermore, as our ability to target specific molecular interactions advances, we now have the ability to design small molecules, protein therapeutics, and other forms of targeted therapies. By focusing on the specific molecular abnormalities in a cancer cell, these agents hold the potential to be much more effective and much less toxic than current cytotoxic therapies.

**Features**
- Explores novel therapeutic strategies to inhibit signaling
- Discusses current and next generation antimitotic therapies in cancer
- Features up-to-date research

**Contents**
- Signaling Pathways in Cancer: 21st Century Approaches to Cancer Therapy. - Current And Next Generation Antimitotic Therapies In Cancer. - DNA Damage Checkpoint Signaling Pathways in Human Cancer. - Non-Receptor Tyrosine Kinases and their Roles in Cancer. - The Hedgehog Signaling Pathway in Cancer Pathogenesis and Therapy. - Wnt Signaling in Cancer Pathogenesis and Therapeutics. - STAT Signaling in the Pathogenesis and Treatment of Cancer. - Protein Therapeutics in Oncology. - Index

**Fields of interest**
- Cancer Research; Pharmacology/Toxicology

**Target groups**
- Research

**Product Category**
- Contributed volume
Muscarinic Receptors

Muscarinic acetylcholine receptors have played a key role in the advancement of knowledge of pharmacology and neurotransmission since the inception of studies in these fields, and the effects of naturally occurring drugs acting on muscarinic receptors were known and exploited for both therapeutic and non-therapeutic purposes for hundreds of years before the existence of the receptors themselves was recognized. This volume presents a broad yet detailed review of current knowledge of muscarinic receptors that will be valuable both to long-time muscarinic investigators and to those new to the field. It describes the detailed insights that have been obtained on the structure, function, and cell biology of muscarinic receptors. This volume also describes physiological analyses of muscarinic receptors and their roles in regulating the function of the brain and of a variety of peripheral tissues.

Features
► Provides both a broad overview of muscarinic acetylcholine receptors and a detailed description of their molecular and cell biology and physiology, and current and potential future therapeutic applications of drugs targeted at the muscarinic system
► Will be of interest to a wide range of researchers working in the areas of pharmacology, physiology, neuroscience, endocrinology, and receptor biology, and to basic and clinical scientists working in both universities and the pharmaceutical/biotech industry
► Written by leading authorities in the field

Fields of interests
Pharmacology/Toxicology; Human Physiology; Cell Biology

Target groups
Research

Product Category
Handbook

Pediatric Cancer

M. A. Hayat

Cancer still represents one of the leading causes of death in children. Tumors of the CNS account for 17% of childhood malignancies, with the highest incidence during the first 5 years of life. Some types of tumors are more common in children than in adults. The most common childhood tumors are neuroblastoma, medulloblastoma, low-grade astrocytomas, ependymomas, craniopharyngiomas, and brain stem gliomas. The incidence rate of primary tumors of children between the ages 0 to 19 years is approximately 4 cases/100,000. The most commonly occurring childhood cancer is leukemia. It is estimated that 43,050 new cases of leukemia were diagnosed in the United States in 2010 with 21,840 deaths.

Fields of interests
Cancer Research; Pediatrics; Diagnostic Radiology

Target groups
Research

Product Category
Contributed volume
Computational Neuroscience of Drug Addiction

Contents

Fields of interests
Neurosciences; Computer Appl. in Life Sciences

Target groups
Research

Product Category
Contributed volume

Due December 2011
2012. XIV, 342 p. 91 illus. in color. (Springer Series in Computational Neuroscience, Volume 10) Hardcover
► $209.00
ISBN 978-1-4614-0750-8

M. Hayat, Kean University, Union, NJ, USA (Ed.)

Stem Cells and Cancer Stem Cells, Volume 3
Stem Cells and Cancer Stem Cells, Therapeutic Applications in Disease and Injury: Volume 3

Contents
Caveolins and Caveolae
Roles in Signaling and Disease Mechanisms

Caveolae are 50-100 nm flask-shaped invaginations of the plasma membrane that are primarily composed of cholesterol and sphingolipids. Using modern electron microscopy techniques, caveolae can be observed as omega-shaped invaginations of the plasma membrane, fully-invaginated caveolae, grape-like clusters of interconnected caveolae (caveosome), or as transcellular channels as a consequence of the fusion of individual caveolae. The caveolin gene family consists of three distinct members, namely Cav-1, Cav-2 and Cav-3. Cav-1 and Cav-2 proteins are usually co-expressed and particularly abundant in epithelial, endothelial, and smooth muscle cells as well as adipocytes and fibroblasts.

Features
- Discusses pleiotropic functions of caveolae and caveolin proteins
- Presents the role and function of caveolae and caveolins in cell signaling and human disease mechanisms
- Focuses on selected topics

Contents
Lipid Rafts, Caveolae and GPI-Linked Proteins.- Caveolae and the Regulation of Endocytosis.- Caveolin-1: Role in Cell Signaling.- Regulation of eNOS in Caveolae.- Recent Developments in the Interactions Between Caveolin and Pathogens.- Caveolin-1 and Breast Cancer: A New Clinical Perspective.- Caveolin-1 and Prostate Cancer Progression.- Caveolins and Caveolae, Roles in Insulin Signalling and Diabetes.- Atherosclerosis, Caveolae and Caveolin-1.- Caveolins and Heart Diseases.- Caveolins and Lung Function.

Fields of interest
Biomedicine general

Target groups
Research

Product Category
Contributed volume

M. Kaufmann, Private Universität Witten/Herdecke gGmbH, Germany; C. Klinger, Private Universität Witten/Herdecke gGmbH, Witten, Germany (Eds)

Functional Genomics
Methods and Protocols

Contents
C. Knapp, V. Madden, University of Florida, Gainesville, FL, USA; S. Fowler-Kerry, University of Saskatchewan, Saskatoon, SK, Canada (Eds)

**Pediatric Palliative Care: Global Perspectives**

**Features**
- Description of pediatric palliative care in 23 countries
- Program development and implementation
- Pediatric palliative care policies and legislation
- Barriers and enablers of pediatric palliative care
- Description of children who need pediatric palliative care

**Contents**
- Acknowledgement.

**Fields of interests**
- Biomedicine general; Maternal and Child Health; Pediatrics

**Target groups**
- Research

**Product Category**
- Contributed volume

---

R. Lever, University of London, UK; B. Mulloy, NIBSC, Potters Bar, Hertfordshire, UK; C. P. Page, Sackler Institute of Pulmonary Pharmacology, London, UK (Eds)

**Heparin - A Century of Progress**

Heparins remain amongst the most commonly used drugs in clinical practice. Almost 100 years have passed since the initial discovery of this complex substance and, during this time, understanding of the nature and uses of heparin and related molecules has grown dramatically. The aim of this volume is to summarise the developments that have led to the current status of both heparins as drugs and the field of heparin research, with a focus on the particularly rapid progress that has been made over the past three decades. Individual sections are dedicated to the nature of heparin as a biological molecule, the current approaches and techniques that are used to ensure the safety and reliability of heparin as a medicine, the clinical pharmacology of heparin as an anticoagulant drug, effects and potential applications of heparin aside of those involving haemostasis and, finally, the nature and potential uses of heparin-like materials from both natural and synthetic sources.

**Features**
- Written by leading experts in the field
- With numerous illustrations
- A valuable reference work on the occasion of the upcoming centenary of heparin

**Contents**
- Part 1. Introduction.
- Part 2. Unfractionated and Low Molecular Weight Heparins.
- Part 3. Clinical Use of Heparin and LMWH.
- Part 5. Heparin-like Entities.

**Fields of interests**
- Pharmacology/Toxicology; Molecular Medicine; Pharmaceutical Sciences/Technology

**Target groups**
- Research

**Product Category**
- Handbook

---

C. López-Larrea, Hospital Universitario Central de Asturias, Oviedo, Spain (Ed.)

**Self and Nonself**

In 1960 Sir Frank Macfarlane Burnet received the Noble Prize in Physiology and Medicine.

**Features**
- Covers different aspects of the emergence of immune systems in the context of life
- Focuses on the origin of the immune response during the development of multicellularity
- Presents an integrated view of self and nonself recognition systems in the context of evolution

**Contents**
- The Origin of the Bacterial Immune Response.
- The Evolution of Self During the Transition to Multicellularity.
- Neglected Biological Features in Cnidarians Self-Nonself Recognition.

**Fields of interests**
- Immunology; Biomedicine general

**Target groups**
- Professional/practitioner

**Product Category**
- Contributed volume

---

Due December 2011

2012. XXXVI, 464 p. 64 illus. in color. Hardcover
- $209.00
- ISBN 978-94-007-2569-0

Due November 2011

2012. VI, 480 p. 79 illus., 34 in color. (Handbook of Experimental Pharmacology, Volume 207) Hardcover
- $419.00
- ISBN 978-3-642-23055-4

Due January 2012

2012. XXII, 318 p. 35 illus., 22 in color. (Advances in Experimental Medicine and Biology, Volume 738) Hardcover
- approx. $209.00
Epigenetic Epidemiology

The exploding field of epigenetics is challenging the dogma of traditional Mendelian inheritance.

Features
- First book in this new, emerging field
- State of the art on human evidence in epigenetics
- Helps to digest rapid growing information on epigenetics in humans
- A guide how to design a study on epigenetics in humans
- Assists in interpreting and understanding epigenetic evidence in humans

Contents

Fields of interests
Cancer Research; Epidemiology; Human Genetics

Target groups
Research

Product Category
Contributed volume

Astrocytes

Methods and Protocols

Contents
Astrocytes: Multi-talented Stars of the Central Nervous System.-Neurrogenic Astrocytes and their Glycoconjugates: not just “Glue” Anymore.-Heterogeneity of Astrocytic Form and Function.-Preparation of Mixed Glial Cultures from Postnatal Rat Brain.-Generation of Primary Astrocyte Cultures Devoid of Contaminating Microglia.-Derivation of Microglia-free Astrocyte Cultures from Neural Stem Cells.-Isolation and Culture of Spinal Cord Astrocytes.-Isolation and Culture of the Astrocytes from the Retina and Optic Nerve.-Primary Cultures of Astrocytes from Fetal Bovine Brain.-Isolation and Cultivation of Porcine Astrocyte.-Isolation and Culture of Human Astrocytes.-Cell Culturing of C. elegans Glial Cells for the Assessment of Cytosolic Ca2+ Dynamics.-Astrocyte Polarization and Wound Healing in Culture: Studying Cell Adhesion Molecules.-An in Vitro Trauma Model to Study Rodent and Human Astrocyte Reactivity.-Use of Gel Zymography to Examine Matrix Metalloproteinase (gelatinase) Expression in Brain Tissue or in Primary Glial Cultures.-ELISA Methodology to Quantify Astrocyte Production of Cytokines/Chemokines in Vitro.-Induction of Nitric Oxide Synthase-2 Expression and Measurement of Nitric Oxide Production in Enriched Primary Cortical Astrocyte Cultures.-Examining Potassium Channel Function in Astrocytes.-Connexin Based Channels in Astrocytes: How to Study their Properties.-Isotope-based Quantitation of Uptake, Release and Metabolism of Glutamate and Glucose in Cultured Astrocytes.-An in Vitro Model of Reactive Astrogliosis and its Effect on Neuronal Growth. [...] 

Fields of interests
Neurosciences; Human Physiology

Target groups
Professional/practitioner

Product Category
Contributed volume

Twenty Years of G-CSF

Clinical and Nonclinical Discoveries

Granulocyte colony-stimulating factor (G-CSF or G-CSF) is a secreted glycoprotein that stimulates the proliferation and differentiation of granulocyte precursor cells, and induces mobilization of peripheral blood progenitor cells from the bone marrow. Development of recombinant human G-CSF has had a profound impact on the treatment of many diseases, including severe chronic neutropenia and cancer, and has enabled peripheral stem cell transplantation to supplant bone marrow transplantation in the autologous setting. This Milestones in Drug Therapy volume describes the experience of the last 20 years of treatment with recombinant human G-CSF, including the basic science, the use of recombinant human G-CSF in both the oncology and nononcology settings, and the safety and economics of its use. Many of the authors were the original investigators of recombinant human G-CSF and other authors are key researchers who provide their outlook for the next 20 years for use of and research with recombinant human G-CSF.

Features
- Many of the authors are the original investigators of recombinant human G-CSF
- Key researchers provide their outlook for the next 20 years
- Describes oncological and non-oncological applications

Contents
Basic Science.- Use of rHuG-CSF in the Oncology Setting.- Use of rHuG-CSF in Non-Oncology Setting.- Safety and Economics.- The Next 20 Years.

Fields of interests
Pharmacology/Toxicology; Cancer Research; Immunology

Target groups
Research

Product Category
Contributed volume
Invariants of Behavior
Constancy and Variability in Neural Systems

The study of the brain and behavior is illuminated with the discovery of invariances. Experimental brain research uncovers constancies amidst variability, with respect to interventions and transformations prescribed by experimental paradigms. Place cells, mirror neurons, event related potentials and areas differentially active in fMRI, all illustrate the pervasive role of invariances in neural systems in relation to their function.

Features
- Studies the possible space of variations in structure and dynamics that maintain a given behavioral function unchanged; what are, in other words, the invariants of a given behavior
- Invariances are introduced first generally, then in the study of neural systems
- The role of empirical invariances in explanation of behavioral function is discussed and exemplified

Contents

Fields of interests
Neurosciences; Computation by Abstract Devices; Neurobiology

Target groups
Graduate

Product Category
Monograph

Principles of Immunopharmacology

Contents

Fields of interests
Immunology; Pharmacology/Toxicology; Cell Biology

Target groups
Research

Product Category
Graduate/Advanced undergraduate textbook

Behavioral Neurobiology of Aging

This volume discusses the current state of research findings related to healthy brain aging by integrating human clinical studies and translational research in animal models. Several chapters offer a unique overview of successful aging, age-related cognitive decline and its associated structural and functional brain changes, as well as how these changes are influenced by reproductive aging. Insights provided by preclinical studies in mouse models and advanced neuroimaging techniques in humans are also presented.

Features
- This volume provides topics that will be useful to researchers, clinicians and students interested in the current knowledge and research challenges in neurobiological perspectives in aging as well as future research directions in aging research
- Written by leading authorities in this field
- With numerous illustrations

Contents

Fields of interests
Neurosciences; Behavioural Sciences; Geriatrics/Gerontology

Target groups
Research

Product Category
Contributed volume

Birchhäuser

Available
$209.00
ISBN 978-1-4419-8803-4

Due August 2011
3rd, revised and extended ed. 2011. XXXI, 728 p. 162 illus., 37 in color. Softcover
$129.00
ISBN 978-3-0346-0135-1

Due January 2012
2012. Approx. 300 p. (Current Topics in Behavioral Neurosciences, Volume 10)
$209.00
ISBN 978-3-642-23874-1
J. M. Parry, E. M. Parry, Lyndhurst, UK (Eds)
Genetic Toxicology
Principles and Methods

The evaluation of potential mutagenic activity is a critical step in the assessment of the safety of both new and pre-existing chemical types.

Features
► Covers the scientific basis, the methodologies, and the applications of the methods in clear detail ► Features step-by-step, laboratory ready protocols ► Includes expert tips and implementation advice to ensure successful results

Contents

Fields of interest
Pharmacology/Toxicology; Human Genetics

Target groups
Professional/practitioner

Product Category
Contributed volume

G. P. Quinn, S. T. Vadaparampli, University of South Florida, Tampa, Fl, USA (Eds)
Reproductive Health and Cancer in Adolescents and Young Adults

Features
► Summarizes the latest research in this field ► Each chapter written by expert in the field ► Covers broad array of reproductive health issues ► Unique population of AYA (adolescent and young adult) ► Each chapter has vignet and list of recommendation for providers

Contents

Fields of interest
Cancer Research; Oncology; Reproductive Medicine

Target groups
Research

Product Category
Contributed volume

A. L. Ronco, IUCLAEH, Maldonado, Uruguay; E. De Stéfani, Universidad de la República, Montevideo, Uruguay
Nutritional Epidemiology of Breast Cancer

The book is the first one published exclusively on the field of nutritional epidemiology of breast cancer. It summarizes the currently existing knowledge, with an updated and comprehensive international bibliography (~ 1,000 references). The authors also performed a review on the epidemiological studies on nutrition and breast cancer carried out in Uruguay between 1994 and 2011, which allowed exploring and identifying the main risk and protective factors for the disease in this high-risk country.

Features
► Original and Innovative approaches ► Challenging proposals ► Information completeness

Contents

Fields of interest
Cancer Research; Nutrition; Epidemiology

Target groups
Research

Product Category
Monograph
Viral Molecular Machines

This book will contain a series of solicited chapters that concern with the molecular machines required by viruses to perform various essential functions of virus life cycle. The first three chapters (Introduction, Molecular Machines and Virus Architecture) introduce the reader to the best known molecular machines and to the structure of viruses. The remainder of the book will examine in detail various stages of the viral life cycle. Beginning with the viral entry into a host cell, the book takes the reader through replication of the genome, synthesis and assembly of viral structural components, genome packaging and maturation into an infectious virion.

Features
- Written by leaders in their respective fields
- Uses the best examples from bacteriophages and animal viruses, many causing infectious diseases of public health importance
- Conveys state of the art knowledge of the topic generated by combining X-ray crystallography, high resolution electron microscopy, molecular genetics, biochemistry, and single molecule biophysics

Contents

Fields of interest
Virology; Microbiology; Infectious Diseases

Target groups
Research

Product Category
Contributed volume

Fundamentals and Applications of Controlled Release Drug Delivery

Features
- Text easy to understand
- Book is generously supplemented with diagrams
- Covers among others mechanisms and modeling of drug delivery, overview of applied therapeutics, and concepts of temporal, spatial and chronotherapeutic approaches to drug delivery

Contents

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

Target groups
Research

Product Category
Contributed volume

Lactoferrin and its Role in Wound Healing

Lactoferrin is an iron-binding glycoprotein belonging to the transferrin family. It acts as a defense in host animals against microbes and viruses, since it has a broad spectrum of antimicrobial and antiviral activities. Lactoferrin has been shown to regulate the growth and differentiation of many types of cells. The results of recent studies indicate that lactoferrin is a potent regulator of dermal fibroblasts, and promotes cutaneous wound healing. The collagen gel contraction, a model of wound contraction during wound healing process, and migration of human fibroblasts were enhanced by lactoferrin. LRP-1 (LDL Receptor related Protein-1) acts as a signaling receptor for lactoferrin that mediate fibroblast response to lactoferrin by activating ERK/MAPK signaling pathway. In addition, lactoferrin promotes biosynthesis of extracellular matrix (ECM) component such as type-I collagen and hyaluronan. Hyaluronan is a major component of ECM in connective tissue and promotes wound healing.

Features
- Provides the recent advances in molecular mechanisms of wound healing
- Provides in-depth information on roles of lactoferrin as a signaling molecule
- Presents the scientific background on use of lactoferrin as a wound healing agent

Contents

Fields of interest
Biomedicine general; Human Physiology; Cell Biology

Target groups
Professional/practitioner

Product Category
Monograph
**New Series**

**SpringerBriefs in Pharmaceutical Science & Drug Development**

SpringerBriefs in Pharmaceutical Science & Drug Development present concise summaries of cutting-edge research and its applications in the fields of the pharmaceutical and biotechnology industries. Featuring compact volumes of 50 to 125 pages, the series covers a range of content from professional to academic. Typical topics might include: • A timely report of state-of-the-art analytical techniques • A bridge between new research results, as published in journal articles, and a contextual literature review • A snapshot of a hot or emerging topic • An in-depth case study or clinical example • Practical information and background to allow researchers to transition into new areas SpringerBriefs in Pharmaceutical Science & Drug Development will allow authors to present their ideas and findings to their scientific and research communities quickly and will allow readers to absorb them with minimal time investment. Both solicited and unsolicited manuscripts are considered for publication in this series.

**J. R. Turner, Quintiles, Durham, NC, USA**

**Key Statistical Concepts in Clinical Trials for Pharma**

This book discusses key statistical concepts that facilitate the inferential analysis of data collected from a group of individuals participating in a pharmaceutical clinical trial, the estimation of their clinical significance in the general population of individuals likely to be prescribed the drug if approved, and the related decision-making that occurs at both the public health level (by regulatory agencies when deciding whether or not to approve a new drug for marketing) and the individual patient level (by physicians and their patients when deciding whether or not the patient should be prescribed a drug that is on the market). These concepts include drug safety and efficacy, statistical significance, clinical significance, and benefit-risk balance.

**Feature**

- Discusses key statistical concepts

**Fields of interests**

Biomedicine general; Pharmaceutical Sciences/Technology

**Target groups**

Research

**Product Category**

Contributed volume

---

**R. O. Williams III, A. B. Watts, University of Texas, Austin, TX, USA; D. A. Miller, Hoffmann-La Roche, Inc., Nutley, NJ, USA (Eds)**

**Formulating Poorly Water Soluble Drugs**

This volume is intended to provide the reader with a breadth of understanding regarding the many challenges faced with the formulation of poorly water-soluble drugs as well as in-depth knowledge in the critical areas of development with these compounds.

**Features**

- Highlights the most recent advancements reported in the literature on technologies to improve the dissolution and bioavailability of poorly water soluble drugs
- Provides a comprehensive discussion of new technologies developed and recently reported
- Very useful to scientists in the chemical industry and agricultural industry

**Contents**


**Fields of interest**

Pharmaceutical Sciences/Technology

**Target groups**

Research

**Product Category**

Contributed volume
The Financial Systems of Industrial Countries
Evidence from Financial Accounts

This book offers a comprehensive overview of the financial systems of major industrialized countries using the statistical framework of the financial accounts.

Features
- Updated analysis of financial systems evolution in the major industrialized countries
- Detailed focus on households, firms, financial intermediaries and rest of the world
- Focus on the evolution of financial accounts before and during the recent financial crisis
- Discussion of the historical evolution of financial account framework

Contents
The origins of financial accounts in the United States and Italy: Copeland, Raffi and the institutions.
- Private sector debt matters too: theoretical perspectives on credit and the building of financial accounts.
- Household wealth in a cross-country perspective.
- Should household wealth and Government accounts include future pension rights?
- Financial sector dynamics and firms' capital structure.
- Convergence of financial structures in Europe: an application of factorial matrix analysis.
- The effects of monetary policy in the euro era: results from the flow of funds.
- Imbalances in household, firm, public and foreign sector balance sheets in the 2000s.

Fields of interests
Finance/Investment/Banking; Financial Economics; Macroeconomics/Monetary Economics

Target groups
Research

Product Category
Contributed volume

F. Farschtschian, London, UK
The Reality of M&A Governance
Transforming Board Practice for Success

Empirical research shows that two thirds – some claim even four fifths – of all acquisitions fail. Bad acquisitions can spell disaster for a company, but if successful, they can lead to healthy growth, enhanced competitiveness and a world market position. Despite the vast amount of academic and practical research on M&A, there are still no adequate theories to explain this continued trend of failure. In fact, although success factors have been broadly researched and are well known, most work still concentrates on them without concomitantly touching upon the necessary governance structure which enables their effective deployment. This is crucial.

Features
- Best practice recommendations for boards and top management allowing the establishment of effective governance structures
- The experience and views of some of the world’s most renowned CEOs and Charmen including unique company documents illustrating the reality of board-management communications in a highly successful company
- Farschtschian exposes and provocatively illustrates the limits of current corporate governance and organisational structures to cope with new challenges regarding changes in acquisitions

Contents
Conceptual Part.
- Research Methodology.
- Empirical Part.
- Analysis of Results.
- Best Practice Recommendations for Boards.
- Outlook and Conclusion.

Fields of interests
Management/Business for Professionals; Business/Management Science, general; Entrepreneurship

Target groups
Professional/practitioner

Product Category
Monograph
Innovation Communities

Teamworking of Key Persons as a Success Factor in Radical Innovation

Self-organising networks have become the dominant innovators of complex technologies and radical innovation. The growing need for co-operation to ensure innovation success calls for a broader understanding of what makes innovation projects successful and requires new concepts. The book introduces the new concept of “innovation communities”, defining them as informal networks of like-minded individuals who act as innovation promoters or champions.

Features

- The concept of “innovation communities” as networks of champions is completely new
- Findings from surveys prove that networks of champions are a success factor in radical innovation
- Case studies illustrate why the collaboration of champions makes innovation projects successful
- The book presents hands-on methods and includes tips on how to develop innovation communities
- Innovation managers can learn from best practice cases

Contents


Fields of interests

Innovation/Technology Management; Entrepreneurship; R & D/Technology Policy

Target groups

Research

Product Category

Monograph

Due November 2011

2012. XIV, 300 p. 36 illus., 34 in color. Hardcover

$179.00

ISBN 978-3-642-22127-9

Real Estate Investment

This book fills a gap in the existing resources available to students and professionals needing an academically rigorous, but practically orientated source of knowledge about real estate finance. Written by an academic whose area of study is finance and particularly valuation, and a bank vice-president who for many years has practised as a commercial lender and who teaches real estate investment at university level, this book will lead readers to truly understand the fundamentals of making a sound real estate investment decision. The focus is primarily on the valuation of leased properties such as apartment buildings, office buildings, retail centers, and warehouse space, rather than on residential property.

Features

- Combines practical relevance with mathematical rigor
- Highly relevant and useful for both students, professionals and small investors
- Focuses on commercial properties

Contents


Fields of interests

Finance/Investment/Banking; Entrepreneurship; Quantitative Finance

Target groups

Upper undergraduate

Product Category

Graduate/Advanced undergraduate textbook

Due January 2012

2012. 200 p. 20 illus. (Springer Texts in Business and Economics) Hardcover

approx. $109.00

ISBN 978-3-642-23526-9
Advances in Business Ethics Research

D. C. Poff, A. C. Michalos

Advances in Business Ethics Research: A Journal of Business Ethics Book Series is intended to extend the Special Issue tradition to attract collections of manuscripts arising from an interdisciplinary approach that will push forward the current frontiers of business ethics. The series will welcome proposals that have a fairly specific focus on problems or projects that will lead to innovative research charting the course for new developments for corporate and individual actors in mixed market economies. In broad strokes manuscripts for this series may be located in the fields of accounting, finance, business law, case studies, codes of ethics, corporate governance, sustainability, corporate social responsibility (or corporate responsibility), labor relations, international management, leadership, marketing, consumer behavior, philosophical foundations, small business, entrepreneurship, social enterprise, teaching business ethics, and values-based management.

T. Hebb, Carleton University, Ottawa, ON, Canada (Ed.)

The Next Generation of Responsible Investing

Contents
Acknowledgements.- About the Contributors.- Chapter 1: Introduction - The Next Generation of Responsible Investing; Tessa Hebb.- Chapter 2: After the Credit Crisis - the Future of Sustainable Investing; Cary Kosinski, Nick Robins and Stephen Viederman.- Chapter 3: Putting Sustainable Investing into Practice: A governance framework for pension funds; Claire Woods and Roger Urwin.- Chapter 4: Avoiding the Next Financial Crisis; Michael Musuraca.- Chapter 5: From Fiduciary Duties to Fiduciary Relationships for Socially Responsible Investment; Benjamin J. Richardson.- Chapter 6: Effective Shareholder Engagement: The factors that contribute to shareholder salience; James Gifford.- Chapter 7: Measuring the Impact of Engagement in Canada; Tessa Hebb, Heather Hachigian, and Rupert Allen.- Chapter 8: The Good Corporate Citizen; Ed Waitzer and Johnny Jaswal.- Chapter 9: Misdeeds Matter: Long-Term Stock Price Performance after the Filing of Class-Action Lawsuits; Rob Bauer and Robin Braun.- Chapter 10: Targeted Responsible Investing; Tom Croft.- Chapter 11: Social investment and responsible investment: Their relationship and intersections in the mining industry; Caitlin McElroy.- Reference List.- Index.

Fields of interests
Finance/Investment/Banking; Ethics; Financial Economics

Target groups
Research

Product Category
Contributed volume

Due October 2011
2012. VIII, 260 p. 4 illus. (Advances in Business Ethics Research, Volume 1) Hardcover
► $139.00
ISBN 978-94-007-2347-4

M. Hilb, University of St. Gallen, Switzerland

New Corporate Governance
Successful Board Management Tools

Martin Hilb presents an innovative and integrated approach to the theory and practice of corporate governance. Central to this approach is a set of instruments - developed and tested by the author - that can be used by boards to offer effective strategic direction and control to their organizations. The board instruments can be readily applied to the selection, review, remuneration and development of board members, and for conducting board self-evaluations. This new approach to corporate governance is based on four guiding principles: keep it situational, keep it strategic, keep it integrated, and keep it controlled. Together, these principles form the basis of an integrated approach to all key aspects of corporate governance.

Features
► Provides innovative tools that can be used by boards to offer effective strategic direction and control to their organizations ► Presents a new approach to corporate governance, developed by the author ► Explains and demonstrates four critical principles of governance: keep it situational, keep it strategic, keep it integrated, and keep it controlled ► Winner of the gold medal in Corporate Governance by the "International Academy of Quality" ► The author is a well-known specialist and consultant who gives seminars on the topic

Contents

Fields of interests
Management/Business for Professionals; Organization/Planning

Target groups
Professional/practitioner

Product Category
Professional book

Due November 2011
► $69.95
ISBN 978-3-642-23594-8
J. Pérez Ríos, Universidad de Valladolid, Spain

**Design and Diagnosis for Sustainable Organizations**

The Viable System Method

How can organizations and their managers face the tremendous complexity of the current environment? How can their compliance with the requirements of sustainability be evaluated? And how can new organizations be structured to ensure their viability? This book addresses these questions in a very practical way, essentially combining systems theory with cybernetics to help managers to evaluate and shape organizations by making accessible the wealth of knowledge contained in these fields. Importantly, it also provides guidelines for its practical application.

**Features**
- Find out if your organization is prepared to survive
- Learn in a short time how to diagnose the health of your company
- Find out why your organization does not meet your expectations
- Why many firms and organizations are unable to survive the current systemic crisis

**Contents**
- Systems Thinking, Organisational Cybernetics and the Viable System Model.
- Diagnosis and Design of Organisations.
- Pathologies of Organisations.
- Software for VSM application.
- Team Syntegrity.

**Fields of interests**
- Organization/Planning: Business/Management Science, general

**Target groups**
- Research

**Product Category**
- Monograph

---

H. Schramm, WU Wirtschaftsuniversität Wien, Austria

**Freight Forwarder’s Intermediary Role in Multimodal Transport Chains**

A Social Network Approach

**Features**
- The business of freight forwarding is examined thoroughly from both a theoretical and empirical point of view in English
- Current status and development of multimodal transport chains including a leg by sea or air and the role of freight forwarders therein are discussed
- A conceptual framework of a freight forwarder’s intermediary perspective based on New Institutional Economics and Intermediation Theory of the Firm is developed
- Six distinct models of network structure are surveyed, namely Network Models in Operations Research and Management Science, Strategic Networks, Dynamic Networks, Entrepreneurial Networks, Industrial Networks, and Social Networks
- A brief introduction to Social Network Analysis is given

**Contents**
- Legal and Functional Perspective of Freight Forwarding in Multimodal Transport Chains.
- Models of network Structure and the Network Perspective.
- A Closer Look on Contemporary Social Network Analysis.
- Freight Forwarder’s Personal Network in Multimodal Transport Chains: An Empirical Investigation.

**Fields of interests**
- Production/Logistics/Supply Chain Management; International Economics; Organization/Planning

**Target groups**
- Graduate

**Product Category**
- Monograph

---

I. Wieck, M. Streichfuss, Roland Berger Strategy Consultants, Düsseldorf, Germany; T. Klaas-Wissing, W. Stötzel, University of St. Gallen, Switzerland

**Switchpoints for the Future of Logistics**

Roland Berger Strategy Consultants and the University of St. Gallen’s Chair of Logistics Management conducted this study in order to identify and assess switchpoints that will shape the future of the logistics industry. Rather than making projections focused on a fixed point in time, the authors instead aimed to identify the most unpredictable developments that could impact logistics. Consequently, the topics for discussion range from fairly specific near-future developments to more exploratory „blue-sky” topics. Throughout their highly interesting discussions with respondents and experts, the authors encountered a wide range of uncommon and unexpected, but not at all unlikely projections for the future.

**Features**
- New approach to view on the future of logistics
- Results based on an online-study with 154 participants
- Detailed discussion of 18 topics, including raw material sources, recycling cycles, supply chains, shopping behavior, traffic flows, drivers for sustainability, and environmental regulations
- High level implications of the findings

**Contents**
- Executive summary.
- The study presents a new, explorative perspective on the uncertainty of future developments.
- Switchpoints are forks in the road of future developments.
- Approach and methodology.
- Topics, findings and switchpoints.
- Detailed discussion of the 18 topics.
- Implication of the findings.

**Fields of interests**
- Production/Logistics/Supply Chain Management; Management/Business for Professionals

**Target groups**
- Professional/practitioner

**Product Category**
- Monograph

---

Due September 2011
2011. VIII, 161 p. 175 illus., 173 in color. Hardcover
- $139.00
ISBN 978-3-642-22317-4

Due November 2011
2012. X, 400 p. 41 illus., 1 in color. (Contributions to Management Science) Hardcover
- $189.00
ISBN 978-3-7908-2774-3

Due September 2011
2011. IX, 41 p. 67 illus. (SpringerBriefs in Business) Softcover
- $49.95
ISBN 978-3-642-23492-7
W. Wiesemann, Imperial College London

Optimization of Temporal Networks under Uncertainty

Many decision problems in operations research are defined on temporal networks, that is, workflows of time-consuming tasks whose processing order is constrained by precedence relations. For example, temporal networks are used to model projects, computer applications, digital circuits and production processes. Optimization problems arise in temporal networks when a decision maker wishes to determine a temporal arrangement of the tasks and/or a resource assignment that optimizes some network characteristic (e.g. the time required to complete all tasks). The parameters of these optimization problems (e.g. the task durations) are typically unknown at the time the decision problem arises. This monograph investigates solution techniques for optimization problems in temporal networks that explicitly account for this parameter uncertainty. We study several formulations, each of which requires different information about the uncertain problem parameters.

Features
- Combines the state-of-the-art in optimization under uncertainty and temporal networks
- Develops a unified perspective on temporal networks, covering applications in project management, computer science, electrical engineering and production scheduling
- Numerous examples explain the concepts and provide a natural flow

Fields of interests
Operation Research/Decision Theory; Game Theory/Mathematical Methods; Optimization

Target groups
Research

Product Category
Monograph
A. H. Müller, University of Bayreuth, Germany; O. Borisov, University of Pau, France (Eds)

Self Organized Nanostructures of Amphiphilic Block Copolymers I

Features
- Highest Impact Factor of all publications ranked by ISI within Polymer Science
- Short and concise reports on physics and chemistry of polymers, each written by the world renowned experts
- Still valid and useful after 5 or 10 years
- The electronic version is available free of charge for standing order customers at: springer.

Contents

Fields of interests
Polymer Sciences; Surface and Interface Science, Thin Films; Soft and Granular Matter, Complex Fluids and Microfluidics

Target groups
Research

Product Category
Reviews

Available
2011. XIII, 253 p. 100 illus., 4 in color. (Advances in Polymer Science, Volume 241) Hardcover
- $309.00
ISBN 978-3-642-22485-0

A. H. Müller, University of Bayreuth, Germany; O. Borisov, University of Pau, France (Eds)

Self Organized Nanostructures of Amphiphilic Block Copolymers II

Block Copolymer Surfactant Mixtures in Aqueous Solution: Can we Achieve Size and Shape Control by Co-Micellization?

Features
- Highest Impact Factor of all publications ranked by ISI within Polymer Science
- Short and concise reports on physics and chemistry of polymers, each written by the world renowned experts
- Still valid and useful after 5 or 10 years
- The electronic version is available free of charge for standing order customers at: springer.com/series/12/

Contents
Block Copolymer Surfactant Mixtures in Aqueous Solution: Can we Achieve Size and Shape Control by Co-Micellization?, by Thomas Hellweg; Non-ionic Thermoresponsive Polymers in Water, by Vladimir Aseyev; Heikki Tenhu and Françoise Winnik; From Coordination Polymers to Hierarchical Self-Assembled Structures, by Yun Yan, Arie de Keizer, Martien A. Cohen Stuart and Nicolaas A. M. Besseling; Processes of Ordered Structure Formation in Polypeptide Thin Film Solutions, by Joan Botza, Helmut Schlaad and Günter Reiter; Amphiphilic Polymers at Interfaces, by Katarzyna Kita-Tokarczyk, Mathias Junginger, Serena Belegrinou and Andreas Taubert;

Fields of interests
Polymer Sciences; Surfaces and Interfaces, Thin Films; Soft and Granular Matter, Complex Fluids and Microfluidics

Target groups
Research

Product Category
Reviews

Available
2011. XII, 206 p. 72 illus., 5 in color. (Advances in Polymer Science, Volume 242) Hardcover
- $259.00
ISBN 978-3-642-22296-2

R. Jayakumar, Amrita Center for Nanosciences and Molecular Medicine, Cochin, India; M. Prabaharan, SRM University, Kattankulathur, India; R. A. Muzzarelli, University of Ancona, Italy (Eds)

Chitosan for Biomaterials II


Features
- Highest Impact Factor of all publications ranked by ISI within Polymer Science
- Short and concise reports on physics and chemistry of polymers, each written by the world renowned experts
- Still valid and useful after 5 or 10 years
- The electronic version is available free of charge for standing order customers at: springer.com/series/12/

Contents

Fields of interests
Polymer Sciences; Medical Microbiology

Target groups
Research

Product Category
Reviews

Available
2011. XII, 207 p. 2 illus., 1 in color. (Advances in Polymer Science, Volume 244) Hardcover
- $259.00
ISBN 978-3-642-24060-7

Due September 2011
2011. XII, 207 p. 2 illus., 1 in color. (Advances in Polymer Science, Volume 244) Hardcover
- $259.00
ISBN 978-3-642-24060-7
Strategies for Achieving Food Security in Central Asia

Food Security is a primary concern for all countries. However the vulnerabilities which need addressing are dictated by the individual country according to the food control systems in place, the nature of the food industry and the culture of the country. This book summarises the presentations of a NATO Advanced Training Course addressing the issue of food security in Central Asia. The book is divided into two sections.

Features
- Describes food control systems in Central Asian Countries
- Evaluates vulnerabilities in commonly used food security systems
- Collects information from diverse subject areas which affect the quality of food security systems

Fields of interests
Food Science; Quality Control, Reliability, Safety and Risk

Target groups
Graduate

Product Category
Proceedings

Due November 2011

Softcover
2011. XX, 331 p. 10 illus., 9 in color. (NATO Science for Peace and Security Series C: Environmental Security)
➤ $89.95
ISBN 978-94-007-2504-1

Hardcover
2011. XX, 331 p. 10 illus., 9 in color. (NATO Science for Peace and Security Series C: Environmental Security, Volume)
➤ $189.00
ISBN 978-94-007-2501-0

M. Atanasov, C. Daul, P. Tregenna-Piggott (Eds)

Vibronic Interactions and the Jahn-Teller Effect
Theory and Applications

Contents
- A Symmetry Adapted Approach to the Dynamic Jahn-Teller Problem.
- The Dynamic Jahn-Teller Effect in Cu(I)/MgO: Dynamic and Static Jahn-Teller Effect in Impurities: Determination of the Tunneling Splitting.
- Vibronic Transitions to a State with Jahn-Teller Effect: Contribution of Phonons.
- Many-Electron Multiplet Theory Applied to O-Vacancies in (i) Nanocrystalline HfO2 and (ii) Non-Crystalline SiO2 and Si Oxynitride Alloys.
- C60 Molecules on Surfaces: the Role of Jahn-Teller Effects and Surface Interactions.
- The Quadratic p3⊗h Jahn-Teller System as a Model for the Anion.
- Estimation of the Vibronic Coupling Constants of Fullerene Monocation: Comparison between Experimental and Simulated Results.
- Adiabatic to Diabatic Transformation and Nuclear Dynamics on Diabatic Hamiltonian Constructed by Using Ab-Initio Potential Energy Surfaces and Non - Adiabatic Coupling Terms for Excited States of Sodium Trimer.

Features
- More comprehensive coverage of all aspects of biotechnology in the pulp and paper industries
- Up-to-date with current and emerging technologies
- Focuses on environmentally friendly processes that are popular in the pulp and paper industry

Fields of interests
Industrial Chemistry/Chemical Engineering; Biotechnology; Carbohydrate Chemistry

Target groups
Research

Product Category
Monograph

Due October 2011

Softcover
2011. XVI, 301 p. 163 illus., 96 in color. (Progress in Theoretical Chemistry and Physics, Volume 23)
➤ $349.00

Hardcover
2011. XVI, 301 p. 163 illus., 96 in color. (Progress in Theoretical Chemistry and Physics, Volume 23)
➤ approx. $179.00

P. Bajpai, Thapar Research & Development Center Colony, Patiala, India

Biotechnology for Pulp and Paper Processing

This book provides the most up-to-date information available on various biotechnological processes useful in the pulp and paper industry. Each of the twenty chapters covers a specific biotechnological process or technique, discussing the advantages, limitations, and future prospects of the most important and popular processes used in the industry. Topics covered include tree improvement, pulping, bleaching, deinking, fiber modification, biosolids management, and biorefining.

Features
- More comprehensive coverage of all aspects of biotechnology in the pulp and paper industries
- Up-to-date with current and emerging technologies
- Focuses on environmentally friendly processes that are popular in the pulp and paper industry

Fields of interests
Industrial Chemistry/Chemical Engineering; Biotechnology; Carbohydrate Chemistry

Target groups
Research

Product Category
Monograph

Due January 2012

Softcover
2012. XIV, 479 p. 49 illus., 33 in color. Hardcover
➤ $179.00

Hardcover
2012. XIV, 479 p. 49 illus., 33 in color. Hardcover
➤ $179.00
B. Fraser-Reid, Pittsboro, NC, USA

From Sugar to Splenda
A Personal and Scientific Journey of a Carbohydrate Chemist and Expert Witness

More than just coincidence connects a Tate & Lyle lawsuit and artificial sweetener to Jamaican-born Chemist Bert Fraser-Reid. From his first experience of Chemistry through his diabetic father, to his determination and drive as a Chemistry student in Canada, Fraser-Reid weaves a remarkable tale integrating science, law and autobiographical anecdotes. This book arises from the lawsuit brought by Tate & Lyle against companies accused of infringing its patents for sucralose, the sweet ingredient in the artificial sweetener SPLENDLE which is made by chlorinating sugar.

Features
► The first book to discuss this Tate & Lyle lawsuit ► A combination of autobiography, scientific explanation and legal commentary ► An autobiography of successful and famous sugar Chemist Bert-Fraser Reid ► Of interest to a wide audience, including a popular audience ► Highlights the development and associated health benefits and risks of artificial sweeteners

Contents
Jamaica.- The Author in Jamaica.- Canada - very fortunately.- London - Hough, Khan and Pfadnis get together.- Sweetness.- „Luck“. - Prepping for the Trial - Identifying „Swords of Damocles“- Preamble to the Trial.- Day One of the Trial.- Day Two of the Trial.- Day Three of the Trial.- Day Four of the Trial.- Day Five of the Trial.- Day Six of the Trial.- Days Seven and Eight of the Trial: My time on the Witness Stand.- Appendices.

Fields of interests
Carbohydrate Chemistry; Commercial Law; Food Science

Target groups
Research

Product Category
Monograph
Fluorescent Proteins I
From Understanding to Design

Fluorescent proteins are intimately connected to research in the life sciences. Tagging of gene products with fluorescent proteins has revolutionized all areas of biosciences, ranging from fundamental biochemistry to clinical oncology, to environmental research. The discovery of the Green Fluorescent Protein, its first, seminal application and the ingenious development of a broad palette of fluorescence proteins of other colours, was consequently recognised with the Nobel Prize for Chemistry in 2008. Fluorescent Proteins I is devoted to the basic photophysical and photochemical aspects of fluorescent protein technology.

Features
► A comprehensive review ► Written by experts ► Richly illustrated

Contents

Fields of interests
Analytical Chemistry; Molecular Medicine; Medical Biochemistry

Target groups
Research

Product Category
Reviews

Due October 2011
2011. XVI, 787 p. 231 illus., 138 in color. Hardcover
► approx. $189.00
ISBN 978-94-007-0918-8

Novel Technologies in Food Science
Their Impact on Products, Consumer Trends and the Environment

Contents

Fields of interests
Food Science; Chemistry/Food Science, general

Target groups
Professional/practitioner

Product Category
Contributed volume

Due December 2011
2011. XVI, 476 p. 57 illus., 19 in color. (Integrating Safety and Environmental Knowledge Into Food Studies towards European Sustainable Development, Volume 7) Hardcover
► $209.00
ISBN 978-1-4419-7879-0
A. Mohammad, Inamuddin, Aligarh Muslim University, India (Eds)

**Green Solvent Properties and Applications in Chemistry**

**Contents**

**Fields of interests**
Chemistry/Food Science, general; Environmental Chemistry; Analytical Chemistry

**Target groups**
Research

**Product Category**
Contributed volume

---

M. Navarro, J. A. Planell, Institute for Bioengineering of Catalonia, Barcelona, Spain (Eds)

**Nanotechnology in Regenerative Medicine**

**Methods and Protocols**

**Contents**

**Fields of interests**
Biotechnology; Nanotechnology; Biomaterials

**Target groups**
Professional/practitioner

**Product Category**
Contributed volume

---

T. Nyokong, Rhodes University, Grahamstown, South Africa; V. Ahsen, Gebze Institute of Technology, Gebze-Kocaeli, Turkey (Eds)

**Photosensitizers in Medicine, Environment, and Security**

This book addresses the synthesis of photosensitizers, the main emphasis being on the new methods of synthesis such as microwave, sonochemistry and the use of ionic liquids.

**Features**

- Goes beyond the traditional use of porphyrin-related photosensitizers presenting emerging applications such as an environment and security
- First book to present the study of photophysical and photochemical behavior of photosensitizers in combination with nanoparticles

**Contents**
Design and conception of photosensitizers.- Recent developments in the synthesis of porphyrin and phthalocyanine photosensitizers and related systems.- The contribution of theoretical chemistry to the drug design in photodynamic therapy.- Photochemical and photophysical characterization.- Sensitization of singlet oxygen formation in aqueous media.- The use of phthalocyanines and related complexes in photodynamic therapy.- Combination Therapy: Complexing of QDs with tetrayrpyrrold and other dyes.- Exogenously induced endogenous Photosensitizers.- Photocatalytic degradation of pollutants with emphasis on phtha- locyanines and related complexes.- Photocatalysis for synthetic purposes.- Photosensitizers in solar energy conversion.- Chromophores for optical power limiting.

**Fields of interests**
Organic Chemistry; Medicinal Chemistry; Environment, general

**Target groups**
Research

**Product Category**
Contributed volume

---

**Due November 2011**
2011. LXVI, 1475 p. 328 illus., 72 in color. Hardcover
► $189.00
ISBN 978-94-007-1711-4

**Due December 2011**
2012. XIV, 416 p. 85 illus., 38 in color. (Methods in Molecular Biology, Volume 811) Hardcover
► $139.00

**Due October 2011**
2011. XVII, 699 p. 211 illus., 43 in color. Hardcover
► $129.00
Chemistry

A. Piccolo, Universita di Napoli Federico II, Portici, Italy (Ed.)

**Carbon Sequestration in Agricultural Soils**

A Multidisciplinary Approach to Innovative Methods

Contents

The nature of Soil Organic Matter and innovative soil managements to fight global changes and maintain agricultural productivity. - The Kyoto protocol and European and Italian regulations in Agriculture. - Field plots and crop yields under innovative methods of carbon sequestration in soil. - Carbon sequestration in soils by hydrophobic protection and in-situ catalyzed photo-polymerization of soil organic matter (SOM). Chemical and physical-chemical aspects of SOM in field plots. - The stable isotopes approach to study C and N sequestration processes in a plant-soil system. - Impact of innovative agricultural practices of carbon sequestration on soil microbial community. - Effects of methods of carbon sequestration in soil on biochemical indicators of soil quality. - Biological and biotechnological evaluation of Carbon dynamics in field experiments. - Measurements of CO2 and N2O emissions in the agricultural field experiments of the ESCOSAGR project. - Effects of carbon sequestration methods on soil respiration and root systems in microcosm experiments and in vitro studies. - New modelling approach to describe and predict carbon sequestration dynamics in agricultural soils. Field plots and crop yields under innovative methods of carbon sequestration in soil. - Carbon sequestration in soils by hydrophobic protection and in-situ catalyzed photo-polymerization of soil organic matter (SOM). Chemical and physical-chemical aspects of SOM in field plots. ...

**Fields of interests**

Organic Chemistry; Soil Science & Conservation; Geochemistry

**Target groups**

Research

**Product Category**

Monograph

---

J. J. Scragg, The Angstrom Laboratory, Uppsala, Sweden

**Copper Zinc Tin Sulfide Thin Films for Photovoltaics**

Synthesis and Characterisation by Electrochemical Methods

Jonathan Scragg documents his work on a very promising material suitable for use in solar cells. Copper Zinc Tin Sulfide (CZTS) is a low cost, earth-abundant material suitable for large scale deployment in photovoltaics. Jonathan pioneered and optimized a low cost route to this material involving electroplating of the three metals concerned, followed by rapid thermal processing (RTP) in sulfur vapour. His beautifully detailed RTP studies – combined with techniques such as XRD, EDX and Raman – reveal the complex relationships between composition, processing and photovoltaic performance.

**Features**

- Nominated by the University of Bath for a Springer Theses Prize
- Pioneering and optimized low-cost route to CZTS
- Detailed study of the relationship between structure, phase composition and optoelectronic performance of CZTS films

**Contents**


**Fields of interests**

Electrochemistry; Metallic Materials; Renewable and Green Energy

**Target groups**

Research

**Product Category**

Monograph

---

M. Sillanpää, Lappeenranta University of Technology, Mikkeli, Finland

**Ultrasound Technology in Green Chemistry**

Coauthor: T. Pham, Lappeenranta University of Technology, Mikkeli, Finland; R. A. Shrestha, Lehigh University, Bethlehem, PA, USA

As a new and rapidly growing science, the applications of ultrasound methods in environmental technology hold a promising future. Compared to conventional methods, ultrasonication can bring several benefits such as being environmentally friendly (no toxic chemicals are used or produced), low cost, and compact, allowing on-site treatment. Besides an overview featuring the background behind ultrasonic technology, this brief summarizes the main studies and innovations reported in recent research that has utilized ultrasound methods in environmental analysis, water, and sludge treatment, soil and sediment remediation to air purification.

**Features**

- Summarizes the main findings and innovations of recent studies that have been using ultrasound in environmental analysis
- Pinpoints the benefits of using ultrasound in green chemistry and environmental applications

**Contents**

Introduction. - Ultrasound - Background Overview. - Water Treatment. - Sludge Stabilization. - Sediment and Soil Remediation. - Air Pollution Control. - Environmental Analysis. - Conclusion.

**Fields of interests**

Chemistry/Food Science, general; Environmental Chemistry

**Target groups**

Research

**Product Category**

Monograph

---

Due January 2012

2012, 300 p. 225 illus., 75 in color. Hardcover
- $129.00
ISBN 978-3-642-23384-5

Due September 2011

2011, XV, 215 p. 144 illus., 4 in color. (Springer Theses) Hardcover
- $129.00
ISBN 978-3-642-22918-3

Due September 2011

2011, V, 36 p. 3 illus. (SpringerBriefs in Molecular Science / SpringerBriefs in Green Chemistry for Sustainability) Softcover
- $49.95
ISBN 978-3-642-22918-3
M. J. Simpson, University of Birmingham, UK

Two Studies in Gas-Phase Ion Spectroscopy
Vacuum-Ultraviolet Negative Photoion Spectroscopy and Ion-Molecule Reaction Kinetics

In this thesis Matthew Simpson reportstwo areas of work in ion spectroscopy, each investigation in itself worthy of a PhD. The first study uses tunable vacuum-ultraviolet radiation from a synchrotron to identify negative ions from twenty four photoexcited polyatomic molecules in the gas phase. From these experiments, Matthew collects a vast amount of data and summarises and reviews ion-pair formation from polyatomic molecules.

Features
- Nominated by the University of Birmingham for a Springer Theses Prize.
- From a huge quantity of data the author attempts to rationalise the circumstances needed for favourable formation of anions.
- The most comprehensive collection of information on this type of ion formation.

Contents
Introduction and background information.
- The experiments.
- Vacuum-ultraviolet negative photoion spectroscopy of SF6, C2F4 and SF5CF3.
- Vacuum-ultraviolet negative photoion spectroscopy of CF3Cl, CF3Br and CF3I.
- Vacuum-ultraviolet negative photoion spectroscopy of small polyatomic molecules.
- The reactions of CF3+ (n = 1-3) with C2H4, C2H3F, CH2CF2 and C2HF3.
- The reactions of C2F4+ with C2H4, C2H3F, CH2CF2 and C2HF3.

Fields of interest
Spectroscopy/Spectrometry; Spectroscopy and Microscopy; Physical Chemistry

Target groups
Research

Product Category
Monograph

A. Bocarsly, University of Princeton, NJ, USA; D. M. Mingos, University of Oxford, UK (Eds)

Fuel Cells and Hydrogen Storage


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

Fields of interest
Inorganic Chemistry

Target groups
Professional/practitioner

Product Category
Reviews

C. A. Bignozzi, University of Ferrara, Italy (Ed.)

Photocatalysis

Features
- This series presents critical reviews of the present position and future trends in modern chemical research.
- Short and concise reports on chemistry.
- Each written by the world-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
- Hydrogen Production with Nanostructured and Sensitized Metal Oxides, by Stefano Caramori, Vito Cristino, Laura Meda, Roberto Argazzi and Carlo Alberto Bignozzi.
- Artificial Photosynthesis Challenges: Water Oxidation at Nanostructured Interfaces, by Mauro Carraro, Andrea Sartorel, Francesca Maria Toma, Fausto Puntoriero, Franco Scandola, Sebastiano Campagna, Maurizio Prato and Marcella Bonchio.
- Photocatalytic Reduction of CO2: From Molecules to Semiconductors, by Tsut ato Yui, Yusuke Tamaki, Keita Sekizawa and Osamu Ishidani.
- Design of Heterogeneous Photocatalysts Based on Metal Oxides to Control the Selectivity of Chemical Reactions, by Andrea Maldotti and Alessandra Molinari.

Fields of interest
Organic Chemistry; Catalysis; Physical Chemistry

Target groups
Research

Product Category
Reviews

Due October 2011

- $129.00
ISBN 978-3-642-23128-5

Available
2011. XI, 205 p. 65 illus., 26 in color. (Structure and Bonding, Volume 141) Hardcover
- $259.00
ISBN 978-3-642-21779-1

Available
- $259.00
ISBN 978-3-642-22293-1
Microfluidics Technologies and Applications

Features
- This series presents critical reviews of the present position and future trends in modern chemical research
- Short and concise reports on chemistry

Contents

Fields of interests
Microengineering; Industrial Chemistry; Chemical Engineering; Soft and Granular Matter; Complex Fluids and Microfluidics

Target groups
Research

Product Category
Contributed volume

Due October 2011
2011. XII, 291 p. (Topics in Current Chemistry, Volume 305) Hardcover
- $309.00
ISBN 978-3-642-24066-9

Due September 2011
2011. XII, 344 p. 149 illus., 19 in color. (Topics in Current Chemistry, Volume 304) Hardcover
- $339.00
ISBN 978-3-642-23049-3
U. Kazmaier, Saarland University, Saarbrücken, Germany (Ed.)

**Transition Metal Catalyzed Enantioselective Allylic Substitution in Organic Synthesis**

*Features*
- Each volume of Topics in Organometallic Chemistry provides the broad scientific readership with a comprehensive summary and critical overview of a specific topic in organometallic chemistry. Research in this rapidly developing transdisciplinary field is having profound influence on other areas of scientific investigation, ranging from catalytic organic synthesis to biology, medicine and material science.
- With contributions by international experts.

*Contents*

*Fields of interests*
Organometallic Chemistry; Catalysis; Organic Chemistry

*Target groups*
Research

*Product Category*
Reviews

---

M. Weidenbörner, Bonn, Germany

**Mycotoxins in Feedstuffs**

Mycotoxins are substances produced from fungal secondary metabolic processes. They impair animal health, thereby causing great economic losses of livestock through disease. Livestock come into contact with mycotoxins through contaminated feedstuff. Feedstuff is any of the constituent nutrients of an animal ration. The plants used in feed, such as grains, oil seeds, nuts, and root crops, are susceptible to mycotoxin contamination. Mycotoxins in feedstuffs feeds which have been reported to have been contaminated with mycotoxins, including data on the degree of contamination, the concentration of the toxins, and the country of origin and/or detection of the contaminated feed. This second edition will feature: - More than 180 new publications concerning mycotoxins in feedstuffs. - A more efficient organization of the content, making the book easier to use in daily practice. - A single-chapter overview of mycotoxins in the corresponding feedstuffs.

*Features*
- More than 180 new publications concerning mycotoxins in feedstuffs.
- A more efficient organization of the content, making the book easier to use in daily practice.
- A single-chapter overview of mycotoxins in the corresponding feedstuffs.

*Fields of interests*
Food Science; Biomedicine general

*Target groups*
Professional/practitioner

*Product Category*
Monograph

---

J. A. Woolford, University of Sussex, Brighton, UK

**The Double [3+2] Photocycloaddition Reaction**

Jason Woolford’s thesis describes for the first time, a double [3+2] photocycloaddition of alkenes onto aromatic rings. Modern synthetic chemistry relies on the ability of researchers to uncover new and more efficient ways of creating highly complex structures. This work describes a novel, environmentally friendly photochemical step that converts in one pot, trivial starting materials into otherwise difficult to construct fenestrane frameworks. The rigid cores of these frameworks have significant potential in drug design. Moreover, the novelty of this work overtakes many other methods for the creation of chiral centres. No less than seven chiral centres are created in the photochemical step together with the formation of four carbon-carbon bonds and multifused rings. Jason’s innovative work has been the subject of several publications in peer-reviewed journals.

*Features*
- Nominated by the University of Sussex for a Springer Theses Prize.
- Synthesis of fenestranes frameworks have significant potential in drug design.
- Outlines the possibilities for the creation of further chiral centres.

*Contents*

*Fields of interests*
Organic Chemistry; Medicinal Chemistry; Analytical Chemistry

*Target groups*
Research

*Product Category*
Monograph
How to Reliably Test for GMOs

The detection of genetically modified organisms (GMOs) is becoming very complex, with new GMOs, approved and unapproved, constantly entering world markets. Traceability and labelling of GMOs is defined in regulations worldwide, demanding accurate and reliable testing to support the requirements of legislation. This Brief provides the current state-of-the-art on all key topics involved in GMO testing and is a source of detailed practical information for laboratories. Special focus is given to qualitative and quantitative real-time PCR analysis relevant to all areas where detection and identification rely on nucleic acid-based methods. The following topics, important for testing laboratories, are also discussed: organization of the laboratory, focusing on aspects of the quality system and methods for testing, validation and verification of methods, and measurement uncertainty.

Features
- Concise guide to GMO testing
- Includes detailed practical instructions for GMO testing
- Discusses current issues in GMO testing

Contents

Fields of interest
Food Science

Target groups
Professional/practitioner

Product Category

Due November 2011

2011. VIII, 115 p. 21 illus., 19 in color. (SpringerBriefs in Food, Health, and Nutrition) Softcover
- $49.95
Distributed Multiple Description Coding
Principles, Algorithms and Systems

This book examines distributed video coding (DVC) and multiple description coding (MDC), two novel techniques designed to address the problems of conventional image and video compression. Covering all fundamental concepts and core technologies, the chapters can also be read as independent and self-sufficient, describing each methodology in sufficient detail to enable readers to repeat the corresponding experiments easily.

Features
- Presents a state-of-the-art survey of distributed video coding (DVC) and multiple description coding (MDC)
- Describes each approach in detail, so that readers can easily repeat the corresponding experiments
- Provides a practical guide to the systems of DVC and MDC for engineers

Contents

Fields of interests
Image Processing and Computer Vision; Coding and Information Theory

Target groups
Research

Product Category
Monograph

Due November 2011
➤ $99.00
ISBN 978-1-4471-2247-0
Haptic Interaction with Deformable Objects
Modelling VR Systems for Textiles

The focus from most Virtual Reality (VR) systems lies mainly on the visual immersion of the user. But the emphasis only on the visual perception is insufficient for some applications as the user is limited in his interactions within the VR. Therefore the textbook presents the principles and theoretical background to develop a VR system that is able to create a link between physical simulations and haptic rendering which requires update rates of 1 kHz for the force feedback. Special attention is given to the modeling and computation of contact forces in a two-finger grasp of textiles. Addressing further the perception of small scale surface properties like roughness, novel algorithms are presented that are not only able to consider the highly dynamic behaviour of textiles but also capable of computing the small forces needed for the tactile rendering at the contact point.

Features
- Introduction to haptic rendering with comprehensive review of the mechanical foundation and mathematical calculation
- Showing the steps required for real-time simulation of deformable objects especially textile materials
- Highlighting the issues in haptic real-time computation and providing approaches to the solution of force rendering of the two-finger mechanical contact grasping a textile

Contents
- Introduction
- Physical Simulation
- Haptic Interaction
- VR System Framework
- Analysis of VR System
- Summary & Outlook
- Index

Fields of interest
Simulation and Modeling

Target groups
Research

Product Category
Monograph

Due September 2011
2011. X, 138 p. 75 illus. (Springer Series on Touch and Haptic Systems, 0) Hardcover
► $99.00
G. C. Buttazzo, Scuola Superiore S. Anna, Pisa, Italy

**Hard Real-Time Computing Systems**

**Predictable Scheduling Algorithms and Applications**

This updated edition offers an indispensable exposition on real-time computing, with particular emphasis on predictable scheduling algorithms. It introduces the fundamental concepts of real-time computing, demonstrates the most significant results in the field, and provides the essential methodologies for designing predictable computing systems used to support time-critical control applications.

**Features**
- Introductory text for predictable scheduling in hard real-time computing systems
- Numerous illustrations and ample exercises create a comprehensive and fluid learning tool
- Expanding upon the previous best-selling volumes, this revised edition includes: new applications, essential examples for identifying critical conditions, new results on Resource Reservation, and a survey of available tools for design, simulation and analysis of real-time systems

**Contents**

**Fields of interests**
Special Purpose and Application-Based Systems; Circuits and Systems; System Performance and Evaluation

**Target groups**
Research

**Product Category**
Graduate/Advanced undergraduate textbook

---

S. Campanoni, Harvard University, Cambridge, MA, USA

**Guide to ILDJIT**

This book is a guide to getting started with ILDJIT, a compilation framework designed to be both easily extensible and easily configurable. Within this framework, it is possible to build a tool-chain by customizing ILDJIT for specific purposes. Customizations can be used within both static and dynamic compilers already included in the framework without adaptations. Moreover, customizations allow modification of both the behaviors and the characteristics of these compilers to better satisfy the particular need. Currently, ILDJIT is able to translate bytecode programs to generate machine code for both Intel x86 and ARM processors. By relying on ILDJIT technology, more input languages or platforms can be supported. After an introduction to ILDJIT, this guide goes into detail on how to exploit it by extending the framework to match specific requirements. Finally, there is an introduction and discussion of the design choices followed during the authors’ years of development efforts towards ILDJIT.

**Feature**
- Presents a guide to getting started with the ILDJIT compilation framework

**Contents**

**Fields of interest**
Programming Languages, Compilers, Interpreters

**Target groups**
Research

**Product Category**

---

H. Chen, University of Arizona, Tucson, AZ, USA

**Dark Web**

**Exploring and Data Mining the Dark Side of the Web**

**Features**
- Examines and explains every aspect of an important ongoing research program in terrorism informatics
- Interdisciplinary perspective looks at three dimensions: methodological issues, database and computational techniques, and legal, social and privacy challenges
- Hsinchun Chen is a worldwide leader in data mining research and a prolific Springer author

**Contents**

**Fields of interests**
Data Mining and Knowledge Discovery; Business Information Systems; Operation Research/Decision Theory

**Target groups**
Research

**Product Category**
Monograph

---

Due October 2011

- $99.00
ISBN 978-1-4614-0675-4

Due September 2011

2011. IX, 101 p. 30 illus. (SpringerBriefs in Computer Science) Softcover
- $39.95
ISBN 978-1-4471-2193-0

Due November 2011

- $189.00
Computer Vision and Pattern Recognition) Hardcover

2012. X, 160 p. 74 illus., 9 in color. (Advances in Computer Vision and Pattern Recognition) Hardcover

$99.00
ISBN 978-3-642-20443-2

Due January 2012

Autonomous Intelligent Vehicles

Theory, Algorithms, and Implementation

H. Cheng, University of Electronic Science and Technology, Chengdu, China

This important text/reference presents state-of-the-art research on intelligent vehicles, covering not only topics of object/obstacle detection and recognition, but also aspects of vehicle motion control. With an emphasis on both high-level concepts, and practical detail, the text links theory, algorithms, and issues of hardware and software implementation in intelligent vehicle research.

Features
- Presents state-of-the-art research on intelligent vehicles
- Covers both object/obstacle detection and recognition, and vehicle motion control
- Discusses both high-level theory and algorithms, and practical hardware and software implementation

Contents

Fields of interests
Image Processing and Computer Vision; Artificial Intelligence (incl. Robotics); Pattern Recognition

Target groups
Research

Product Category
Monograph

Grammars for Language and Genes

Theoretical and Empirical Investigations

D. Chiang, USC Information Sciences Institute, Marina del Rey, CA, USA

J. Sleightholme, Fortranplus, London, UK

Introduction to Programming with Fortran

With Coverage of Fortran 90, 95, 2003, 2008 and 77

I. Chivers, Rhymney Consulting, London, UK

Features
- Lots of complete worked examples highlighting key language features in small components
- Material organized in bite sized chunks in a cumulative fashion, where each chapter builds on earlier ones
- Problems at the end of each chapter graded to test understanding of the concepts and language features introduced

Contents

Fields of interests
Programming Languages, Compilers, Interpreters; Programming Techniques; Software Engineering

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

Introduction to Programming


$89.95

Due December 2011

Introduction to Programming

J. Sleightholme, Fortranplus, London, UK

Features
- Lots of complete worked examples highlighting key language features in small components
- Material organized in bite sized chunks in a cumulative fashion, where each chapter builds on earlier ones
- Problems at the end of each chapter graded to test understanding of the concepts and language features introduced

Contents

Fields of interests
Programming Languages, Compilers, Interpreters; Programming Techniques; Software Engineering

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

Due September 2011
D. Draheim, University of Innsbruck, Austria

Pathways in Software Engineering
On the Development and Operations of Large-Scale Software Systems

Software is pervasive in today's technical systems in industry and everyday life. Modern enterprises strategically invest into software and often have their own software development departments.

Features
➔ Presents crucial word-of-mouth knowledge shared by senior software managers
➔ Explains the mutual dependencies between the several leading software engineering paradigms
➔ Includes many real world case studies that help readers to understand the relevance of the various concepts presented
➔ Bridges the gap between software management and IT infrastructure management
➔ The terminology of the book is carefully oriented towards the terminology standards in the field (IEEE, OMG, PMI, WfMC)

Contents

Fields of interests
Software Engineering; Programming Techniques; Management of Computing and Information Systems

Target groups
Professional/practitioner

Product Category
Monograph

D. Draheim, University of Innsbruck, Austria

Pathways in Software Engineering
On the Development and Operations of Large-Scale Software Systems

Software is pervasive in today's technical systems in industry and everyday life. Modern enterprises strategically invest into software and often have their own software development departments.

Features
➔ Presents crucial word-of-mouth knowledge shared by senior software managers
➔ Explains the mutual dependencies between the several leading software engineering paradigms
➔ Includes many real world case studies that help readers to understand the relevance of the various concepts presented
➔ Bridges the gap between software management and IT infrastructure management
➔ The terminology of the book is carefully oriented towards the terminology standards in the field (IEEE, OMG, PMI, WfMC)

Contents

Fields of interests
Software Engineering; Programming Techniques; Management of Computing and Information Systems

Target groups
Professional/practitioner

Product Category
Monograph
Traffic-Sign Recognition Systems

This work presents a full generic approach to the detection and recognition of traffic signs. The approach is based on the latest computer vision methods for object detection, and on powerful methods for multiclass classification. The challenge was to robustly detect a set of different sign classes in real time, and to classify each detected sign into a large, extensible set of classes. To address this challenge, several state-of-the-art methods were developed that can be used for different recognition problems. Following an introduction to the problems of traffic sign detection and categorization, the text focuses on the problem of detection, and presents recent developments in this field. The text then surveys a specific methodology for the problem of traffic sign categorization – Error-Correcting Output Codes – and presents several algorithms, performing experimental validation on a mobile mapping application.

Features
► Presents a full generic approach to the detection and recognition of traffic signs, based on state-of-the-art computer vision methods for object detection, and on powerful methods for multiclass classification ► Surveys a specific methodology for the problem of traffic sign categorization: Error-Correcting Output Codes ► Includes experimental validation results performed on a mobile mapping application

Contents
Introduction.- Preliminaries.- Repairing and Querying: the Fundamental Decision Problems.- Computing Card-minimal Repairs.- Consistent Answers to Aggregate Queries.- Possible Extensions and Open Problems.- References.

Fields of interest
Image Processing and Computer Vision

Target groups
Research

Product Category

Due September 2011
2011. VI, 95 p. 34 illus. (SpringerBriefs in Computer Science) Softcover
► $39.95

S. Flesca, F. Furfaro, University of Calabria, Rende, Italy; F. Parisi, University of Calabria, Rende, Italy

Repairing and Querying Databases under Aggregate Constraints

Research has deeply investigated several issues related to the use of integrity constraints on relational databases. In particular, a great deal of attention has been devoted to the problem of extracting „reliable“ information from databases containing pieces of information inconsistent with regard to some integrity constraints. In this manuscript, the problem of extracting consistent information from relational databases violating integrity constraints on numerical data is addressed. Aggregate constraints defined as linear inequalities on aggregate-sum queries on input data are considered. The notion of repair as consistent set of updates at attribute-value level is exploited, and the characterization of several data-complexity issues related to repairing data and computing consistent query answers is provided. Moreover, a method for computing “reasonable” repairs of inconsistent numerical databases is introduced, for a restricted but expressive class of aggregate constraints. An extension of this method for dealing with the data repairing problem in the presence of weak aggregate constraints which are expected to be satisfied, but not required to, is presented. Furthermore, a technique for computing consistent answers of aggregate queries in the presence of a wide form of aggregate constraints is provided.

Contents
Introduction.- Preliminaries.- Repairing and Querying: the Fundamental Decision Problems.- Computing Card-minimal Repairs.- Consistent Answers to Aggregate Queries.- Possible Extensions and Open Problems.- References.

Fields of interest
Database Management

Target groups
Professional/practitioner

Product Category

Due November 2011
2011. V, 65 p. 50 illus. (SpringerBriefs in Computer Science) Softcover
► $39.95
ISBN 978-1-4614-1640-1

B. Furht, Florida Atlantic University, Boca Raton, FL, USA; A. Escalante, LexisNexis, Boca Raton, FL, USA (Eds)

Handbook of Data Intensive Computing

Contents
R. Harper, Microsoft Research, Cambridge, UK (Ed.)

The Connected Home: The Future of Domestic Life

The title of this new book: “The Connected Home” reflects the move away from the idea that smart homes would alter the lives of those living in them by providing technologies to take over tasks that were previously the responsibility of the householder, such as managing entertainment, education – and even eating! Up until around 10 years ago this view was commonplace but time has shown that the technologies to support a smart home have not developed in such a way as to support this premise. Instead, what people do in their homes has moved the concept of a smart home into that of the ‘connected home’.

Features
► First book offering insights into the social shaping of technology and the shaping of human behavior
► Focuses on how technologies have been designed in the past and how they might be in the future
► Analyses the effect of social media such as Facebook in the home

Contents
From smart home to connected home .- The networked home: The way of the future or a vision too far?.- Changing times: home life and domestic habit.- Family Life, Children and the Feminization of Computing.- The web, the home and the search engine.- Changing practices of family television behavior
-► A novel approach which amalgamates Description Logic (DL) reasoning with Hierarchical Task Network (HTN) planning is presented

Features
► Develops algorithms and concepts in DL for automatically generating the planning problem
► Highlights the need for a deliberative layer in robotics and its role as a planning system of sorts
► A novel approach for integrating DL reasoning and HTN planning is presented

Contents

Fields of interests
Artificial Intelligence (incl. Robotics); Simulation and Modeling; User Interfaces and Human Computer Interaction

Target groups
Research

Product Category
Monograph

Available
2011. XXII, 215 p. (Lecture Notes in Computer Science / Lecture Notes in Artificial Intelligence, Volume 6798) Softcover
► $72.00
ISBN 978-3-642-22579-6

R. Hartanto, DFKI Robotics Innovation Center, Bremen, Germany

A Hybrid Deliberative Layer for Robotic Agents
Fusing DL Reasoning with HTN Planning in Autonomous Robots

The Hybrid Deliberative Layer (HDL) solves the problem that an intelligent agent faces in dealing with a large amount of information which may or may not be useful in generating a plan to achieve a goal. The information, that an agent may need, is acquired and stored in the DL model. Thus, the HDL is used as the main knowledge base system for the agent. In this work, a novel approach which amalgamates Description Logic (DL) reasoning with Hierarchical Task Network (HTN) planning is introduced. An analysis of the performance of the approach has been conducted and the results show that this approach yields significantly smaller planning problem descriptions than those generated by current representations in HTN planning.

Features
► Develops algorithms and concepts in DL for automatically generating the planning problem
► Highlights the need for a deliberative layer in robotics and its role as a planning system of sorts
► A novel approach for integrating DL reasoning and HTN planning is presented

Contents

Fields of interests
Artificial Intelligence (incl. Robotics); Simulation and Modeling; User Interfaces and Human Computer Interaction

Target groups
Research

Product Category
Monograph

Available
2011. XXII, 215 p. (Lecture Notes in Computer Science / Lecture Notes in Artificial Intelligence, Volume 6798) Softcover
► $72.00
ISBN 978-3-642-22579-6

R. Harper, Microsoft Research, Cambridge, UK (Ed.)

The Connected Home: The Future of Domestic Life

The title of this new book: “The Connected Home” reflects the move away from the idea that smart homes would alter the lives of those living in them by providing technologies to take over tasks that were previously the responsibility of the householder, such as managing entertainment, education – and even eating! Up until around 10 years ago this view was commonplace but time has shown that the technologies to support a smart home have not developed in such a way as to support this premise. Instead, what people do in their homes has moved the concept of a smart home into that of the ‘connected home’.

Features
► First book offering insights into the social shaping of technology and the shaping of human behavior
► Focuses on how technologies have been designed in the past and how they might be in the future
► Analyses the effect of social media such as Facebook in the home

Contents
From smart home to connected home .- The networked home: The way of the future or a vision too far?.- Changing times: home life and domestic habit.- Family Life, Children and the Feminization of Computing.- The web, the home and the search engine.- Changing practices of family television behavior
-► A novel approach which amalgamates Description Logic (DL) reasoning with Hierarchical Task Network (HTN) planning is presented

Features
► Develops algorithms and concepts in DL for automatically generating the planning problem
► Highlights the need for a deliberative layer in robotics and its role as a planning system of sorts
► A novel approach for integrating DL reasoning and HTN planning is presented

Contents

Fields of interests
Artificial Intelligence (incl. Robotics); Simulation and Modeling; User Interfaces and Human Computer Interaction

Target groups
Research

Product Category
Monograph

Available
2011. XII, 563 p. (Lecture Notes in Computer Science / Theoretical Computer Science and General Issues, Volume 6650) Softcover
► $107.00
ISBN 978-3-642-22669-4

O. Goldreich, The Weizmann Institute of Science, Rehovot, Israel

Studies in Complexity and Cryptography
Miscellanea on the Interplay between Randomness and Computation

Contents
**Computability and Complexity Theory**

**Contents**

- SmART World - User-Friendly Mobile Ubiquitous Augmented Reality Framework.
- Augmented Viewpoint: Towards Precise Manipulation at a Distance for Outdoor Augmented Reality Wearable Computers.
- Design Recommendations for Augmented Reality based Training of Maintenance Skills.
- Collaborative Content Generation: A Platform for Mobile Collaborative Augmented Reality Game: A Case Study of "AR Fighter".
- Effect of Collaboration and Competition in an Augmented Reality Mobile Game.
- Prototyping a Mobile AR Based Multi-user Guide System for Yuanmingyuan Garden.
- Dynamic, Abstract Representations of Audio in a Mobile Augmented Reality Conferencing System.
- Facilitating Collaboration with Laser Projector-Based Spatial Augmented Reality in Industrial Applications.

**Fields of interests**

- Theory of Computation; Algorithm Analysis and Problem Complexity

**Target groups**

- Research

**Product Category**

- Graduate/Advanced undergraduate textbook

---

**Moving Target Defense**

Creating Asymmetric Uncertainty for Cyber Threats

Moving Target Defense: Creating Asymmetric Uncertainty for Cyber Threats was developed by a group of leading researchers. It describes the fundamental challenges facing the research community and identifies new promising solution paths. Moving Target Defense which is motivated by the asymmetric costs borne by cyber defenders takes an advantage afforded to attackers and reverses it to advantage defenders. Moving Target Defense is enabled by technical trends in recent years, including virtualization and workload migration on commodity systems, widespread and redundant network connectivity, instruction set and address space layout randomization, just-in-time compilers, among other techniques.

**Contents**

- A Formal Model for a System’s Attack Surface: Effectiveness of Moving Target Defenses.
- Global ISR: Toward a Comprehensive Defense Against Compiler-Generated Software Diversity.
- Sym-biotes and defensive Mutualism: Moving Target Defense.
- Manipulating Program Functionality to Eliminate Security.
- End-to-End Software Diversification of Internet Services.
- Introducing Diversity and Uncertainty to Create Moving Attack.
- Toward Network Configuration Randomization for Moving Target Defense.
- Configuration Management Security in Data Center Environments.

**Fields of interests**

- Systems and Data Security; Data Encryption; Information Systems Applications (incl. Internet)

**Target groups**

- Professional/practitioner

**Product Category**

- Professional book

---

**Logic and Games on Automatic Structures**

Playing with Quantifiers and Decompositions

The evaluation of a logical formula can be viewed as a game played by two opponents, one trying to show that the formula is true and the other trying to prove it is false. This correspondence has been known for a very long time and has inspired numerous research directions. In this book, the author extends this connection between logic and games to the class of automatic structures, where relations are recognized by synchronous finite automata. In model-checking games for automatic structures, two coalitions play against each other with a particular kind of hierarchical imperfect information. The investigation of such games leads to the introduction of a game quantifier on automatic structures, which connects automata with the classical model-theoretic notion of a game quantifier.

**Contents**

- 1 Logics, Structures and Presentations.
- 2 Game Quantifiers on Automatic Presentations.
- 3 Games for Model Checking on Automatic Structures.
- 4 Memory Structures for Infinitary Games.
- 5 Counting Quantifiers on Automatic Structures.
- 6 Cardinality Quantifiers in MSO on Linear Orders.
- 7 Cardinality Quantifiers in MSO on Trees.
- 8 Outlook.

**Fields of interests**

- Artificial Intelligence (incl. Robotics); Mathematical Logic and Formal Languages; Symbolic and Algebraic Manipulation

**Target groups**

- Research

**Product Category**

- Monograph
Organizational Interoperability in E-Government: Lessons from 77 European Good-Practice Cases

In the e-government research community as well as in many national e-government programs, interoperability is widely seen as a key factor in developing effective and attractive e-services.

Features
- The most comprehensive survey on organizational issues related to e-government
- Readers benefit from the experience, lessons learned, and recommendations from 77 international projects
- Presents an empirically based conceptual framework that details the options for IT governance in e-government

Contents

Fields of interests
Computer Appl. in Administrative Data Processing; Business Information Systems; Public Administration

Target groups
Research

Product Category
Monograph

Available
2011. XIV, 185 p. 28 illus. Hardcover
► $99.00
ISBN 978-3-642-22501-7

Euclidean Shortest Paths

T. S. Li, National Cheng Kung University, Tainan City, Taiwan; K. Tu, National Kaohsiung First University, Kaohsiung City, Taiwan; C. Tseng, National Chung Hsing University, Taichung, Taiwan; C. Hsu, National Taiwan Normal University, Taipei, Taiwan; N. Jesse, Technical University of Dortmund, Germany; C. Kuo, National Taiwan University of Science and Technology, Taipei, Taiwan; H. Yang, University of Science and Technology, Kaohsiung City, Taiwan (Eds)

Next Wave in Robotics

This book constitutes the refereed proceedings of the 14th RoboWorld Cup and Congress of the Federation of International Robosoccer Association, FIRA 2011, held in Kaohsiung, Taiwan in August 2011. The 34 revised papers presented were carefully reviewed and selected for inclusion in the proceedings out of a total of 110 contributed papers presented at FIRA 2011. The papers address a broad variety of current topics in robotics research, particularly in robot soccer.

Features
- Up-to-date result
- Fast track conference proceedings
- State-of-the-art report

Fields of interests
Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision; Robotics and Automation

Target groups
Research

Product Category
Monograph

Available
2011. XII, 292 p. (Communications in Computer and Information Science, Volume 212) Softcover
► $95.00
ISBN 978-3-642-23146-9

Due December 2011
2012. XIV, 370 p. 263 illus. Hardcover
► $129.00

Computer Science
Z. Mahmood, R. Hill, University of Derby, UK (Eds)

Cloud Computing for Enterprise Architectures

This important text provides a single point of reference for state-of-the-art cloud computing design and implementation techniques.

Features
- Includes balanced corporate analysis, discussing benefits, issues and limitations
- Presents a roadmap and deployment methodologies, exploring synergies between enterprise cloud computing, SOA and grid computing
- Provides case studies for enterprise architects and business managers

Contents
Part I: Concepts and Principles
- Cloud Computing for EA
- EA Fundamentals
- Cloud Computing Business Models
- The Convergence of EA and Cloud Computing
- Part II: Approaches and Frameworks
- Component-Based Development for Cloud Computing Architectures
- Identity and Access Management in Cloud Computing
- A Cloud Architecture for Educational Enterprises: a Case Study in Robotics
- Cloud Computing: an Enabler in Developing Business Models for Global Enterprises
- Using Common Logic to Provide a Semantic EA Framework for Cloud Computing
- Part III: Issues and Challenges
- The Cloud Challenges for Enterprise Architects
- Service Level Agreements in Cloud Computing: Perspectives of Private Consumers and Small-to-Medium Enterprises
- Enterprise HPC in the Clouds
- Part IV: Further Research and Studies
- Cloud Computing and the Emerging Market
- Fair Non-Repudiation Framework for Cloud Storage
- A Cross-Enterprise Approach to Detecting Information Leakage without Leaking Information

Fields of interests
Computer Communication Networks; Business Information Systems

Target groups
Professional/practitioner

Product Category
Professional book

Due November 2011
2011. V, 515 p. 73 illus., 36 in color. (Computer Communications and Networks) Hardcover
- $159.00

N. T. Nguyen, Wroclaw University of Technology, Poland (Ed.)

Transactions on Computational Collective Intelligence V

These Transactions publish research in computer-based methods of computational collective intelligence (CCI) and their applications in a wide range of fields such as the Semantic Web, social networks and multi-agent systems.

Features
- &lt;p&gt;Journal-like reviewing process&lt;/p&gt;
- &lt;p&gt;State-of-the art research&lt;/p&gt;
- &lt;p&gt;Deals with emerging topics in the fields of semantic web, social networks, multi-agent systems&lt;/p&gt;

Contents
Improved N-grams Approach for Web Page Language Identification
- Image Edge Detection Using Variation-Adaptive Ant Colony Optimization
- An Iterative Process for Component-Based Software Development Centered on Agents
- Cellular Gene Expression Programming Classifier Learning
- A Situation-Aware Computational Trust Model for Selecting Partners
- Using the Perseus System for Modelling Epistemic Interactions
- Reduction of Faulty Detected Shot Cuts and Cross Dissolve Effects in Video Segmentation Process of Different Categories of Digital Videos
- Using Knowledge Integration Techniques for User Profile Adaptation Method in Document Retrieval Systems
- Modeling Agents and Agent Systems
- Online News Event Extraction for Global Crisis Surveillance

Fields of interests
Artificial Intelligence (incl. Robotics); Computer Communication Networks; Information Systems Applications (incl.Internet)

Target groups
Research

Product Category
Contributed volume

Due September 2011
2011. X, 213 p. (Lecture Notes in Computer Science / Transactions on Computational Collective Intelligence, Volume 6910) Softcover
- $95.00
ISBN 978-3-642-24015-7

H. Paulheim, Reinheim, Germany

Ontology-based Application Integration

Ontology-based Application Integration introduces UI-level (User Interface Level) application integration and discusses current problems which can be remedied by using ontologies. It shows a novel approach for applying ontologies in system integration. While ontologies have been used for integration of IT systems on the database and on the business logic layer, integration on the user interface layer is a novel field of research. This book also discusses how end users, not only developers, can benefit from semantic technologies.

Features
- Includes a running case study of a real system from the emergency management domain
- Illustrates the feasibility of semantic technologies using a non-sandbox example
- Discusses how end users, not only developers, can benefit from semantic technologies

Contents
Introduction
- Part I System Integration, Ontologies, and User Interfaces
- Application Integration on the User Interface Level
- Ontology-based System Integration
- Ontologies in User Interface Development
- Part II Integrating User Interfaces with Ontologies
- A Framework for User Interface Integration
- An Ontology of User Interfaces and Interactions
- Data Object Exchange
- Efficient Semantic Event Processing
- Crossing Technological Borders
- Part III The Future of Ontology-based UI Integration
- Improving Information Exploration
- Towards End-user User Interface Integration
- Conclusion and Outlook

Fields of interests
Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics); Software Engineering

Target groups
Professional/practitioner

Product Category
Professional book

Due October 2011
2011. XVI, 270 p. 92 illus., 49 in color. Hardcover
- $99.00
Multilingual Information Retrieval
From Research To Practice

We are living in a multilingual world and the diversity in languages which are used to interact with information access systems has generated a wide variety of challenges to be addressed by computer and information scientists. The growing amount of non-English information accessible globally and the increased worldwide exposure of enterprises also necessitates the adaptation of Information Retrieval (IR) methods to new, multilingual settings.

Contents

Fields of interest
Information Storage and Retrieval; User Interfaces and Human Computer Interaction; Document Preparation and Text Processing

Target groups
Research

Product Category
Graduate/Advanced undergraduate textbook

S. Petrov, Google New York, NY, USA
Coarse-to-Fine Natural Language Processing
Foreword by: E. Charniak, Brown University, Providence, USA

The impact of computer systems that can understand natural language will be tremendous. To develop this capability we need to be able to automatically and efficiently analyze large amounts of text. Manually devised rules are not sufficient to provide coverage to handle the complex structure of natural language, necessitating systems that can automatically learn from examples. To handle the flexibility of natural language, it has become standard practice to use statistical models, which assign probabilities for example to the different meanings of a word or the plausibility of grammatical constructions. This book develops a general coarse-to-fine framework for learning and inference in large statistical models for natural language processing. Coarse-to-fine approaches exploit a sequence of models which introduce complexity gradually. At the top of the sequence is a trivial model in which learning and inference are both cheap.

Features
- Foreword written by Eugene Charniak
- This book describes a particular approach to natural language processing and its applications to several tasks
- Many applications are presented

Due November 2011
2012. XV, 113 p. 33 illus., 13 in color. (Theory and Applications of Natural Language Processing) Hardcover
- $109.00
ISBN 978-3-642-22742-4

Interactive Decision Aids in E-Commerce

This book gives recommendations on which interactive decision aids to offer in webstores. Interactive decision aids are tools that help online shoppers to compare and evaluate product information. Consumers can, for instance, exclude products that do not meet certain criteria, they can highlight certain information or they can assign ratings of different kinds. Interactive decision aids are important, because finding the preferred product in a short amount of time increases both the customers’ satisfaction and, in turn, the sales volume. This book includes a detailed description of decision aids, closely studies how decision aids are related to the decision behavior of customers, and develops a comprehensive system of decision aids, which is very flexible, increases both customer satisfaction and confidence, and can be used intuitively. The close link between typical behaviors and the decision aids allows webstores to learn about customers’ decision-making behavior by using a simple click stream analysis. The book is written in an easy-to-read style and provides both practical recommendations and knowledge about consumer behavior.

Features
- Theory-driven design of interactive decision aids
- Practical implications and recommendations on the design of webstores
- New insights into the field of consumer behavior

Due November 2011
2012. X, 270 p. 88 illus., 33 in color. (Contributions to Management Science) Hardcover
- $139.00
ISBN 978-3-7908-2768-2

J. Pfeiffer, Johannes Gutenberg-Universität Mainz, Germany

Interactive Decision Aids in E-Commerce

This book gives recommendations on which interactive decision aids to offer in webstores. Interactive decision aids are tools that help online shoppers to compare and evaluate product information. Consumers can, for instance, exclude products that do not meet certain criteria, they can highlight certain information or they can assign ratings of different kinds. Interactive decision aids are important, because finding the preferred product in a short amount of time increases both the customers’ satisfaction and, in turn, the sales volume. This book includes a detailed description of decision aids, closely studies how decision aids are related to the decision behavior of customers, and develops a comprehensive system of decision aids, which is very flexible, increases both customer satisfaction and confidence, and can be used intuitively. The close link between typical behaviors and the decision aids allows webstores to learn about customers’ decision-making behavior by using a simple click stream analysis. The book is written in an easy-to-read style and provides both practical recommendations and knowledge about consumer behavior.

Features
- Theory-driven design of interactive decision aids
- Practical implications and recommendations on the design of webstores
- New insights into the field of consumer behavior

Due November 2011
2012. X, 270 p. 88 illus., 33 in color. (Contributions to Management Science) Hardcover
- $139.00
ISBN 978-3-7908-2768-2
T. Plötz, Newcastle University, Newcastle upon Tyne, UK; G. A. Fink, TU Dortmund, Germany

**Markov Models for Handwriting Recognition**

Since their first inception, automatic reading systems have evolved substantially, yet the recognition of handwriting remains an open research problem due to its substantial variation in appearance. With the introduction of Markovian models to the field, a promising modeling and recognition paradigm was established for automatic handwriting recognition. However, no standard procedures for building Markov model-based recognizers have yet been established. This text provides a comprehensive overview of the application of Markov models in the field of handwriting recognition, covering both hidden Markov models and Markov-chain or n-gram models. First, the text introduces the typical architecture of a Markov model-based handwriting recognition system, and familiarizes the reader with the essential theoretical concepts behind Markovian models. Then, the text reviews proposed solutions in the literature for open problems in applying Markov model-based approaches to automatic handwriting recognition.

**Contents**
- Introduction to Linked Data and its Lifecycle on the Web.
- Foundations of Description Logics.
- Using SPARQL with RDFS and OWL Entailment.
- Database foundations for scalable RDF processing.
- Scalable OWL 2 Reasoning for Linked Data.
- OWL and Rules.
- Modeling the Web of Data.
- Trust management methodologies for the Web.
- Software Analysis.
- Probabilistic-Logical Web Data Integration.
- An Introduction to Constraint Programming and Combinatorial Optimisation.
- Foundations of Description Logics.
- Using SPARQL with RDFS and OWL Entailment.
- Database foundations for scalable RDF processing.
- Scalable OWL 2 Reasoning for Linked Data.
- OWL and Rules.
- Modeling the Web of Data.
- Trust management methodologies for the Web.

**Fields of interest**
- Pattern Recognition
- Research

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

---

S. Raghavan, Chennai, India; E. Dawson (Eds)

**An Investigation into the Detection and Mitigation of Denial of Service (DoS) Attacks**

Critical Information Infrastructure Protection

Around the globe, nations face the problem of protecting their Critical Information Infrastructure, normally referred to as Cyber Space. In this monograph, we capture FIVE different aspects of the problem: High speed packet capture, Protection through authentication, Technology Transition, Test Bed Simulation, and Policy and Legal Environment. The monograph is the outcome of over three years of cooperation between India and Australia.

**Features**
- Helps in the overall understanding of the Critical Information Infrastructure Protection Problem
- Helps in the design of a monitoring system
- Helps in Policy formulation
- Helps in Legal Framework Design

**Fields of interests**
- Input/Output and Data Communications; Systems and Data Security; Control Structures and Microprogramming

**Target groups**
- Professional/practitioner

**Product Category**
- Monograph

---

**Due September 2011**

2011. VI, 78 p. 5 illus. (SpringerBriefs in Computer Science) Softcover
- $39.95

**Available**

- $107.00
ISBN 978-3-642-23031-8

**Due November 2011**

2012. XV, 397 p. 83 illus., 29 in color. With online files/update. Hardcover
- $129.00
A. Salminen, University of Jyväskylä, Finland; F. Tompa, University of Waterloo, ON, Canada

Communicating with XML

This book provides extensive insight into the possibilities and challenges of XML in building new information management solutions in networked organizations. After a brief introduction to Web communication features and XML fundamentals, the book examines the benefits of adopting XML and illustrates various types of XML use: XML in document management; XML for data-centric and multimedia components; XML as a format for metadata, including metadata for the Semantic Web; and XML in support of data interchange between software applications and among organizations. The challenges of adopting XML in large-scale information management are also discussed. In addition, applications across a broad spectrum are examined and numerous case studies pertaining to the adoption of XML are presented. The book is particularly suitable for courses offered in Information Studies, Information Systems, or Information Technology.

Features
▶ Introduces XML technologies using an information-centric focus ▶ Shows why and how XML has become ubiquitous on the Web ▶ Presents major members of W3C’s XML family of languages without expecting readers to be proficient programmers

Contents
Setting the Stage.- Fundamentals.- Why use XML?- Document Management.- Data-Centric and Multimedia Components.- Metadata.- Data Interchange.- Adopting XML for Large-Scale Information.- Introduction to XHTML.- History of XML.- Extended Backus-Naur Form (EBNF)

Fields of interests
Information Systems Applications (incl.Internet); Document Preparation and Text Processing; Information Systems and Communication Service

Target groups
Professional/practitioner

Product Category
Professional book

Due September 2011
2011. XXIV, 1507 p. 818 illus., 579 in color. (Texts in Computer Science) Hardcover
▶ $169.00
ISBN 978-0-85729-885-0

K. Shukla, Banaras Hindu University, Varanasi, India; M. Prasad, Institute for Development and Research in Banking Technology, Hyderabad, India

Lossy Image Compression
Domain Decomposition-Based Algorithms

Image compression is concerned with minimization of the number of information carrying units used to represent an image. Lossy compression techniques incur some loss of information which is usually imperceptible. In return for accepting this distortion, we obtain much higher compression ratios than is possible with lossless compression. Salient features of this book include: four new image compression algorithms and implementation of these algorithms; detailed discussion of fuzzy geometry measures and their application in image compression algorithms; new domain decomposition based algorithms using image quality measures and study of various quality measures for gray scale image compression; compression algorithms for different parallel architectures and evaluation of time complexity for encoding on all architectures; parallel implementation of image compression algorithms on a cluster in Parallel Virtual Machine (PVM) environment.

Features
▶ Introduces new image compression algorithms and their implementation ▶ Provides a detailed discussion of fuzzy geometry measures and their application in image compression algorithms ▶ Describes parallel implementation of image compression algorithms on a cluster in Parallel Virtual Machine environment

Contents

Fields of interest
Image Processing and Computer Vision

Target groups
Research

Product Category
Graduate book

Due September 2011
2011. X, 128 p. 54 illus., 4 in color. (SpringerBriefs in Computer Science) Softcover
▶ $39.95

D. Salomon, California State University, Northridge, CA, USA


This book presents a broad overview of computer graphics (CG), its history, and the hardware tools it employs. Covering a substantial number of concepts and algorithms, the text describes the techniques, approaches, and algorithms at the core of this field. Emphasis is placed on practical design and implementation, highlighting how graphics software works, and explaining how current CG can generate and display realistic-looking objects. The mathematics is non-rigorous, with the necessary mathematical background introduced in the Appendixes.

Features
▶ Provides comprehensive coverage of the field of computer graphics ▶ Suitable as both a textbook for students and a manual for professionals ▶ Contains exercises throughout the text, with solutions available

Fields of interest
Computer Graphics

Target groups
Upper undergraduate

Product Category
Graduate/Advanced undergraduate textbook

Due October 2011
2011. XV, 248 p. 49 illus., 17 in color. Hardcover
▶ $79.95

News 9/2011
journal on data semantics XV

The LNCS Journal on Data Semantics is devoted to the presentation of notable work that, in one way or another, addresses research and development on issues related to data semantics. The scope of the journal ranges from theories supporting the formal definition of semantic content to innovative domain-specific applications of semantic knowledge. The journal addresses researchers and advanced practitioners working on the semantic web, interoperability, mobile information services, data warehousing, knowledge representation and reasoning, conceptual database modeling, ontologies, and artificial intelligence.

Feature
- State-of-the-art research
- Up-to-date results in data semantics
- Unique visibility

Contents
Capturing Rhetoric and Argumentation Aspects within Scientific Publications.
A Reference Model for Semantic Peer-to-Peer Networks.
Discovery of Probabilistic Mappings between Taxonomies: Principles and Experiments.
TwigTable: Using Semantics in XML.
Twig Pattern Query Processing.
Database Semantics Recovery through Analysis of Dynamic SQL.
Ontology Alignment Evaluation Initiative: Six Years of Experience.
A Reference Model for Semantic Peer-to-Peer Networks.
Discovery of Probabilistic Mappings between Taxonomies: Principles and Experiments.
TwigTable: Using Semantics in XML.
Twig Pattern Query Processing.
Database Semantics Recovery through Analysis of Dynamic SQL.
Ontology Alignment Evaluation Initiative: Six Years of Experience.

Fields of interests
Data Mining and Knowledge Discovery; Database Management; Information Storage and Retrieval

Target groups
Research

Product Category
Contributed volume

W. M. Spears, Swarmotics LLC, Laramie, WY, USA;
D. F. Spears, University of Wyoming, Laramie, WY, USA (Eds)

Physicomimetics
Physics-Based Swarm Intelligence

Standard approaches to understanding swarms rely on inspiration from biology and are generally covered by the term “biomimetic”. This book focuses on a different, complementary inspiration, namely physics. The editors have introduced the term „physicomimetics“ to refer to physics-based swarm approaches, which offer two advantages: they capture the notion that “nature is lazy”, meaning that physical systems always perform the minimal amount of work necessary, an especially important advantage in swarm robotics; and physics is the most predictive science, reducing complex systems to simple concepts and equations that codify emergent behavior and help us to design and understand swarms.

Features
- This book introduces and defines the term physicomimetics
- The contributing authors are the leading researchers in this field
- A supporting website offers supplementary material, including simulation code, simulation videos, and videos of working robots

Fields of interests
Artificial Intelligence (incl. Robotics); Control, Robotics, Mechatronics; Computational Intelligence

Target groups
Research

Product Category
Monograph

Transactions on Computational Science XII
Special Issue on Cyberworlds
M. Gavrilova, University of Calgary, AB, Canada;
C. K. Tan, Exascale Ltd., Birmingham, UK; A. Sourin, O. Sourina, Nanyang Technological University, Singapore

Features
- Includes up-to-date research results in the broad field of cyberworlds
- Covers a wide range of topics from tangible interfaces to haptic modeling and cybernavigation
- Includes a detailed introductory preface by the guest editors, summing up the contents of each paper

Contents

Fields of interests
User Interfaces and Human Computer Interaction; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl.Internet)

Target groups
Research

Product Category
Contributed volume
Transactions on Computational Science XIII
M. Gavrilova, University of Calgary, AB, Canada;
C. J. Tan, Exascale Ltd., Birmingham, UK

The 13th issue of the Transactions on Computational Science journal consists of two parts.

Features
► The first part focuses on computational models
► The focus of the second part is on networks and augmented reality
► Both theoretical and applicational papers are included

Contents
Collision Probability in an In-Line Machines Model.- A Computational-Geometry Approach to Digital Image ContourExtraction.- On Multipli-
catively Weighted Voronoi Diagrams for Lines in the Plane.- Fast Streaming 3D Level Set Seg-
mentation on the GPU for Smooth Multi-phase Segmentation.- Valued Dominance-Based Rough Set Approach to Incomplete Information System.- An FPGA-Based Fault-Tolerant 2D Systolic Array for Matrix Multiplications.- Neural Network Based Lane Change Trajectory Prediction in Autono-
mous Vehicles.- Conditional Privacy through Ring Signature in Vehicular Ad-Hoc Networks.- Establish-
ing a Museum Display Platform by Using Com-

Fields of interests
User Interfaces and Human Computer Interaction;
Artificial Intelligence (incl. Robotics); Information Systems Applications (incl.Internet)

Target groups
Research

Product Category
Contributed volume

Transactions on Large-Scale Data- and Knowledge-Centered Systems III
Special Issue on Data and Knowledge Management in Grid and P2P Systems

The LNCS journal Transactions on Large-Scale Data- and Knowledge-Centered Systems focuses on data management, knowledge discovery, and knowledge processing, which are core and hot topics in computer science. Since the 1990s, the Internet has become the main driving force behind application development in all domains.

Features
► Covers a wide range of different topics in the field of knowledge management in grid and P2P systems
► Includes a selection of the best papers presented at GLOBE 2010
► Gives a detailed coverage of the state of the art of the field

Contents

Fields of interests
Database Management; Data Mining and Knowledge Discovery; Information Storage and Retrieval

Target groups
Research

Product Category
Contributed volume

Robert Recorde
Tudor Polymath, Expositor and Practitioner of Computation

The 16th-Century intellectual Robert Recorde is chiefly remembered for introducing the equals sign into algebra, yet the greater significance and broader scope of his work is often overlooked. This book presents an authoritative and in-depth analysis of the man, his achievements and his historical importance. This scholarly yet accessible work examines the latest evidence on all aspects of Recorde's life, throwing new light on a character deserving of greater recognition.

Features
► Presents an authoritative and in-depth analysis of the man, his achievements and his historical importance
► Discusses the greater significance and broader scope of Recorde's work
► Covers aspects of Recorde's life overlooked in other studies

Contents
pects.- His Will and His Religion.

Fields of interests
History of Computing; History of Mathematical Sciences; History

Target groups
Research

Product Category
Monograph

Available
2011. XX, 207 p. (Lecture Notes in Computer Science / Transactions on Computational Science, Volume 6750) Softcover
► $98.00
ISBN 978-3-642-22618-2

Available
2011. IX, 239 p. (Lecture Notes in Computer Science / Transactions on Large-Scale Data- and Knowledge-Centered Systems, Volume 6790) Softcover
► $98.00
ISBN 978-3-642-23073-8

Due November 2011
2011. VI, 276 p. 2 Illus. (History of Computing) Hardcover
► $99.00
ISBN 978-0-85729-861-4
Software and Systems
Traceability

Software and Systems Traceability provides a comprehensive description of the practices and theories of software traceability across all phases of the software development lifecycle. The term software traceability is derived from the concept of requirements traceability.

Features

- Provides a comprehensive description of the practices and theories of software traceability across all phases of the software development cycle
- A reference point for traceability research and practice
- Addresses the topic of traceability in a detailed manner

Contents


Fields of interests
Software Engineering/Programming and Operating Systems; Software Engineering

Target groups
Upper undergraduate

Product Category
Contributed volume

Due December 2011

2012. 532 p. Hardcover

$169.00
ISBN 978-1-4471-2238-8
**Economic Geology**

**The Origin and Mining of Ore Deposits**

Economic Geology focuses not only on the nature and origin of ore deposits but also explores the economic issues that surround the exploitation of mineral resources. Topics of particular focus are the rate of exploitation of natural resources, the question of when or if these resources will be exhausted, the pollution and social disturbance that accompanies mining, the compromises and challenges that arise from the explosion of demand from China, India and other rapidly developing countries, and the moral issues that surround mining of metals in lesser developed countries for consumption in the “first-world” countries. With its dual character, the book is useful as an introductory text for students in earth sciences and a reference volume for students, teachers and researchers of geography, economics and social sciences.

**Features**
- Contains numerous case studies and worked examples
- First introductory book which deals extensively with the economic and social issues of mineral exploitation
- Numerous colour figures

**Contents**
1. Introduction to economic geology.
2. Classification, distribution and uses of ores and ore deposits.
3. Magmatic ore deposits.
4. Hydrothermal deposits.
5. Deposits formed by sedimentary and surficial processes.

**Fields of interests**
Economic Geology; Landscape/Regional and Urban Planning; Environmental Law/Policy/Ecotechnology

**Target groups**
Upper undergraduate

**Product Category**
Graduate/Advanced undergraduate textbook

---

**Dynamic land use/cover change modelling**

**Geosimulation and multiagent-based modelling**

The thesis is an original and novel contribution to land use/land cover change analysis using methods of geosimulation and agent-based modeling. The author implements several traditional methodologies of land use change by means of remote sensing and GIS techniques. An Agent-Based Model was developed in order to simulate land use change in the Tehran metropolitan area, comparing the outcomes of each particular methodology. All methods are compared, and advantages and disadvantages discussed.

**Features**
- Nominated by University of Vienna for a Springer Theses Prize
- The author developed a new Agent-Based Model that simulates land use change in the Tehran metropolitan area
- Traditional and new methodologies for the remote sensing of land use/cover change are compared, and advantages and disadvantages discussed

**Contents**
Preface.
1. The eddy covariance method.
3. Data acquisition and flux calculations.
4. Corrections and data quality control.
5. Night time flux correction.
6. Data gap filling.
7. Uncertainty quantification.
8. Footprint analysis.
11. Eddy covariance measurements over forests.
12. Eddy covariance measurements over crops.
13. Eddy covariance measurements over grasslands.
14. Eddy covariance measurements over wetlands.
15. Eddy covariance measurements over urban areas.
16. Eddy covariance measurements over lakes.
17. Database maintenance, data sharing policy, collaboration.

**Fields of interests**
Remote Sensing/Photogrammetry; Landscape/Regional and Urban Planning; Geographical Information Systems/Cartography

**Target groups**
Research

**Product Category**
Monograph

---

**Eddy Covariance**

**A Practical Guide to Measurement and Data Analysis**

This highly practical handbook is an exhaustive treatment of eddy covariance measurement that will be of keen interest to scientists who are not necessarily specialists in micrometeorology.

**Features**
- Reference book for dimensioning building and managing eddy covariance systems
- Reference book for setting up rational data treatment procedures
- Reference for students who want to study the bases of eddy covariance
- Rational and accessible to non-specialists in micrometeorology

**Contents**
Preface.
1. The eddy covariance method.
3. Data acquisition and flux calculations.
4. Corrections and data quality control.
5. Night time flux correction.
6. Data gap filling.
7. Uncertainty quantification.
8. Footprint analysis.
11. Eddy covariance measurements over forests.
12. Eddy covariance measurements over crops.
13. Eddy covariance measurements over grasslands.
14. Eddy covariance measurements over wetlands.
15. Eddy covariance measurements over urban areas.
16. Eddy covariance measurements over lakes.
17. Database maintenance, data sharing policy, collaboration.

**Fields of interests**
Meteorology/Climatology; Climate Change; Physical Geography

**Target groups**
Research

**Product Category**
Monograph
SpringerBriefs in Earth System Sciences

K. Hamilton, G. Lohmann, L. A. Mysak

SpringerBriefs in Earth System Sciences present concise summaries of cutting-edge research and practical applications. The series focuses on interdisciplinary research linking the lithosphere, atmosphere, biosphere, cryosphere, and hydrosphere building the system earth. It publishes peer-reviewed monographs under the editorial supervision of an international advisory board with the aim to publish 8 to 12 weeks after acceptance. Featuring compact volumes of 50 to 125 pages (approx. 20,000–70,000 words), the series covers a range of content from professional to academic such as:

- A timely reports of state-of-the-art analytical techniques
- Bridges between new research results
- Snapshots of hot and/or emerging topics
- Literature reviews
- In-depth case studies

Briefs are published as part of Springer’s eBook collection, with millions of users worldwide. In addition, Briefs are available for individual print and electronic purchase. Briefs are characterized by fast, global electronic dissemination, standard publishing contracts, easy-to-use manuscript preparation and formatting guidelines, and expedited production schedules.

Both solicited and unsolicited manuscripts are considered for publication in this series.

Earth System Modelling - Volume 2
Algorithms, Code Infrastructure and Optimisation

Collected articles in this series are dedicated to the development and use of software for earth system modelling and aims at bridging the gap between IT solutions and climate science. The particular topic covered in this volume addresses the historical development, state of the art and future perspectives of the mathematical techniques employed for numerical approximation of the equations describing atmospheric and oceanic motion. Furthermore, it describes the main computer science and software engineering strategies employed to turn these mathematical methods into effective tools for understanding earth’s climate and forecasting its evolution. These methods and the resulting computer algorithms lie at the core of earth system models and are essential for their effectiveness and predictive skill.

Fields of interests
Computer Applications in Earth Sciences; Mathematical Applications in Earth Sciences; Simulation and Modeling

Due October 2011
➤ $49.95
ISBN 978-3-642-23830-7

Earth System Modelling - Volume 5
Tools for Configuring, Building and Running Models

Collected articles in this series are dedicated to the development and use of software for earth system modelling and aims at bridging the gap between IT solutions and climate science. The particular topic covered in this volume addresses the process of configuring, building, and running earth system models. Earth system models are typically a collection of interacting computer codes (often called components) which together simulate the earth system.

Features
- The only book to detail the issues and supporting technologies for configuring, building and running earth system models
- Part of an integrated series of books which bridge the gap between IT solutions and climate science
- Provides an in-depth perspective on the overall process of working with Earth System Models as well as each of the steps involved

Contents

Fields of interests
Computer Applications in Earth Sciences; Mathematical Applications in Earth Sciences; Simulation and Modeling

Due October 2011
2012. 70 p. 20 illus., 5 in color. (SpringerBriefs in Earth System Sciences, 1) Hardcover
➤ approx. $69.95
ISBN 978-3-642-23931-1
Effective Parameters of Hydrological Models

Models of geological objects are tools for interpolation and extrapolation of available data in space and time continuously. Real structures of the objects are unknown, and their models and simulated results carry uncertainty which cannot be evaluated in a provable way. The real issue is obtaining effective predictions in a reasonably defined sense. This requires a knowledge of mechanisms that convert actual geological properties into effective model parameters. These mechanisms are introduced in the book.

Features

- Numerous step-by-step tutorials help the reader to learn quickly
- A special chapter on next generation
- Flash introduces the reader to future applications
- Includes ten tips on how to protect flash sites from hackers

Contents

Foreword.- Introduction.- Engineering approach.- Geostatistical approach.- Model identification.- Transforming mechanisms to effective model parameters.- Examples of linear transforming mechanisms.- Examples of non-linear transforming mechanisms.- Evaluation of transforming mechanisms.- Inverse problems and transforming mechanisms.- Conclusion.- Afterword.- References.

Fields of interests

Hydrogeology; Mathematical Applications in Earth Sciences; Math. Appl. in Environmental Science

Target groups

Research

Product Category

Monograph

Precipitation Modeling and Quantitative Analysis

The book examines surface rainfall processes through cloud-resolving modeling and quantitative analysis of surface rainfall budget and summarizes modeling and analysis results in recent seven years. The book shows validation of precipitation modeling against observations and derives a set of diagnostic precipitation equations.

Features

- Unique quantitative analysis of rainfall processes for operational forecasters to improve their rainfall predictions
- Step-by-step tutorials of rainfall analysis for graduate students
- A complete set of two-dimensional sensitivity experiments for the reference of development of three-dimensional model experiments

Contents


Fields of interests

Meteorology/Climatology; Natural Hazards; Simulation and Modeling

Target groups

Graduate

Product Category

Monograph

Russian Arctic Seas

Navigational conditions and accidents

For safe operations in the Arctic, it is critical to understand the natural conditions and to learn from the experiences of ice pilots who have worked there. In the context of planning the Petropolar Arctic project, accounts of seagoing activities in the Russian Arctic Seas that resulted in accidents have been gathered and are now made available in this bilingual (Russian-English) volume. Here especially, the physical environment and navigation issues for the Kara, Laptev, East Siberian and Chukchi seas are described. Fully half of the book describes accidents induced by heavy ice conditions since 1900; 94 accidents are carefully reported and classified.

Features

- Bilingual format enables readers to see the original names, current geographic names (also located on maps) and names of the ships to fully understand the accidents
- Supports learning of special vocabulary and expressions of Russian speakers
- Unique collection of archival materials about sea-ice navigation and accidents plus illustrations, eye-witness accounts, and original maps of accident sites
- First English-language descriptions of the Russian Arctic seas from navigational perspective

Contents

Introduction.- Common Features of the Russian Arctic Seas.- The main stages of Northern Sea Navigation and Vessels Development.- The Kara Sea.- The Laptev Sea.- The East Siberian Sea.- The Chukchi Sea.- Conclusion.- References.- Indexes

Fields of interests

Applied Earth Sciences; Physical Geography; Monitoring/Environmental Analysis

Target groups

Research

Product Category

Monograph
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. These Springer Briefs volumes examine the dynamic interplay between humans and the natural environment as reconstructed by the many and varied sub-fields of the Earth Sciences.

Features
- Cutting edge research in the field of human environment interactions
- Broad geographic appeal

Contents
Foreword by Michelle Goman.- Genesis of an artifact layer at the La Playa archaeological site, Sonora, Mexico.- Quaternary stratigraphy of the La Playa archaeological site, Northern Sonora, Mexico.- The Red River raft and its sedimentological implications.

Fields of interests
Earth System Sciences/Management; Geography (general); Environment, general

Target groups
Research

Product Category
Monograph

Due October 2011
2011. VIII, 50 p. 30 illus., 6 in color. (SpringerBriefs in Earth System Sciences) Softcover
- $49.95
ISBN 978-3-642-23758-4

Due September 2011
2011. 950 p. 300 illus. (Springer Geology, Volume) Hardcover
- $279.00
ISBN 978-3-642-22121-7

Due October 2011
2011. VI, 156 p. 37 illus., 21 in color. (SpringerBriefs in Earth Sciences) Softcover
- $49.95
ISBN 978-3-642-22400-3
Contents

Fields of interest
Natural Hazards

Target groups
Research

Product Category
Monograph

Seismic Wave Propagation and Scattering in the Heterogenous Earth
Seismic waves - generated both by natural earthquakes and by man-made sources - have produced an enormous amount of information about the Earth's interior. In classical seismology, the Earth is modeled as a sequence of uniform horizontal layers (or spherical shells) having different elastic properties and one determines these properties from travel times and dispersion of seismic waves. The Earth, however, is not made of horizontally uniform layers, and classic seismic methods can take large-scale inhomogeneities into account.

Feature
- A comprehensive survey of the latest developments in seismic wave propagation and analysis and the first coherent introduction to the theory of scattering

Contents

Fields of interests
Geophysics/Geodesy; Statistical Physics, Dynamical Systems and Complexity; Engineering, general

Target groups
Research

Product Category
Monograph

Jeju Island Geopark - A Volcanic Wonder of Korea
This book will deal with geological as well as cultural, historical, archaeological and biological aspects in Jeju Global Geopark. It will start with introduction of Jeju Global Geopark, geographic setting, habitats, history and development of sustainable tourism, management, general geology and geosites, other significant heritage sites, economically sustainable tourism, education and promotion and management plan.

Features
- The only book dealing with Global Jeju Geopark
- Unique insight covering all aspects from economy to geology
- Invaluable for planning future geoparks

Contents

Fields of interest
Geology; Landscape/Regional and Urban Planning; Nature Conservation

Target groups
Lower undergraduate

Product Category
Contributed volume
Earth System Modelling - Volume 3
Coupling Software and Strategies

Collected articles in this series are dedicated to the development and use of software for earth system modelling and aims at bridging the gap between IT solutions and climate science. The particular topic covered in this volume addresses the major coupling software developed and used in the climate modelling community.

Features
► A unique review of existing coupling software used in Earth System Modelling ► Includes detailed technical descriptions written by the software developers themselves ► Covers the two main coupling approaches, the non intrusive one and the integrated one

Contents

Fields of interests
Computer Applications in Earth Sciences; Mathematical Applications in Earth Sciences; Software Engineering

Target groups
Research

Product Category
Monograph

Due November 2011
2011. 70 p. 12 illus., 2 in color. (SpringerBriefs in Earth System Sciences) Softcover
► $49.95
ISBN 978-3-642-23359-3

Earth Sciences

M. Vithanage, Institute of Fundamental Studies, Kandy, Sri Lanka

Tsunami and Groundwater Contamination

Features
► Basic theory and applications of the density-dependent flow and transport in coastal regions ► Particular application to tsunami like situations which has not been covered in other text books ► Very few books available on the subject explained in a manner that graduate students and practitioners can understand ► Actual pictures from the December 2004 tsunami

Contents

Fields of interests
Meteorology/Climatology; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Mathematical Modeling and Industrial Mathematics

Target groups
Professional/practitioner

Product Category
Monograph

Due December 2011
2012. X, 200 p. 25 illus. in color. (Environmental Earth Sciences) Hardcover
► approx. $139.00
ISBN 978-3-642-17834-4

P. Warneck, J. Williams, Max Planck Institute for Chemistry, Mainz, Germany

The Atmospheric Chemist’s Companion
Numerical Data for Use in the Atmospheric Sciences

This companion provides a collection of frequently needed data as a convenient desk-top reference for atmospheric scientists as well as a source of information for others interested in this matter. The data is presented primarily as text and illustrations with explanatory text. The information is in a condensed form with reliable and up-to-date information in the field of atmospheric chemistry and physics for wide utility and distribution.

Features
► Tabular format and low price will make it accessible to a broad readership ► Addresses both professional and research markets as well as graduate students ► No similar work available

Contents

Fields of interests
Meteorology/Climatology; Atmospheric Protection/Air Quality Control/Air Pollution; Thermodynamics

Target groups
Research

Product Category
Monograph

Due October 2011
2012. XI, 519 p. 4 illus. Hardcover
► $229.00
ISBN 978-94-007-2274-3
Permafrost Hydrology

Permafrost Hydrology systematically elucidates the roles of seasonally and perennially frozen ground on the distribution, storage and flow of water. Cold regions of the World are subject to mounting development which significantly affects the physical environment. Climate change, natural or human-induced, reinforces the impacts. Knowledge of surface and ground water processes operating in permafrost terrain is fundamental to planning, management and conservation. This book is an indispensable reference for libraries and researchers, an information source for practitioners, and a valuable text for training the next generations of cold region scientists and engineers.

Features
- The book provides comprehensive treatment of physical hydrology in permafrost areas. It offers
- Standard reference source for libraries
- A reference for practitioners and professionals including consulting engineers, infrastructure designers, resource developers, government agents
- Source materials for researchers including environmental and earth scientists
- Information for managers, planners, operators and administrators who are stakeholders in cold regions
- Instructional text for the training of highly qualified personnel including graduate and senior undergraduates, and technical staff

Contents
Introduction – background to permafrost hydrology. - Basic principles – definitions, frozen ground and hydrologic processes. - Groundwater in permafrost terrain. - Active layer dynamics. - Runoff. - Catchment behaviour. - Channel hydrology. - Water balance. - Climate change and permafrost hydrology.

Fields of Interests
Hydrogeology; Climate Change; Physical Geography

Target groups
Professional/practitioner

Product Category
Reference work

Due November 2011

2012. XII, 652 p. 441 illus., 356 in color. Hardcover
- $349.00
ISBN 978-3-642-23461-3

Design and impact of water treaties

Managing climate change

This study presents a unique way to utilize the existing literature to explain the success of treaties in managing hydrologic stress. Literature-derived core concepts are summarized as seven treaty mechanisms categories (specificity, uncertainty management, enforcement, communications, flexibility, integrativeness, and scale) and are hypothesized as important for shaping the institutional resiliency of a treaty. Treaty design is shown to have a relevant and important role in shaping basin management so that nations may better achieve their goals in a changing climate.

Features
- Nominated by Oregon State University for a Springer Theses Prize
- Includes a thorough literature review on the relationship between international conflict and changes in climate
- Numerous case studies are discussed, including the Nile and Helmand River Basins

Contents

Fields of Interests
Hydrogeology; Climate Change; Meteorology/Climatology

Target groups
Research

Product Category
Monograph

Due October 2011

2011. IX, 263 p. 29 illus. (Springer Theses) Hardcover
- $139.00
ISBN 978-3-642-23742-3
Leading processes to lead companies: Lean Six Sigma
Kaizen Leader & Green Belt Handbook

This Minibook is a brief guide for Green Belt during a Lean Six Sigma project management or for Kaizen Leader during a process improvement activity. Through both its theoretical concepts and practical examples it is a pocket book for a quick consultancy. Authors idea comes from companies needs in order to analyze information useful to know in depth different kind of processes. The set of Six Sigma tools are explained through Minitab 16, the last release of the most widely used statistical software.

Features
► Practical examples from the companies ► Pratical advises for counseling ► Pocket guide

Contents

Fields of interests
Industrial Organization; Economics/Management Science, general; Economic Growth

Target groups
Professional/practitioner

Product Category
Monograph

Macroeconomic Analysis and Economic Policy Based on Parametric Control

After the transition to open, free economy governments, the former Soviet republics realized that in spite of becoming a part of the shaky international economic order, their individual economic success can be assured by rational national economic policies that in addition to the fundamental law of supply and demand govern the economic mechanism sensitive to both external and internal phenomena. Originally published in Russian and now translated in English, this book by Dr. A.

Features
► Examines mathematical modelling of the complex socio-economic phenomena suitable for outcome prediction of economic policies ► Presents economic policy making problems as problems of parametric system stabilization and control ► Provides decision support tools to policy makers

Contents

Fields of interests
Macroeconomics/Monetary Economics; Economic Policy; Operation Research/Decision Theory

Target groups
Professional/practitioner

Product Category
Monograph

Technologies and Innovations for Development: Scientific Collaboration for a Sustainable Future

This book provides significant orientations and criteria of success for the effective implementation and use of innovative technologies, notably on the importance of stakeholder ownership and the creation of entrepreneurial ecosystems which will enable their sustainability. The different chapters highlight some concrete examples of scientific cooperation for development, demonstrating the common factor of winning partnerships for all the parties concerned. For northern universities, this constitutes the opportunity for students and researchers to face up to highly trying contexts for which original technological solutions, tailored to these environments, must be provided.

Feature
► This book presents the selected papers from the EPFL UNESCO Chair International Scientific Conference on Technologies for Development held from 8 to 10 February 2010 It covers the themes of urban sustainability, ICTs for the environment, disaster risk reduction, sustainable energy production It shows how innovative appropriate technologies can benefit emerging and developing countries It promotes a real exchange and scientific cooperation between North/South

Fields of interests
Economics/Management Science, general; Sustainable Development; Political Science

Target groups
Professional/practitioner

Product Category
Contributed volume
J. Chevallier, University Paris Dauphine, France
Econometric Analysis of Carbon Markets
The European Union Emissions Trading Scheme and the Clean Development Mechanism

Through analysis of the European Union Emissions Trading Scheme (EU ETS) and the Clean Development Mechanism (CDM), this book demonstrates how to use a variety of econometric techniques to analyze the evolving and expanding carbon markets sphere, techniques that can be extrapolated to the worldwide marketplace. It features stylized facts about carbon markets from an economics perspective, as well as covering key aspects of pricing strategies, risk and portfolio management.

Features
- Provides comprehensive coverage and quantitative treatment of carbon markets, with economic content
- Offers online access with hyperlinks to data and R computer codes to develop programming skills
- Suitable as a textbook in econometrics detailing the techniques used to analyze the CO2 markets (EU ETS, CDM)
- Includes problem sets, a solutions manual, and presentation slides for instructors

Contents
1. Introduction to Emissions Trading.
2. CO2 Price Fundamentals.
3. Link With The Macroeconomy.
4. The Clean Development Mechanism.
6. Advanced Topics: Time-To-Maturity and Modeling the Volatility of Carbon Prices.

Fields of interests
Economics/Management Science, general; Environmental Economics; Financial Economics

Target groups
Upper undergraduate

Product Category
Graduate/Advanced undergraduate textbook

Due November 2011
2012. XVIII, 226 p. 74 illus., 29 in color. Hardcover
$79.95

Econometric Analysis of Carbon Markets
The European Union Emissions Trading Scheme and the Clean Development Mechanism

Due December 2011
$139.00
ISBN 978-3-642-20440-1

Electoral Systems
Paradoxes, Assumptions, and Procedures

Both theoretical and empirical aspects of single- and multi-winner voting procedures are presented in this collection of papers. Starting from a discussion of the underlying principles of democratic representation, the volume includes a description of a great variety of voting procedures. It lists and illustrates their susceptibility to the main voting paradoxes, assesses (under various models of voters’ preferences) the probability of paradoxical outcomes, and discusses the relevance of the theoretical results to the choice of voting system.

Features
- Cutting edge of research into theoretical and empirical aspects of voting systems
- Contains the most up-to-date and accurate survey of the main single-winner election systems and the paradoxes afflicting them
- Essential reading as theoretical underpinning for choice of voting system

Contents

Fields of interests
Game Theory/Mathematical Methods; Political Science; Game Theory, Economics, Social and Behav. Sciences

Target groups
Research

Product Category
Contributed volume

Due December 2011
$139.00
ISBN 978-3-642-20440-1

Electoral Systems
Paradoxes, Assumptions, and Procedures

Due November 2011
2012. XVIII, 226 p. 74 illus., 29 in color. Hardcover
$79.95

Econometric Analysis of Carbon Markets
The European Union Emissions Trading Scheme and the Clean Development Mechanism

Due September 2011
$139.00
ISBN 978-3-642-23928-1

Complex Scheduling
In this revised edition some errors were corrected and new material has been added. In particular, further generalizations of the RCPSP, additional practical applications and some more algorithms were integrated. Since in recent years commercial and non-commercial solvers for mixed integer linear programs or satisfiability problems became much more efficient, they may be a good alternative for calculating exact (or heuristic) solutions. Hence, we provided new sections on MIP-formulations and a SAT-formulation for the RCPSP. Furthermore, a description of ant colony optimization was added to the section on heuristic methods for solving the RCPSP. The section on lower bounds was augmented by bounds based on Lagrangian relaxation. In connection with the new methods for solving the RCPSP, basic concepts for SAT solvers, Lagrangian relaxation, and ant colony optimization have been added to Chapter 2. We also wrote a new basic section on constraint programming and corrected the input-or-output test.

Features
- Describes models and algorithms for complex scheduling problems
- Most algorithms are presented in detail and illustrated with examples
- Second revised edition includes new material, in particular, further generalizations of the RCPSP, additional practical applications and some more algorithms

Contents

Fields of interests
Operation Research/Decision Theory; Algorithm Analysis and Problem Complexity; Algorithms

Target groups
Research

Product Category
Monograph
Risk Habitat Megacity

Megacity development and the inherent risks and opportunities for humans and the environment is a theme of growing urgency in the 21st century. Focusing on Latin America where urbanization is most advanced, this book studies the complexity of a ‘mega-urban system’ and explores interrelations between sectors and issues by providing an in-depths study of one particular city, Santiago de Chile. The book attempts to (i) focus on the emergence of risk in megacities by analyzing risk elements, (ii) evaluate the extent and severity of risks, (iii) develop strategies to cope with adverse risks, and (iv) to guide urban development by combining concepts with empirical evidence.

Features
- Provides an indicator-based state-of-the-art comparison of six megacities in Latin America
- Explores scenarios for development trends of Latin America megacities until 2030
- Offers an indisciplinary and comprehensive perspective on risks and opportunities in the Metropolitan Region of Santiago de Chile
- Provides implementation knowledge in a wide range of urban sectors and policy fields

Contents

Fields of interests
Environmental Economics; Science, general; Landscape/Regional and Urban Planning

Target groups
Research

Product Category
Contributed volume

Theory-Guided Modeling and Empiricism in Information System Research

This editorial book presents twelve contributions from the German „Wirtschaftsinformatik“ that exemplify the contemporary approach of theory-guided modeling and empiricism which complements the traditional design science oriented approach. It brings together recent research which has been presented at major international and national conferences in order to demonstrate the growing importance of this stream of research.

Features
- Overview of state-of-the-art research contributions in theory-guided modeling and empiricism in IS research
- Analysis of a publication network in a specific school of thought
- Presentation of an information centric view in IS research

Fields of interests
Business Information Systems; Information Systems and Communication Service; Models and Principles

Target groups
Research

Product Category
Contributed volume

Understanding German Real Estate Markets

Real estate is the biggest real asset class in an economy, and Germany is the biggest economy in Europe. This implies opportunities as well as specific risks for investors and policy makers. As the German real estate markets have by and large been spared severe disruptions in the course of the economic crisis, many questions arise for investors and academics alike. What are the key institutional characteristics of the German real estate markets that make it different? What are the short and long-term drivers of demand and supply? Which regional and functional market segments are most likely to outperform in the next few years? What are the most important pitfalls for investors in Germany? This book gives answers to these and many more questions. The editors have invited a broad range of extensively knowledgeable practitioners and academics from across the relevant real estate spectrum, i.e. economic, legal, tax, planning and financing issues, to express their views.

Features
- Broad cover of all relevant real estate market issues for investing and analysing German real estate markets
- A good mix of practitioners with first-hand expertise of M&A, financing or legal advice as well as scholars with an internationally high reputation on real estate analysis
- Extensive data to illustrate argumentation

Contents

Fields of interests
Economics/Management Science, general; Cities, Countries, Regions; Housing

Target groups
Professional/practitioner

Product Category
Contributed volume
German Social Policy

L. Leisering

The book is part of the 5-volume series "German Social Policy", a unique multidisciplinary approach to the history of German social policy written by the doyens of their respective disciplines. The volumes expound the contribution of the German tradition to the rise of social policy in the Western world in the 19th and 20th centuries. Germany pioneered modern social policy in the 19th century when Bismarck introduced social insurance. After the Second World War, Germany's Social Market Economy became a model of social integration. The volumes cover the history of ideas (volume 1), the legal and political history before and after 1945 (volumes 2 and 3), the German Democratic Republic (1949-1990) and the impact of German reunification (1990) (volume 4). Volume 5 embeds the German case in a major comparative study of European welfare states, complemented by a study of the USA and the Soviet Union. The volumes also yield insights into general theoretical issues of social policy beyond the empirical case of Germany. Each volume has an introduction by the editor who summarizes the contribution made by the volumes and looks into the future of German social policy.

Thinking About Social Policy

The German Tradition

F. Kaufmann, Universität Bielefeld (Emeritus), Bonn, Germany

The book traces the political history of the concept of social policy. „Social policy“ originated in Germany in the mid 19th century as a scholarly term that made a career in politics. The term became more prominent only after World War II. Kaufmann, the doyen of the sociology of social policy in Germany, argues that „social policy“ responds to the modern disjunction between „state“ and „society“ diagnosed by the German philosopher Hegel. Hegel’s disciple Lorenz von Stein saw social policy as a means to pacify the capitalist class conflict. After World War II, social policy expanded in an unprecedented way, changing its character in the process. Social policy turned from class politics into a policy for the whole population, with new concepts – like „social security“, „redistribution“ and „quality of life“ - and new overarching formulas, „social market economy“ and „social state“ (the German version of “welfare state”).

Water Science & Technology in China: A Roadmap to 2050

C. Liu, Y. Wang, Chinese Academy of Sciences, Beijing, China; M. Shao, Chinese Academy of Sciences, Yangling, China; X. Hou, Chinese Academy of Sciences, Yantai, China (Eds)

As one of the eighteen field-specific reports comprising the comprehensive scope of the strategic general report of the Chinese Academy of Sciences, this sub-report addresses long-range planning for developing science and technology in the field of water science.

Features

► Presents a panoramic scenario for China’s modernization drive to 2050  
► Includes water resource &amp; T roadmaps for relevant basic and strategic systems in China  
► Provides comprehensive consultations for the development of ecological and environmental &amp; T innovation with Chinese characteristics

Contents

Economic Theory, Volume 28) Hardcover

Due October 2011


$139.00

Economic Theory, Volume 657) Softcover

Due November 2011

2012. 418 p. 60 illus. (Lecture Notes in Economics and Mathematical Systems, Volume 657) Softcover

$129.00
ISBN 978-3-642-22900-8

Due September 2011


$139.00
ISBN 978-3-7908-2771-2

G. Y. Luo, McMaster University, Hamilton, ON, Canada

Evolutionary Foundations of Equilibria in Irrational Markets

One of the core building blocks of traditional economic theory is the concept of equilibrium, a state of the world in which economic forces are balanced and in the absence of external influences the values of economic variables remain static. Many traditional equilibrium models, or equilibria, are established based on the rational behavior of individuals within financial markets, such as traders, market analysts, and investing firms, and their ability to maximize profits, no matter the cost. Yet what happens when these market participants behave in an irrational manner, and how does this impact economic equilibria?

Features
► First comprehensive text on equilibrium outcomes through economic natural selection in irrational markets
► Covers several new evolutionary models of future markets, commodities, and one-sided auctions
► First book to survey equilibrium outcomes at an aggregate level

Contents
6. The Evolution of Money as a Medium of Exchange in a Primitive Economy.
7. Conclusion.

Fields of interests
Economics/Management Science, general; Game Theory/Mathematical Methods; Financial Economics

Target groups
Research

Product Category
Monograph

G. Parodi, D. Sciulli, Università „G. d’Annunzio” di Chieti-Pescara, Italia (Eds)

Social Exclusion
Short and Long Term Causes and Consequences

The book provides a panoramic approach to social exclusion, with emphasis on structural causes (education, health, accidents) and on short term causes connected with the crisis which started in 2008. The picture emerging, based on econometric analysis, is that the crisis has widened the risk of social exclusion, from the structural groups, like disabled people and formerly convicted people, to other groups, like the young, unemployed, low skilled workers and immigrants, in terms of income, poverty, health, unemployment, transition between occupational statuses, participation, leading to a widening of socio-economic duality. It has also been stressed the relevance of definitions of socio-economic outcomes for the evaluation of the crisis, and their consequences to define interventions to fight socio-economic effects of the economic downturn. The adequacy of welfare policies to cope with social exclusion, especially during a crisis, has been called into question.

Features
► Relevant topic for understanding the contemporary economic situation
► Covering of a wide variety of disadvantaged groups
► Variety of applications of sound econometric techniques

Contents
The structural and long term causes of social exclusion.
- Groups structurally vulnerable to social exclusion.
- Economic crisis, labour markets and social exclusion.

Fields of interests
Labor Economics; Economic Policy; Social Policy

Target groups
Research

Product Category
Contributed volume
Redefining German Health Care
Moving to a Value-Based System

The German health care system is on a collision course with budget realities. Costs are high and rising, and quality problems are becoming ever more apparent. Decades of reforms have produced little change to these troubling trends. Why has Germany failed to solve these cost and quality problems? The reason is that Germany has not set value for patients as the overarching goal, defined as the patient health outcomes achieved per euro expended.

Features
► Presents a comprehensive and coherent strategy to reform the German health care system
► Outlines actionable recommendations to providers of health care, insurance plans, policy-makers and patients to improve the value of German health care
► Delivers a functional description of the German health care system providing an excellent overview for practitioners in the field

Contents
Introduction.- Defining the Problem.- Guiding Principles of a Value-Based Health Care System.- The German Health Care System: Overview and Historical Development.- Health Insurance in Germany.- Health Care Providers.- Overall Assessment of German Health Care Providers.- The Role of Health Plans, Employers and Patients in Health Care Delivery.- Measuring the Results of Care.- Creating a High-Value German Health Care System: Overall Assessment and Recommendations.- Taxonomy of BQS Quality Indicators.

Fields of interests
Health Economics; Management/Busines for Professionals; Public Health/Gesundheitswesen

Target groups
Professional/practitioner

Product Category
Professional book

Rising, and quality problems are becoming ever more apparent. Decades of reforms have produced little change to these troubling trends. Why has Germany failed to solve these cost and quality problems? The reason is that Germany has not set value for patients as the overarching goal, defined as the patient health outcomes achieved per euro expended.

Features
► Presents a comprehensive and coherent strategy to reform the German health care system
► Outlines actionable recommendations to providers of health care, insurance plans, policy-makers and patients to improve the value of German health care
► Delivers a functional description of the German health care system providing an excellent overview for practitioners in the field

Contents
Introduction.- Defining the Problem.- Guiding Principles of a Value-Based Health Care System.- The German Health Care System: Overview and Historical Development.- Health Insurance in Germany.- Health Care Providers.- Overall Assessment of German Health Care Providers.- The Role of Health Plans, Employers and Patients in Health Care Delivery.- Measuring the Results of Care.- Creating a High-Value German Health Care System: Overall Assessment and Recommendations.- Taxonomy of BQS Quality Indicators.

Fields of interests
Health Economics; Management/Busines for Professionals; Public Health/Gesundheitswesen

Target groups
Professional/practitioner

Product Category
Professional book

Origins of the German Welfare State
Social Policy in Germany to 1945

This book traces the origins of the German welfare state. The author, formerly director at the Max-Planck-Institute for European Legal History, Frankfurt, provides a perceptive overview of the history of social security and social welfare in Germany from early modern times to the end of World War II, including Bismarck’s pioneering introduction of social insurance in the 1880s. The author unravels “layers” of social security that have piled up in the course of history and, so he argues, still linger in the present-day welfare state. The account begins with the first efforts by public authorities to regulate poverty and then proceeds to the “social question” that arose during the 19th-century Industrial Revolution.

Features
► Comprehensive account of the history of social security in Germany to 1945
► Analyses all major periods of recent German history
► Written by a distinguished scholar of the legal history of Germany, formerly director at the Max-Planck-Institute for European Legal History, Frankfurt

Contents

Fields of interests
Social Policy; Political Science; History

Target groups
Research

Product Category
Monograph

Economics/Management Science

Origins of the German Welfare State
Social Policy in Germany to 1945

This book traces the origins of the German welfare state. The author, formerly director at the Max-Planck-Institute for European Legal History, Frankfurt, provides a perceptive overview of the history of social security and social welfare in Germany from early modern times to the end of World War II, including Bismarck’s pioneering introduction of social insurance in the 1880s. The author unravels “layers” of social security that have piled up in the course of history and, so he argues, still linger in the present-day welfare state. The account begins with the first efforts by public authorities to regulate poverty and then proceeds to the “social question” that arose during the 19th-century Industrial Revolution.

Features
► Comprehensive account of the history of social security in Germany to 1945
► Analyses all major periods of recent German history
► Written by a distinguished scholar of the legal history of Germany, formerly director at the Max-Planck-Institute for European Legal History, Frankfurt

Contents

Fields of interests
Social Policy; Political Science; History

Target groups
Research

Product Category
Monograph
D. Strangio, Sapienza University of Rome, Italy
The Reasons for Underdevelopment: The Case of Decolonisation in Somaliland

The history of Italian colonial affairs has recently attracted renewed interest from historians and economists. It is a complex and involved question. Over the last few years, though perhaps slightly later than the more mature historiography of other European countries, the work of some important scholars has opened up new fields of investigation and research. Recent studies have tried to analyse in greater depth the working mechanisms of the colonial system, broadening the field of investigation also to the perspective of African countries and the political-economic equilibriums of the second half of the 20th century. This study fits into this area of research and analyses crucial aspects of the decolonisation of Somalia, the history of the presence of Italian banking in Somaliland; relations between Italian and Somali institutions; Italian political-monetary policies during the reconstruction and the first economic boom.

Features
► In depth analysis of colonial affairs
► Crucial aspects of the decolonisation
► Analyse the history of the presence of Italian banking in Somaliland

Contents
Preface.- 1 Introduction.- 2 The Somali People: Between Trusteeship and Independence.- 3 Analysis of the Economic System of Somalia.- 4 Companies and Firms in Italian Somalia.- 5 International Aid to Somalia.- Conclusion.- Appendices.

Fields of interests
Development Economics; Migration; Macroeconomics/Monetary Economics

Target groups
Research

Product Category
Monograph

H. F. Zacher, Max-Planck-Institut für ausländisches und internationales Sozialrecht, Munich, Germany

This book investigates the history of the post-war welfare state in Germany and its normative foundations, with special emphasis on constitutional issues. The author, formerly Director of the Max-Planck-Institute for Foreign and International Social Law, Munich, and President of the Max-Planck-Society, argues that social policy – not only in Germany – is about struggles over the “social”. The "social" is an open and changing concept that reflects the modern quest for equality, voiced in semantics like justice, participation, inclusion and security. The “social” and the "social state" (the German term for welfare state) are enshrined in the German Constitution of 1949, the Grundgesetz.

Features
► In-depth analysis of post-war social policies in Germany since 1945
► Unique analysis of the German post-war welfare state from the point of view of constitutional law
► Unique analysis of the international references of the German post-war welfare state
► Unique analysis of the normative foundations of the German post-war welfare state
► Unique analysis of the "social" as the driver of social policy

Contents

Fields of interests
Social Policy; Political Science; Constitutional Law

Target groups
Research

Product Category
Monograph

Due November 2011
2012. X, 156 p. (Contributions to Economics) Hardcover
► $119.00
ISBN 978-3-7908-2777-4
Work and Education in America
The Art of Integration

Features
- Provides operational definitions of 21st century skills
- Solution-focussed approaches to methodological constraints and technological barriers to the assessment of 21st century skills
- Contains descriptions of example assessment tasks
- Offers international perspectives and comparisons of assessment approaches and assessment policy
- Supported by major companies and leading institutes such as CISCO, Intel and Microsoft

Contents
- List of tables
- List of figures
- Abstracts
- Foreword
- Chapter 1: Overview
- Chapter 2: Defining 21st century skills
- Chapter 3: Perspectives on Methodological Issues
- Chapter 4: Technological Issues for Computer-Based Assessment
- Chapter 5: New assessments and environments for knowledge building
- Chapter 6: Policy frameworks for new assessments
- Conclusion
- References

Fields of interests
- Assessment, Testing and Evaluation; Educational Technology; Computers and Education

Target groups
- Research

Product Category
- Contributed volume

Assessment and Teaching of 21st Century Skills

Rapid—and seemingly accelerating—changes in the economies of developed nations are having a proportional effect on the skill sets required of workers in many new jobs. Work environments are often technology-heavy, while problems are frequently ill-defined and tackled by multidisciplinary teams. This book contains insights based on research conducted as part of a major international project supported by Cisco, Intel and Microsoft.
M. S. Khine, University of Bahrain, Kingdom of Bahrain (Ed.)

Advances in Nature of Science Research
Concepts and Methodologies

Contents
Foreword, Richard Coll.- PART I: Conceptual Issues in the Nature of Science Research.- Chapter 1 Changing the Focus: From Nature of Science to Features of Science, Michael Matthews.- Chapter 2 Perceptual, Attentional, and Cognitive Heuristics that Interact with the Nature of Science to Complicate Public Understanding of Science, Tina A. Grotzer, Rebecca B. Miller, Rebecca A. Lincoln.- Chapter 3 The Natures of Scientific Thinking: Creativity as the Handmaiden to Logic in the Development of Public and Personal Knowledge, Keith S Taber.- Chapter 4 The Bounded Nature of Science: An effective Tool in an Equitable Approach to the Teaching of Science, Sherry Southerland, Barry Golden, Patrick Enderle.- Chapter 5 Why the Study of Pseudoscience Should Be Included in Nature of Science Studies, Ronald Good.- Chapter 6 The Status of the Nature of Science in Science Education, Saouma Boujaoude, Garine Santourian.- PART II: Methodological Advances in the Nature of Science Research.- Chapter 7 Teaching and Learning of Nature of Science and Scientific Inquiry: Building Capacity through Systematic Research-Based Professional Development, Judith S. Lederman, Norman G. Lederman, Ibyoung Sug Kim, Eun Kyung Ko.- Chapter 8 The Nature of Scientists' Nature of Science Views, Renee Schwartz.- Chapter 9 The Nature of Science or the Nature of Teachers: Beginning Science Teachers’ Understanding of NOS, Jonah B. Firestone, Sissy S. Wong, Julie A. Luft, Derek Fay. [...]
Queer Masculinities: A Critical Reader in Education

Contents
Part 1: Queer Masculinities at the K-12 Level.
**Metacognition in Science Education**

**Trends in Current Research**

**Features**
- Discusses emerging topics at the intersection of metacognition with teaching and learning of science concepts
- Presents cutting-edge studies on how metacognitive instruction enhances understanding and thinking in science classrooms
- Is a testimony to the growing recognition of the value of metacognition for science learning

**Contents**

- Introduction.
- Metacognition in science education: Definitions, constituents, and their intricate relation with cognition.
- Reading science: How a naive view of reading hinders so much else.
- Metacognitive knowledge and field-based science learning in an outdoor environmental education program.
- The role of metacognition in students’ understanding and transfer of explanatory structures in science.
- The role of knowledge integration in learning chemistry with dynamic visualization.
- The relationship between metacognition and the ability to pose questions in chemical education.
- Explicit teaching of meta-strategic knowledge: definitions, student learning, and teachers’ professional development.
- A metacognitive teaching strategy for pre-service teachers: Collaborative diagnosis of conceptual understanding in science.
- Toward convergence of critical thinking, metacognition, and reflection: Illustrations from natural and social sciences, teacher education and classroom practice.

**Fields of interests**

Science Education; Learning and Instruction; Teaching and Teacher Education

**Target groups**

Research

**Product Category**

Contributed volume

---

**The Practice of Theoretical Curiosity**

The desire for knowledge is an abiding facet of human experience and cultural development. This work documents curiosity as a sociohistorical force initiating research across the disciplines. Projects generated by theoretical curiosity are presented as historical and material practices emerging as expressions of embodied knowledge and experience. The shifting cultural, philosophical and practical relations between theory and curiosity are situated within classical, medieval, early modern and contemporary communities of practice. The Practice of Theoretical Curiosity advocates for a critical, aesthetic engagement in everyday life.

**Features**

- Historicizes curiosity as a social and material practice
- A phenomenological appreciation of curiosity as an expression of situated knowledge and experience
- Documents the motivating influences for research in genomics, pedagogy, artificial life, social movement theory
- Accents the primary place of technics and technology for thought and research.

**Contents**

- Preface: Thinking Curiously.
- Chapter One: First Questions.
- Chapter Two: A Taming of the Passions.
- Chapter Three: Pedagogies of Curiosity.
- Chapter Four: The Sphinx.
- Chapter Five: Curiosity and the Question.
- Chapter Six: Technics: Thinking Life.
- Chapter Seven: Minds, Limits, Spaces.

**Fields of interests**

Educational Philosophy; Philosophy of Education; Phenomenology

**Target groups**

Research

**Product Category**

Monograph
Identification for Automotive Systems

Contents

Fields of interests
Automotive Engineering; Systems Theory; Control; Control

Target groups
Graduate

Product Category
Contributed volume

Due November 2011
2012. XII, 361 p. 163 illus., 121 in color. (Lecture Notes in Control and Information Sciences, Volume 418) Hardcover
► approx. $179.00

Low Power RF Circuit Design in Standard CMOS Technology

Low Power Consumption is one of the critical issues in the performance of small battery-powered handheld devices. Mobile terminals feature an ever increasing number of wireless communication alternatives including GPS, Bluetooth, GSM, 3G, WiFi or DVB-H. Considering that the total power available for each terminal is limited by the relatively slow increase in battery performance expected in the near future, the need for efficient circuits is now critical. This book presents the basic techniques available to design low power RF CMOS analogue circuits.

Features
► It bridges the lack of specific books for High Frequency design; much of the available literature on low frequency and digital applications does not meet the RF needs
► The book takes a practical approach throughout
► It gives the reader multiple perspectives covering architecture alternatives, technology features and dedicated schematic circuit techniques

Contents

Fields of interests
Circuits and Systems; Communications Engineering; Networks; Microwaves, RF and Optical Engineering

Target groups
Research

Product Category
Monograph

Due September 2011
2011. 300 p. (Lecture Notes in Electrical Engineering, Volume 104) Hardcover
► approx. $179.00
ISBN 978-3-642-22986-2

Emerging Technological Risk
Underpinning the Risk of Technology Innovation

Emerging Technological Risk is concerned with the risk in socio-technical systems. In particular, it develops a multidisciplinary account of emerging technological risk associated with the technology systems (in which software is a major component). Emerging Technological Risk draws on the results of a six-year multidisciplinary research project to develop an understanding of emerging technological risk in terms of a class of socio-technical hazards. It identifies and explains these hazards by means of the different case studies conducted within the project. Moreover, it reviews relevant literature. It also provides an annotated bibliography, which forms a comprehensive multidisciplinary account of technology risk. This supports the development of understanding the complex and subtle nature of technological risk.

Features
► Complements and extends classical approaches to risk
► Includes an annotated bibliography, which forms a comprehensive multidisciplinary account of technology risk
► Identifies and explains socio-technical hazards by means of different case studies

Contents

Fields of interests
Quality Control, Reliability, Safety and Risk; Innovation/Technology Management; System Performance and Evaluation

Target groups
Research

Product Category
Monograph

Due December 2011
2012. XXXII, 176 p. 19 illus., 11 in color. Hardcover
► $129.00
ISBN 978-1-4471-2142-8
Reset Control Systems

Reset Control Systems addresses the analysis for reset control treating both its basic form, and some useful variations of the reset action and reset condition. The issues regarding reset control – concepts and motivation; analysis tools; and the application of design methodologies to real-world examples – are given thorough coverage. The text opens with a historical perspective which moves from the seminal work of the Clegg integrator and Horowitz FORE to more recent approaches based on impulsive/hybrid control systems and explains the motivation for reset compensation. Preliminary material is also included. The focus then turns to stability analysis for systems using techniques which account for various time- and frequency-domain criteria. The final section of the book is centered on control systems design and application. The PI+CI compensator is detailed as a proposed frequency domain approach using quantitative feedback theory and ideas for design improvement. Design examples are given.

Features

- Provides the academic reader with a self-contained reference on a hybrid control approach not previously given dedicated coverage of this sort
- Gives the industrial reader a simple but powerful strategy for improving the performance of control systems
- Presents a range of real-world systems

Contents


Fields of interests

Control; Information Systems Applications (incl. Internet); Building Construction

Target groups

Research

Product Category

Monograph

A Perspective on Stereophonic Acoustic Echo Cancellation

Single-channel hands-free teleconferencing systems are becoming popular. In order to enhance the communication quality of these systems, more and more stereophonic sound devices with two loudspeakers and two microphones are deployed. Because of the coupling between loudspeakers and microphones, there may be strong echoes, which make real-time communication very difficult. The best way we know to cancel these echoes is via a stereo acoustic echo canceller (SAEC), which can be modelled as a two-input/two-output system with random variables. In this work, the authors recast this problem into a single-input/single-output system with complex random variables thanks to the widely linear model.

Features

- Delivers a new convenient formulation with single-input/single-output
- System with complex random variables for stereo acoustic echo canceller
- Includes experimental studies
- Written by well-known experts in the area

Contents


Fields of interests

Signal, Image and Speech Processing; User Interfaces and Human Computer Interaction; Fourier Analysis

Target groups

Research

Product Category

Monograph

Speech Enhancement in the STFT Domain

This work addresses this problem in the short-time Fourier transform (STFT) domain. We divide the general problem into five basic categories depending on the number of microphones being used and whether the interface or interband correlation is considered. The first category deals with the single-channel problem where STFT coefficients at different frames and frequency bands are assumed to be independent. In this case, the noise reduction filter in each frequency band is basically a real gain. Since a gain does not improve the signal-to-noise ratio (SNR) for any given subband and frame, the noise reduction is basically achieved by liftering the subbands and frames that are less noisy while weighing down those that are more noisy. The second category also concerns the single-channel problem. The difference is that now the interframe correlation is taken into account and a filter is applied in each subband instead of just a gain.

Feature

- Addresses this problem in the short-time Fourier transform (STFT)

Contents


Fields of interests

Signal, Image and Speech Processing; Fourier Analysis; Engineering Acoustics

Target groups

Research

Product Category

Monograph
K. Bertels, TU Delft, The Netherlands (Ed.)

**Hardware/Software Co-design for Heterogeneous Multi-core Platforms**

The hArtes Toolchain

HW/SW Co-Design for Heterogeneous Multi-Core Platforms describes the results and outcome of the FP6 project which focuses on the development of an integrated tool chain targeting a heterogeneous multi core platform comprising of a general purpose processor (ARM or powerPC), a DSP (the diopsis) and an FPGA. The tool chain takes existing source code and proposes transformations and mappings such that legacy code can easily be ported to a modern, multi-core platform. Downloadable software will be provided for simulation purposes.

**Features**
- Book addresses a big challenge in the ES industry which is to port applications to multi-core platforms
- Detailed description of operational tool chain
- Simulation examples downloadable from internet

**Contents**
Introduction.- ThArtes Toolchain.- The hArtes Platform.- Audio Array Processing for Telepresence.- In Car Audio.- Extensions of the hArtes Toolchain.- Conclusion: Multi-Core Processor Architectures are Here to Stay.

**Fields of interests**
Circuits and Systems; Processor Architectures

**Target groups**
Professional/practitioner

**Product Category**
Monograph

---

R. Beutler, Südwstrundfunk Frequenz- und Versorgung, Stuttgart, Germany

**The Digital Dividend of Terrestrial Broadcasting**

The Digital Dividend of Terrestrial Broadcasting discusses the Digital Dividend and how to satisfy the growing demand of mobile services like LTE (Long Term Evolution). This book highlights the impact of the Digital Dividend on terrestrial broadcasting and its future in broadcasting. Also this book looks at spectrum management, the history of the Digital Dividend, the digital switch-over from analog to digital in terrestrial broadcasting, the consequences arising from the identification of a spectrum that could be released for other purposes.

**Features**
- Covers the current situation of the Digital Dividend as it pertains to international frequency management
- Describes spectrum management which is available to employ the Digital Dividend for non-broadcasting services
- Presents case studies which show how to reorganize the remaining spectrum in order to meet broadcasting requirements

**Contents**

**Fields of interests**
Communications Engineering, Networks; Signal, Image and Speech Processing; Innovation/Technology Management

**Target groups**
Research

**Product Category**
Monograph

---

M. Biba, University Of Tirana, Albania; F. Xhafa, University of London, UK (Eds)

**Learning Structure and Schemas from Documents**

The rapidly growing volume of available digital documents of various formats and the possibility to access these through Internet-based technologies, have led to the necessity to develop solid methods to properly organize and structure documents in large digital libraries and repositories. Due to the extremely large volumes of documents and to their unstructured form, most of the research efforts in this direction are dedicated to automatically infer structure and schemas that can help to better organize huge collections of documents and data. This book covers the latest advances in structure inference in heterogeneous collections of documents and data.

**Features**
- Presents State-Of-The-Art Methods for Structure Learning and Schema Inference
- Case Studies and Best Practices from Real Large Scale Digital Libraries, Repositories and Corpora
- Written by Leading Experts in the Field

**Contents**

**Fields of interests**
Computational Intelligence; Artificial Intelligence (incl. Robotics)

**Target groups**
Research

**Product Category**
Monograph

---

**Due September 2011**

2011. XVIII, 282 p. 111 illus. Hardcover
- $129.00

**Due January 2012**

2012. X, 203 p. 16 illus. Hardcover
- $129.00
ISBN 978-1-4614-1568-8

**Due August 2011**

2011. 400 p. (Studies in Computational Intelligence, Volume 375) Hardcover
- $179.00
ISBN 978-3-642-22912-1
Mechatronic Systems
Analysis, Design and Implementation

This book deals with the analysis, the design and the implementation of the mechatronic systems. Classical and modern tools are developed for the analysis and the design for such systems. Robust control, H-Infinity and guaranteed cost control theory are also used for analysis and design of mechatronic systems.

Features
- Self-contained book presenting an introduction to mechatronic systems as well as advanced chapters on the analysis, design and implementation of continuous-time systems controlled by micro-controllers
- Provides the tools that engineers working in mechatronics can use.
- Includes various practical examples and case studies how the presented concepts are implemented to obtain a functional mechatronic system.
- Important reference book for a second course in mechatronics curriculum.

Contents
I Mechatronic Systems.- Mechatronic systems.- II Modeling.- Mathematical modeling.- III Transfer function approaches.- Analysis based on transfer function.- Design based on transfer function.- IV State space approaches.- Analysis based on state space.- Design based on state space.- V Implementation.- Design and implementation of mechatronic systems.- VI Advanced control.- Robust control.- Guaranteed cost control problem.- VII Case studies.- Case studies.- A C language tutorial.

Fields of interests
Mechatronics; Control; Electronics and Microelectronics, Instrumentation

Target groups
Research

Product Category
Monograph

Due October 2011
$229.00
ISBN 978-3-642-22323-5

Natural Computing in Computational Finance
Volume 4

This book follows on from Natural Computing in Computational Finance Volumes I, II and III. As in the previous volumes of this series, the book consists of a series of chapters each of which was selected following a rigorous, peer-reviewed, selection process.

Features
- Recent research in Natural Computing in Computational Finance
- Carefully edited book
- Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Product Category
Monograph

Due October 2011
2011. 206 p. (Studies in Computational Intelligence, Volume 380) Hardcover
$129.00
ISBN 978-3-642-23335-7

Intelligent Distributed Computing
V

Proceedings of the 5th International Symposium on Intelligent Distributed Computing - IDC 2011, Delft, the Netherlands - October 2011

Features
- Latest research in Intelligent Distributed Computing
- Edited outcome of the 5th International Symposium on Intelligent Distributed Computing - IDC 2011, Delft, the Netherlands - October 2011
- Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Product Category
Monograph

Due October 2011
2011. 310 p. (Studies in Computational Intelligence, Volume 382) Hardcover
$179.00
ISBN 978-3-642-24012-6
Principles of Human Joint Replacement
Design and Clinical Application

Drs. Buechel, an orthopaedic surgeon, and Pappas, a professor of Mechanical Engineering, are the designers of several successful joint replacement systems. The most well-known of these is the pioneering LCS knee replacement. They have written this book for the users and designers of joint replacements. It is an attempt to convey to the reader the knowledge accumulated by the authors during their thirty-five-year effort on the development of replacement devices for the lower limb for the purpose of aiding the reader in their design and evaluation of joint replacement devices. The early chapters describe the engineering, scientific and medical principles needed for replacement joint evaluation. One must understand the nature and performance of the materials involved and their characteristics in vivo, i.e., the response of the body to implant materials.

Features
- Presents the principles of human joint replacements
- Overviews the design, clinical application and evaluation of replacement devices for the lower limb
- Written by leading experts in the field

Contents
Chapter 2. Failure Modes.
Chapter 3: The Design Process.
Chapter 4. The Ankle.
Chapter 5. The Hip.
Chapter 6. The Knee.

Fields of interest
Biomedical Engineering; Orthopedics; Biomaterials

Target groups
Research

Product Category
Monograph
Domain of Attraction
Analysis and Control via SOS Programming

For nonlinear dynamical systems, which represent the majority of real devices, any study of stability requires the investigation of the domain of attraction of an equilibrium point, i.e. the set of initial conditions from which the trajectory of the system converges to equilibrium. Unfortunately, both estimating and attempting to control the domain of attraction are very difficult problems, because of the complex relationship of this set with the model of the system. Domain of Attraction addresses the estimation and control of the domain of attraction of equilibrium points via SOS programming, i.e. optimization techniques based on the sum of squares of polynomials (SOS) that have been recently developed and that amount to solving convex problems with linear matrix inequality constraints.

Features
- Offers instructors a concise and simple description of the main features of SOS programming which can be used in the classroom
- Gives readers a systematic strategy for the estimation and control of the domain of attraction in dynamical systems
- Allows the reader to tackle stability problems through a thorough knowledge of the domain of attraction of equilibrium points

Contents

Fields of interests
Control; Systems Theory, Control; Nonlinear Dynamics

Target groups
Research

Product Category
Monograph

Variants of Evolutionary Algorithms for Real-World Applications

Evolutionary Algorithms (EAs) are population-based, stochastic search algorithms that mimic natural evolution. Due to their ability to find excellent solutions for conventionally hard and dynamic problems within acceptable time, EAs have attracted interest from many researchers and practitioners in recent years. This book “Variants of Evolutionary Algorithms for Real-World Applications” aims to promote the practitioner’s view on EAs by providing a comprehensive discussion of how EAs can be adapted to the requirements of various applications in the real-world domains.

Features
- Practitioner’s view on Evolutionary Algorithms
- Provides real-world applications of Evolutionary Algorithms
- Written by leading experts in this field

Contents
Section I: Introduction.- Section II: Planning & Scheduling.- Section III: Engineering.- Section IV: Data Collection, Retrieval & Mining.

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Product Category
Monograph

Classical, Semi-classical and Quantum Noise

Contents

Fields of interests
Signal, Image and Speech Processing; Coding and Information Theory; Quantum Physics

Target groups
Research

Product Category
Monograph
**Nonlinear Approaches in Engineering Applications**

Nonlinear Approaches in Engineering Applications focuses on nonlinear phenomena that are common in the engineering field. The nonlinear approaches described in this book provide a sound theoretical base and practical tools to design and analyze engineering systems with high efficiency and accuracy and with less energy and downtime.

**Features**
- Provides a complete introduction to nonlinear behavior of systems and the advantages of nonlinearity as a tool for solving engineering problems
- Includes applications and examples drawn from the electronics, power, environmental, and nanotechnology fields
- Discusses nonlinear approaches in areas such as dynamic systems and control, optimal control and approaches in nonlinear dynamics and acoustics

**Contents**
- Characterizing Nonlinear Dynamic Systems
- Nonlinear Modeling of Squeeze-Film Phenomena
- Nonlinear Mathematical Modeling of Microbeam MEMS
- Complex Motions in a Fermi Oscillator
- Nonlinear Visco-Elastic Materials
- Nonlinear Dynamic Modeling of Nano and Macroscale Systems
- Equilibrium of a Submerged Body with Slack Mooring
- Nonlinear Deployable Mesh Reflectors
- Nonlinearity in an Electromechanical Braiding System
- Nonlinear Dynamics of Incompressible Flow
- Explicit Equation of Motion of Constrained Systems

**Fields of interests**
- Vibration, Dynamical Systems, Control
- Control, Robotics, Mechatronics
- Calculus of Variations and Optimal Control
- Optimization

**Target groups**
- Research

**Product Category**
- Monograph

**Due January 2012**

2012. XXIX, 625 p. 278 illus., 143 in color. Hardcover
- 449.95
ISBN 978-1-4614-1468-1

---

**On Integrating Unmanned Aircraft Systems into the National Airspace System Issues, Challenges, Operational Restrictions, Certification, and Recommendations**

**Contents**
- 1 Introduction
- 1.1 What’s in a name . . .UAV or UAS?
- 1.2 Motivation and Rationale
- 1.3 On Regulating Safety
- 1.4 Book Objectives and Outline
- References
- 2 Aviation History and Unmanned Flight
- 2.1 Precursors of Flight and Unmanned Aircraft
- 2.2 1916–1944
- 2.3 The Machines of the Cold War
- 2.4 Modern Systems
- 2.5 Remarks
- References
- 3 Current Manned Aviation Regulation
- 3.1 Introduction
- 3.2 Airworthiness Certification
- 3.2.1 Type Certificate
- 3.2.2 Standard Certificates
- 3.2.3 Special Certificates
- 3.3 Special Aircraft Categories
- 3.3.1 Vehicles
- 3.3.2 R/C Models
- 3.4 Pilot Certification
- 3.5 FAR Operation Rules
- 3.5.1 Flight Rules
- 3.5.2 Emergency Rules
- 3.5.3 Maintenance Requirements
- 3.6 Airspace Classes
- 3.7 Regulation Development Models
- References
- 4 Unmanned Aircraft Systems Regulation
- 4.1 Introduction
- 4.2 International Civil Aviation Organization
- 4.3 United States
- 4.4.1 EASA
- 4.4.2 EUROCONTROL
- 4.4.3 EUROCAE
- 4.4.4 Other European Union Activities
- 4.4.5 National Activities
- 4.4.6 Canada
- 4.4.7 Japan
- 4.4.8 International UAS Associations
- References

**Fields of interests**
- Robotics and Automation
- Air and Space Law
- Aerospace Technology and Astronautics

**Target groups**
- Professional/practitioner

**Product Category**
- Monograph

---

**Due September 2011**

(Intelligent Systems, Control and Automation: Science and Engineering, Volume 54) Hardcover
- 179.00
S. Das, I. Pan, Jadavpur University, Kolkata, India

Fractional Order Signal Processing
Introductory Concepts and Applications

The book tries to briefly introduce the diverse literatures in the field of fractional order signal processing which is becoming an emerging topic among an interdisciplinary community of researchers. This book is aimed at postgraduate and beginning level research scholars who would like to work in the field of Fractional Order Signal processing (FOSP). The readers should have preliminary knowledge about basic signal processing techniques. Prerequisite knowledge of fractional calculus is not essential and is explicated at relevant places in connection to the appropriate signal processing topics. Basic signal processing techniques like filtering, estimation, system identification, etc. in the light of fractional order calculus are presented along with relevant application areas.

Features
► Brief introduction to the field of fractional order signal processing ► MATLAB tools to simulate the theories are also introduced so that the readers can apply the theoretical concepts right-away and gain practical insight ► Written by experts in the field

Contents

Fields of interests
Appl.Mathematics/Computational Methods of Engineering: Signal/Image and Speech Processing; Computational Science and Engineering

Target groups
Research

Product Category
Monograph

Due September 2011
2011. X, 101 p. 6 illus., 5 in color. (SpringerBriefs in Applied Sciences and Technology) Softcover ► $49.95
ISBN 978-3-642-23116-2

T. Dong, AG Prof. Helbig, Hagen, Germany

Recognizing Variable Environments
The Theory of Cognitive Prism

Normal adults do not have any difficulty in recognizing their homes. But can artificial systems do in the same way as humans? This book collects interdisciplinary evidences and presents an answer from the perspective of computing, namely, the theory of cognitive prism. To recognize an environment, an intelligent system only needs to classify objects, structures them based on the connection relation (not through measuring!), subjectively orders the objects, and compares with the target environment, whose knowledge is similarly structured. The intelligent system works, therefore, like a prism: when a beam of light (a scene) reaches (is perceived) to an optical prism (by an intelligent system), some light (objects) is reflected (are neglected), those passed through (the recognized objects) are distorted (are ordered differently). So comes the term 'cognitive prism!'

Features
► Introduction of a new computational theory for Recognizing Variable Environments ► Description of the Theory of Cognitive Prism ► Written by a leading expert in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Logic

Target groups
Research

Product Category
Monograph

Due October 2011
2011. 160 p. (Studies in Computational Intelligence, Volume 388) Hardcover ► $129.00
ISBN 978-3-642-24057-7

J. J. Ducrée, R. Zengerle, University of Freiburg, Germany

Microfluidics

This book provides a coherent avenue into the rapidly evolving discipline of microfluidics and its multiple facets - inkjet printers, micropumps, analytical chips and many other technologies. The comprehensive first part presents a systematic overview of the basic set of principles underlying microfluidic systems, i.e. it explains the full scope of principles underlying microfluidic technologies in a coherent context. It extracts only these contributions from a variety of disciplines such as fluid dynamics, physics and chemistry which are of relevance to microfluidics. These inputs then are refined and streamlined to make the subsequent connection to related microfluidic technologies transparent to the reader. However, in order not to lose the grip on the application perspective the second part discusses a broad range of microfluidic components and devices which have recently been developed and conducts an explorative roadmap for future microfluidic technologies.

Features
► The book offers a cross-disciplinary view of the field embracing biological, chemical, physical and engineering perspectives. ► A huge number of citations helps to overview the key technology of microfluidics ► The avenue for understanding the fundamentals of these challenging and rapidly developing technologies based on microfluidics

Contents

Fields of interests
Electronics and Microelectronics, Instrumentation; Biomedical Engineering

Target groups
Research

Product Category
Monograph

Due October 2011
2012. 400 p. With online files/update. (Microtechnology and MEMS) Hardcover ► $139.00
ISBN 978-3-540-20188-5
**At Home in Space**

**The Late Seventies into the Eighties**

This volume, like the others, not only focuses upon the individual missions within the decade but also upon key challenges facing human space exploration at specific points within those years - from the problems of simply breathing and eating in space to the challenges of venturing outside in a pressurized spacesuit, the development of newer and better space toilets, and the difficulties of locomotion on the Moon. The Eighties was a time when traveling into space far more commonplace. Examining in detail the American and Soviet fronts, Ben Evans gives a comprehensive analysis of the varying fortunes of the U.S.

**Features**

- Continues the History of Human Space Exploration
- Provides a detailed account of the goals, missions, setbacks, and achievements of those who ventured into space in the Eighties, particularly the Russian and Americans
- Provides complete coverage of the space shuttle program and the Russian Salyut and Mir space stations

**Contents**

- Introduction
- Description and dynamic models of the plant
- Basic control schema
- Basic structures of adaptive control
- Model-based predictive control strategies
- Frequency-domain control and robust optimal control
- Heuristic fuzzy logic control
- Solar radiation, estimation and prediction
- Temperature control of solar parabolic trough plants
- Solar towers and solar tracking
- Heliostat control
- Solar radiation and solar furnaces

**Fields of interest**

- Aerospace Technology and Astronautics
- Popular Science in Astronomy
- Extraterrestrial Physics
- Science in Astronomy
- Extraterrestrial Physics
- Aerospace Technology and Astronautics
- Popular science

**Target groups**

- Popular/general

**Product Category**

- Popular science

---

**Control of Solar Energy Systems**

Control of Solar Energy Systems details the main solar energy systems, problems involved with their control, and how control systems can help in increasing their efficiency. Thermal energy systems are explored in depth, as are photovoltaic generation and other solar energy applications such as solar furnaces and solar refrigeration systems. This second and updated edition of Advanced Control of Solar Plants includes new material on: solar towers and solar tracking; heliostat calibration; characterization and offset correction; solar radiation, estimation, prediction, and computation; and integrated control of solar plants.

**Features**

- Explores exciting new developments in the field of solar energy technology
- Contains worked examples for the benefit of the student
- A second and updated edition of Advanced Control of Solar Plants, with new material on a diverse array of solar technologies

**Contents**

- Introduction
- Description and dynamic models of the plant
- Basic control schema
- Basic structures of adaptive control
- Model-based predictive control strategies
- Frequency-domain control and robust optimal control
- Heuristic fuzzy logic control
- Solar radiation, estimation and prediction
- Temperature control of solar parabolic trough plants
- Solar towers and solar tracking
- Heliostat control
- Solar radiation and solar furnaces

**Fields of interest**

- Control
- Renewable and Green Energy
- Renewable and Green Energy

**Target groups**

- Professional/practitioner

**Product Category**

- Monograph

---

**Nanoindentation**

Nanoindentation, Third Edition gives a detailed account of the most up-to-date research in this important field of materials testing.

**Features**

- Provides insight on major advances in theoretical understanding of nanoindentation from the last six years
- Expands on applications by including material sourced directly from major players in the field
- Presents the theory and practical knowledge required for work with a nanoindentation instrument, while providing detailed accounts of how they work and their limitations

**Contents**

1: Contact Mechanics
2: Nanoindentation Testing
3: Analysis of Nanoindentation Test Data
4: Factors Affecting Nanoindentation Test Data
5: Simulation of Nanoindentation Test Data
6: Scaling Relationships in Nanoindentation
7: Time-Dependent Nanoindentation
8: Nanoindentation of Thin Films and Small Volumes of Materials
9: Other Techniques in Nanoindentation
10: Nanoindentation Test Standards
11: Nanoindentation Instrumentation
12: Applications of Nanoindentation

**Fields of interest**

- Continuum Mechanics and Mechanics of Materials
- Characterization and Evaluation of Materials
- Nanotechnology

**Target groups**

- Professional/practitioner

**Product Category**

- Professional book

---

Due November 2011

2012. XV, 480 p. (Springer Praxis Books / Space Exploration) Softcover
- $39.95

Due September 2011

2nd ed. 2011 2011. XXXIII, 427 p. (Advances in Industrial Control) Hardcover
- approx. $179.00
- ISBN 978-0-85729-915-4

Due October 2011

- $179.00
Recent Advances in Intelligent Engineering Systems

This volume is a collection of 19 chapters on intelligent engineering systems written by respectable experts of the fields. The book consists of three parts. The first part is devoted to the foundational aspects of computational intelligence. It consists of 8 chapters that include studies in genetic algorithms, fuzzy logic connectives, enhanced intelligence in product models, nature-inspired optimization technologies, particle swarm optimization, evolution algorithms, model complexity of neural networks, and fitness landscape analysis. The second part contains contributions to intelligent computation in networks, presented in 5 chapters.

Features
- Recent research in Intelligent Engineering systems
- Presents applications of Computational Intelligence to Engineering Systems
- Written by leading experts in the field

Contents
Part I Foundation of Computational Intelligence.
Part II Intelligent Computation in Networks.
Part III Application of Computational Intelligence.

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Appl. Mathematics/Computational Methods of Engineering

Target groups
Research

Product Category
Monograph

Due October 2011
2011. 451 p. (Studies in Computational Intelligence, Volume 378) Hardcover
► $179.00
ISBN 978-3-642-23228-2

T. I. Fossen, Norwegian University of Science and Technology, Trondheim, Norway; H. Nijmeijer, Eindhoven University of Technology, Eindhoven, The Netherlands (Eds)

Parametric Resonance in Dynamical Systems

Contents
An Introduction to Parametric Resonance.
Part I Detection and Estimation of Parametric Resonance.
Part II Parametric Roll: Trimaran Vessels and Parametric Roll.
Part III Control of Parametric Resonance in Ships.
Part IV Control of Parametric Resonance in Mechanical Systems.

Fields of interests
Vibration, Dynamical Systems, Control; Systems Theory, Control; Control

Target groups
Research

Product Category
Monograph

Due December 2011
2011. XVIII, 340 p. 143 illus., 78 in color. Hardcover
► $179.00

R. Gasch, Institut für Luft- und Raumfahrt, Berlin, Germany; J. Twiele, FH für Technik und Wirtschaft, Berlin, Germany (Eds)

Wind Power Plants
Fundamentals, Design, Construction and Operation

Wind power plants teaches the physical foundations of usage of Wind Power. It includes the areas like Construction of Wind Power Plants, Design, Development of Production Series, Control, and discusses the dynamic forces acting on the systems as well as the power conversion and its connection to the distribution system. The book is written for graduate students, practitioners and inquisitive readers of any kind. It is based on lectures held at several universities. Its German version it already is the standard text book for courses on Wind Energy Engineering but serves also as reference for practising engineers.

Features
- 2nd English edition of the standard German textbook in its 5th edition
- Up to date: Includes the latest developments
- Teaches all physical basics of wind-power usage
- Reference for practising engineers

Contents
Questionnaire.
Introduction.
- Historical development of windmills.
- Design and components.
- The wind blade geometry.
- Calculation of performance characteristics.
- Scaling wind turbines and rules of similarity.
- Structural dynamics.
- Guidelines and analysis procedures.
- Wind pump systems.
- Electricity generation.
- Supervisory and control systems.
- Concepts of electricity generation.
- Operation at the interconnected grid.
- Planning, operation and economics.
- Offshore windfarms.

Fields of interests
Renewable and Green Energy; Offshore Engineering; Mechanical Engineering

Target groups
Professional/practitioner

Product Category
Graduate/Advanced undergraduate textbook

Due October 2011
2011. 551 p. 434 illus., 1 in color. Softcover
► $99.00
ISBN 978-3-642-22937-4

J. Fodor, Óbuda University, Budapest, Hungary; R. Klempous, Wroclaw University of Technology, Poland; C. P. Suárez Araujo, Universidad de Las Palmas de Gran Canaria, Spain (Eds)
Propagation Engineering in Wireless Communications

Propagation Engineering in Wireless Communications covers the basic principles needed for understanding of radiowaves propagation for common frequency bands used in radio-communications. This book includes descriptions of new achievements and new developments in propagation models for wireless communication. The book is intended to bridge the gap between the theoretical calculations and approaches to the applied procedures needed for radio links design in a proper manner.

Features
► Examines new advancement and achievements in propagation modeling in wireless communications
► Each chapter comes with exercise problems for practicing professionals to gain a deeper understanding
► Describes the formulation of prediction models and planning tools for radio network design

Contents
Ch. 1 Introduction to Radiowaves.- Ch. 2 Basic Principles in Radiowave Propagation.- Ch. 3 Radiowave Propagation in Troposphere.- Ch. 4 Radiowave Propagation in Ionosphere.- Ch. 5 Propagation in 3 KHz to 30 MHz Band.- Ch. 6 Terrestrial Mobile Radio Propagation.- Ch. 7 Line of Sight Propagation.- Ch. 8 Selected Topics in Radiowave Propagation.

Fields of interests
Communications Engineering, Networks; Computer Systems Organization and Communication Networks; Microwaves, RF and Optical Engineering

Target groups
Research

Product Category
Monograph

Advances in Robotics and Virtual Reality

A beyond human knowledge and reach, robotics is strongly involved in tackling challenges of new emerging multidisciplinary fields. Together with humans, robots are busy exploring and working on the new generation of ideas and problems whose solution is otherwise impossible to find. The future is near when robots will sense, smell and touch people and their lives. Behind this practical aspect of human-robotics, there is a half a century spanned robotics research, which transformed robotics into a modern science. The Advances in Robotics and Virtual Reality is a compilation of emerging application areas of robotics. The book covers robotics role in medicine, space exploration and also explains the role of virtual reality as a non-destructive test bed which constitutes a premise of further advances towards new challenges in robotics.

Features
► Current advances in robotics for manipulation and virtual reality
► Exchanges and stimulates research ideas to realize advancements in robotic and virtual reality systems
► Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Robotics and Automation

Target groups
Research

Product Category
Monograph

Digital Signal Processing for In-Vehicle Systems and Safety

1: Towards Multi-modal Driver’s Stress Detection.
2: Driver Emotion and Profiling from Speech.
3: Driving Status Identification from Driving Behavior Signals.
4: Multi-layer Modeling of Driving Behavior based on Hierarchical Mode Segmentation.

Part B: In-Vehicle Interactive/Speech Systems.
5: Evaluation of In-Car Communication Systems.
9: In-Vehicle Speech and Noise Corpora.
11: Feature Compensation Employing Variational Model Composition for Robust Speech Recognition in In-Vehicle Environment.
12: Dual-Channel Speech Enhancement using a Filterbank for Hands-free Communication.

14: Generating Reference Views of Traffic Intersection for Safe Driving Assistance.
15: Computer Vision Systems for “Context Aware” Active Vehicle Safety and Driver Assistance.

Fields of interests
Signal, Image and Speech Processing; Automotive Engineering; Control

Due October 2011
2011. XVI, 530 p. 168 illus., 110 in color. Hardcover
► $229.00
ISBN 978-1-4419-9606-0

Due October 2011
► $179.00
ISBN 978-3-642-23362-3

Due January 2012
2012. XVII, 269 p. 161 illus., 110 in color. Hardcover
► $179.00
ISBN 978-1-4419-9606-0
**Next Generation Intelligent Environments**

**Ambient Adaptive Systems**

Intelligent environments represent an emerging topic in research. Next Generation Intelligent Environments: Ambient Adaptive Systems will cover all key topics in the field of intelligent ambient adaptive systems. It focuses on the results worked out within the framework of the ATRACO (Adaptive and TRusted Ambient eCOlogies) project.

**Contents**

3. Ontology-based Knowledge Management in NGAIEn.
4. Artefact Adaptation in Ambient Intelligent Environments.
5. User Interaction Adaptation within Ambient Environments.
6. Artificial Intelligence Planning for Ambient Environments.
7. Privacy and Trust in Ambient Intelligence Environments.
8. From Scenarios to „Free-Play”: Evaluating the User’s Experience of Ambient Technologies in the Home.

**Features**

- Presents a unique and original collection of chapters on intelligent ambient adaptive systems
- Highlights broad coverage of the field of intelligent environments research and evaluation, as well as introduces topics such as adaptation within activity spheres
- Includes developed prototypes as examples for readers

**Fields of interests**

Signal, Image and Speech Processing; Communications Engineering, Networks; User Interfaces and Human Computer Interaction

**Target groups**

Research

**Product Category**

Monograph

---

**Human – Computer Systems Interaction: Backgrounds and Applications 2**

**Part 1**

The main contemporary human-system interaction (H-SI) problems consist in design and/or improvement of the tools for effective exchange of information between individual humans or human groups and technical systems created for humans aiding in reaching their vital goals. This book is a second issue in a series devoted to the novel in H-SI results and contributions reached for the last years by many research groups in European and extra-European countries.

**Features**

- Latest research on Human – Computer Systems Interaction
- Various examples of the Human-System Interaction problems and solution methods are presented
- Written by a leading expert in the field

**Contents**

Part I Decision Supporting Systems.
Part II Distributed Knowledgebases and WEB Systems.
Part III Impaired Persons Aiding Systems.
Part IV Environment Monitoring and Robotic Systems.
Part V Diagnostic Systems.
Part VI Educational Systems.
Part VII General Problems.

**Features**

- Latest research on Human – Computer Systems Interaction
- Various examples of the Human-System Interaction problems and solution methods are presented
- Written by a leading expert in the field

**Contents**

Part I Decision Supporting Systems.
Part II Distributed Knowledgebases and WEB Systems.
Part III Impaired Persons Aiding Systems.
Part IV Environment Monitoring and Robotic Systems.
Part V Diagnostic Systems.
Part VI Educational Systems.
Part VII General Problems.

**Fields of interests**

Computational Intelligence; Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction

**Target groups**

Research

**Product Category**

Monograph

---

**Due October 2011**

2011. XVI, 276 p. 90 illus. Hardcover
- $129.00
ISBN 978-1-4614-1298-4

**Available**

- approx. $239.00
ISBN 978-3-642-23186-5

- approx. $239.00
ISBN 978-3-642-23171-1
D. E. Holmes, University of California, Santa Barbara, CA, USA; L. C. Jain, University of South Australia, Adelaide, SA, Australia (Eds)

Data Mining: Foundations and Intelligent Paradigms
Volume 1: Clustering, Association and Classification

There are many invaluable books available on data mining theory and applications.

Features
► Latest research in data mining using intelligent paradigms and their applications ► State-of-the-Art title ► Written by leading experts in this field

Contents
Introductory Chapter.- Clustering Analysis in Large Graphs with Rich Attributes.- Temporal Data Mining: Similarity-Profiled Association Pattern.- Bayesian Networks with Imprecise Probabilities: Theory and Application to Classification.- Hierarchical Clustering for Finding Symmetries and Other Patterns in Massive, High Dimensional Datasets.- Randomized Algorithm of Finding the True Number of Clusters Based on Chebychev Polynomial Approximation.- Bregman Bubble Clustering: A Robust Framework for Mining Dense Clusters.- DepMiner: A method and a system for the extraction of significant dependencies.- Integration of Dataset Scans in Processing Sets of Frequent Itemset Queries.- Text Clustering with Named Entities: A Model, Experimentation and Realization.- Regional Association Rule Mining and Scoping from Spatial Data.- Learning from Imbalanced Data: Evaluation Matters.

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Product Category
Monograph

D. E. Holmes, University of California, Santa Barbara, CA, USA; L. C. Jain, University of South Australia, Adelaide, SA, Australia (Eds)

Data Mining: Foundations and Intelligent Paradigms
Volume 3: Medical, Health, Social, Biological and other Applications

There are many invaluable books available on data mining theory and applications. However, in compiling a volume titled "DATA MINING: Foundations and Intelligent Paradigms: Volume 3: Medical, Health, Social, Biological and other Applications" we wish to introduce some of the latest developments to a broad audience of both specialists and non-specialists in this field.

Features
► Contains the latest research on data mining research and its applications to financial modelling ► The state of the art of data mining for financial modelling is presented in a handbook style ► Written by leading experts in this field

Contents
From the content: Advances in Data Mining Applications.- Temporal Pattern Mining for Medical Applications.- BioKeySpotter: an Unsupervised Keyphrase Extraction Technique in the Biomedical Full-text Collection.- Mining Health Claims data for assessing patient risk.- Mining biological networks for similar patterns.- Estimation of Distribution Algorithms in Gene Expression Data Analysis.

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Operation Research/Decision Theory

Target groups
Research

Product Category
Monograph

L. Huang, Auckland University of Technology, New Zealand

A Concise Introduction to Mechanics of Rigid Bodies
Multidisciplinary Engineering

Statics and Dynamics of Rigid Bodies presents an interdisciplinary approach to mechanical engineering through a close evaluation of the statics and dynamics of rigid bodies, presenting a concise introduction to both. This volume bridges the gap of interdisciplinary published texts linking fields like mechatronics and robotics with multi-body dynamics in order to provide readers with a clear path to understanding numerous sub-fields of mechanical engineering. Three-dimensional kinematics, rigid bodies in planar spaces and numerous vector and matrix operations are presented in order to provide a comprehensive understanding of mechanics through dynamics and rigid bodies.

Features
► Practical mechanical engineering examples are applied to the text, offering a link between theoretical fundamentals and every-day application ► Offers simplified mathematical equations to clearly present essential theories in robotics and mechanics ► Presents statics and dynamics together in one comprehensive volume, giving readers a more balanced understanding of their relationship

Contents

Fields of interests
Mechanical Engineering; Mechatronics; Robotics and Automation

Target groups
Research

Product Category
Graduate/Advanced undergraduate textbook
Introduction to Network Simulator NS2

Features
- Provides a guideline on how to set-up, use, and extend NS2.
- Presents a layered approach to introduce communication networking protocols and their simulation using NS2.
- Includes a large number of examples (e.g., codes) on simulation using NS2.
- Contains supplementary material (e.g., simulation exercises) for classes and laboratories on telecommunications networking.

Contents
Simulation of Computer Networks.
- Introduction to Network Simulator 2 (NS2).
- Linkage Between O’Ted and C++ in NS2.
- Implementation of Discrete-Event Simulation in NS2.
- Network Objects: Creation, Configuration and Packet Forwarding.
- Nodes as Routers or Computer Hosts.
- Link and Buffer Management.
- Packets, Packet Headers and Header Format.
- An Overview and User Datagram Protocol Implementation.
- Transmission Control Protocol (TCP).
- Application: User Demand Indicator.
- Wireless Mobile Ad Hoc Networks.
- Developing New Modules for NS2.
- Post Simulation Processing: Debugging, Tracing and Result Compilation.
- Related Helper Classes.
- Appendix A: Programming Essentials.
- Appendix B: A Review of the Polymorphism Concept in OOP.
- Appendix C: BSD Link List and Bit Level Functions.

Fields of interests
- Communications Engineering, Networks, Control, Robotics, Mechatronics, Information Systems, and Communication Service.

Target groups
- Professional/practitioner

Product Category
- Monograph

Due November 2011

2011. XXIX, 421 p. 90 illus., 58 in color. (Lecture Notes in Control and Information Sciences, Volume 417)
Hardcover
- approx. $129.00

Harnessing VLSI System Design with EDA Tools

With the proliferation of VHDL, the reference material also grew in the same order. Today there is good amount of scholarly literature including many books describing various aspects of VHDL. However, an in-depth review of these books reveals a different story. Many of them have emerged simply as an improved version of the manual. While some of them deal with the system design issues, they lack appropriate exemplifying to illustrate the concepts. Others give large number of examples, but lack the VLSI system design issues. In nutshell, the fact which gone unnoticed by most of the books, is the growth of the VLSI is not merely due to the language itself, but more due to the development of a large number of third party tools useful from the FPGA or semicustom ASIC realisation point of view.

Features
- Harnesses VHDL Programming with EDA Tools covers various issues related to VHDL synergized with the EDA tools.
- Provides examples and practical tips for industry problems.
- Discusses the various issues regarding test bench development.
- No other book has so far covered the same.

Contents
- Introduction.
- Development of FPGA Based Network on Chip for Circumventing Spam.
- Analog Front End and FPGA Based Soft IP Core for ECG Logger.
- FPGA Based Multifunction Interface for Embedded Applications.
- FPGA Based High Resolution Time to Digital Converter.

Fields of interests
- Circuits and Systems; Special Purpose and Application-Based Systems.

Target groups
- Research

Product Category
- Monograph

Due September 2011

2012. XXIII, 146 p. 67 illus. Hardcover
- approx. $129.00
ISBN 978-94-007-1863-0
Theory of Arched Structures: Strength, Stability, Vibration

Theory of Arched Structures: Strength, Stability, Vibration presents detailed procedures for analytical analysis of the strength, stability, and vibration of arches of different types, using exact analytical methods of classical structural analysis. The material discussed is divided into four parts.

Contents

Fields of interests
Civil Engineering; Structural Mechanics; Geoengineering; Foundations, Hydraulics

Target groups
Research

Product Category
Monograph

Semantic Methods for Knowledge Management and Communication

The book consists of 31 chapters in which the authors deal with multiple aspects of modeling, utilization and implementation of semantic methods for knowledge management and communication in the context of human centered computing. It is assumed that the modern human centered computing requires the intensive application of these methods as well as effective integration with multiple techniques of computational collective intelligence. The book is organized in four parts devoted to the presentation of utilization of knowledge processing in agent and multiagent systems, application of computational collective intelligence to knowledge management, models for collectives of intelligent agents, and models and environments tailored directly to human-centered computing.

Features
- Latest research on Semantic Methods - Presents Applications of Semantic Methods for Knowledge Management and Communication - Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Product Category
Monograph

Due December 2011
$179.00
Software Engineering Research, Management and Applications 2011

The purpose of the 9th International Conference on Software Engineering Research, Management and Applications (SERA 2011) held on August 10-12, 2011 in Towson University, Maryland was to bring together scientists, engineers, computer users, and students to share their experiences and exchange new ideas and research results about all aspects (theory, applications and tools) of computer and information sciences, and to discuss the practical challenges encountered along the way and the solutions adopted to solve them.

Features
- Recent research in Software Engineering, Management and Applications
- Edited outcome of the ACIS SERA 2011 conference held August 10-12, 2011 in Towson University, Maryland
- Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Software Engineering

Target groups
Research

Product Category
Monograph

Due October 2011

2011. 200 p. (Studies in Computational Intelligence, Volume 377) Hardcover
➤ $129.00
ISBN 978-3-642-23201-5

VLSI for Wireless Communication

B. Leung, University of Waterloo, ON, Canada

VLSI for Wireless Communication, Second Edition, an advanced level text book, takes a system approach starting with an overview of the most up to date wireless systems and the transceiver architecture available today. Wireless standards are first introduced (updated to include the most recent 3G/4G standards in the second edition), and translates from a wireless standard to the implementation of a transceiver. This system approach is particularly important as the level of integration in VLSI increases and coupling between system and component design becomes more intimate. VLSI for Wireless Communication, Second Edition, illustrates designs with full design examples.

Features
- Includes an overview of the most up to date wireless systems and the transceiver architecture available today, including wireless standards
- Design examples and exercises are included in each chapter to enhance the students' understanding, including practicing engineers
- A complete solutions manual for instructors is available on-line

Contents

Fields of interests
Communications Engineering, Networks; Electrical Engineering; Signal, Image and Speech Processing

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

Due October 2011

➤ $89.95
ISBN 978-1-4614-0985-4

Speaker Authentication

Q. Li, Li Creative Technologies, Florham Park, NJ, USA

Speaker Authentication

This book focuses on use of voice as a biometric measure for personal authentication. In particular, „Speaker Recognition“ covers two approaches in speaker authentication: speaker verification (SV) and verbal information verification (VIV). The SV approach attempts to verify a speaker’s identity based on his/her voice characteristics while the VIV approach validates a speaker’s identity through verification of the content of his/her utterance(s). SV and VIV can be combined for new applications.

Features
- First book in speaker recognition/authentication area
- Provides a step by step introduction to the current state of the speaker authentication technology
- Advanced and useful topics and algorithms are selected with real design examples and evaluation results

Contents
What is speaker authentication? - Statistical approaches to detection, identification and verification - Representations of speaker characteristics for authentication purposes - Robust endpoint detection and feature extraction - Statistical models for dynamic pattern recognition - Fundamental approaches to speaker verification and identification - Discriminative training - Relation among discriminative training objectives - Fast discriminative training algorithms for real application - Fast and detection-based decoding for a large group of users - Verbal information verification - Sequential speaker authentication - Sequential multi-modality biometric tests - Microphone array for speaker authentication and speech recognition

Fields of interests
Signal, Image and Speech Processing; Pattern Recognition; Biomedical Engineering

Target groups
Research

Product Category
Monograph

Due October 2011

2012. 280 p. (Signals and Communication Technology) Hardcover
➤ approx. $129.00
ISBN 978-3-642-23730-0
Recently published titles in the field of engineering:

**Recent Advances in System Reliability: Signatures, Multi-state Systems and Statistical Inference**

*Editors: A. Lisnianski, The Israel Electric Corporation Ltd., Haifa, Israel; I. Frenkel, Shamoon College of Engineering, Beer Sheva, Israel (Eds)*

**Contents**

1. Signature Representation and Preservation
2. Results for Engineered Systems and Applications to Statistical Inference
4. Multidimensional Spectra of Multistate Systems with Binary Components
5. Applications of Samaniego Signatures to Bounds on Variances of Coherent and Mixed System Lifetimes
8. Importance Analysis of a Multi-State System Based on Multiple-Value Logic Methods
9. Optimal Replacement and Protection Strategy for Parallel Systems
11. Determination of Vital Activities in Reliability Program for Multi-state System by Using House of Reliability
12. Multi-State Availability Modeling in Practice
13. Reliability Analysis of Redundant Systems with Unimodal Hazard Rate Functions

**Fields of interest**
- Quality Control
- Reliability
- Safety and Risk
- Probability Theory
- Stochastic Processes
- Production/Logistics
- Supply Chain Management

**Target groups**
Research

**Product Category**
Monograph

**Due October 2011**

2011. XIII, 339 p. 65 illus., 1 in color. (Springer Series in Reliability Engineering) Hardcover

|$179.00

**Industrial Process Identification and Control Design**

*Editors: T. Liu, Hong Kong University of Science and Technology, Kowloon, Hong Kong; F. Gao, Hong Kong University of Science and Technology, Kowloon, Hong Kong*

**Step-test and Relay-experiment-based Methods**

Industrial Process Identification and Control Design is devoted to advanced identification and control methods for the operation of continuous-time processes both with and without time delay, in industrial and chemical engineering practice.

**Features**
- Illustrative examples and practical applications are elaborated using an easy-to-follow style for the proposed identification and control methods
- A valuable reference text for control engineers in the process industries
- Written by experts

**Contents**

Part I: Process Identification
- Introduction
- Step Response Identification of Stable Processes
- Step Response Identification of Integrating Processes
- Relay Feedback Identification of Stable Processes
- Relay Feedback Identification of Integrating Processes
- Relay Feedback Identification of Unstable Processes
- Part II: Control System Design
- Control of Single-input-single-output (SISO) Processes
- Two-degree-of-freedom (2DOF) Control of Single-input-single-output (SISO) Processes
- Cascade Control System
- Decoupling Control of Multiple-input-multiple-output (MIMO) Processes
- Multiloop/Decentralized Control Systems
- Batch Process Control
- Conclusions and Future Developments

**Fields of interest**
- Control
- Industrial Chemistry/Chemical Engineering
- Industrial and Production Engineering

**Target groups**
Research

**Product Category**
Monograph

**Due October 2011**

2012. XV, 641 p. 164 illus., 129 in color. (Advances in Industrial Control) Hardcover

|$229.00

**Low Rank Approximation**

*Editors: I. Markovsky, University of Southampton, UK*

**Algorithms, Implementation, Applications**

Data Approximation by Low-complexity Models details the theory, algorithms, and applications of structured low-rank approximation. Efficient local optimization methods and effective suboptimal convex relaxations for Toeplitz, Hankel, and Sylvester structured problems are presented. Much of the text is devoted to describing the applications of the theory including: system and control theory; signal processing; computer algebra for approximate factorization and common divisor computation; computer vision for image deblurring and segmentation; machine learning for information retrieval and clustering; bioinformatics for microarray data analysis; chemometrics for multivariate calibration; and psychometrics for factor analysis.

**Features**
- Provides the reader with an analysis tool which is more generally applicable than the commonly-used total least squares
- Shows the reader solutions to the problem of data modelling by linear systems from a sweeping field of applications
- Supplementary electronic and class-based materials will aid tutors in presenting this material to their students

**Contents**

Introduction
- From Data to Models
- Applications in System and Control Theory
- Applications in Signal Processing
- Applications in Computer Algebra
- Applications in Machine Learning
- Subspace-type Algorithms
- Algorithms Based on Local Optimization
- Data Smoothing and Filtering
- Recursive Algorithms

**Fields of interest**
- Control
- Robotics
- Mechatronics
- Systems Theory
- Control
- Symbolic and Algebraic Manipulation

**Target groups**
Research

**Product Category**
Monograph

**Due November 2011**

2012. X, 254 p. 25 illus., 15 in color. (Communications and Control Engineering) Hardcover

|$109.00

---

**82**

---

---
Memetic Algorithms (MAs) are computational intelligence structures combining multiple and various operators in order to address optimization problems. The combination and interaction amongst operators evolves and promotes the diffusion of the most successful units and generates an algorithmic behavior which can handle complex objective functions and hard fitness landscapes. “Handbook of Memetic Algorithms” organizes, in a structured way, all the most important results in the field of MAs since their earliest definition until now. A broad review including various algorithmic solutions as well as successful applications is included in this book. Each class of optimization problems, such as constrained optimization, multi-objective optimization, continuous vs combinatorial problems, uncertainties, are analysed separately and, for each problem, memetic recipes for tackling the difficulties are given with some successful examples. Although this book contains chapters written by multiple authors, a great attention has been given by the editors to make it a compact and smooth work which covers all the main areas of computational intelligence optimization.

**Features**
- Compact well structured handbook of memetic algorithms
- State-of-the-Art book
- Written by leading experts in this field

**Contents**

**Fields of interests**
Appl.Mathematics/Computational Methods of Engineering; Artificial Intelligence (incl. Robotics)

**Target groups**
Research

**Product Category**
Monograph

---

Supercavitation
Advances and Perspectives

This collection is dedicated to the 70th jubilee of Yu. N. Savchenko, and presents experimental, theoretical, and numerical investigations written by an international group of well-known authors.

**Features**
- Solve very important problems of the high-speed hydrodynamics
- Presents experimental, theoretical, and numerical investigations written by an international group of well-known authors

**Contents**
Mathematical theory and numerical simulation of bubbly cavitating nozzle flows.- Controlled supercavitation formed by a ring type wing.- Supercavitation as the effective tool for water drag reduction.- Water entry of thin hydrofoils.- Hydrodynamic performance of 2-D shock-free supercavitating hydrofoils with a spoiler on the trailing edge.- Investigation of parameters of artificial cavity at closure on a cylindrical hull.- Two-dimensional theory of cavitation flows under the ship bottom.- Hydrodynamic characteristics of disk with a duct in supercavitation flow.- Gas flows within artificial cavities.- Generalized automodel problem of impingement of liquid wedge and solid wedge.- Dynamics of supercavitating bodies.- Experimental investigation of inertial motion of supercavitation models.

**Fields of interests**
Engineering Fluid Dynamics; Fluid- and Aerodynamics; Computational Mathematics and Numerical Analysis

**Target groups**
Research

**Product Category**
Monograph

---

Design Technology for Heterogeneous Embedded Systems

**Contents**

**Fields of interests**
Circuits and Systems; Processor Architectures

**Target groups**
Research

**Product Category**
Monograph
F. Nicolleau, University of Sheffield, UK; C. Cambon, Ecole Centrale de Lyon, France; J. Redondo, Universidad Politecnica de Catalunya, Barcelona, Spain; J. Vassilicos, Imperial College, London, UK; M. Reeks, The University of Newcastle, UK; A. Nowakowski, University of Sheffield, UK (Eds)

**New Approaches in Modeling Multiphase Flows and Dispersion in Turbulence, Fractal Methods and Synthetic Turbulence**

**Contents**

**Fields of interest**
Engineering Fluid Dynamics; Fluid- and Aerodynamics; Numerical and Computational Physics

**Target groups**
Research

**Product Category**
Monograph

---

C. Norberg, Swedish Institute of Space Physics, Kiruna, Sweden; H. Steimle, SC Aerospace Consult, Troisdorf, Germany (Eds)

**Human Spaceflight and Exploration**
A European Perspective in a Global Environment

The book presents a unique overview of activities in human spaceflight and exploration and a discussion of future development possibilities. It provides an introduction for the general public interested in space and would also be suitable for students at university. The book includes the basics of the space environment and the effects of space travel on the human body. It leads through the challenges of designing life support systems for spacecraft as well as space suits to protect astronauts during extravehicular activities.

**Features**
- Uniquely covers the technical and political decision-making processes involved in projects since 1970
- Presents a historical overview of human spaceflight
- Provides unique insight into what it means to be an astronaut
- Shows the selection strategy for making a spaceflight
- Presents a historical overview of human spaceflight
- Provides unique insight into what it means to be an astronaut
- Shows the selection strategy for making a spaceflight

**Fields of interest**
Aerospace Technology and Astronautics

**Target groups**
Research

**Product Category**
Professional book

---

M. Nosonovsky, University of Wisconsin, Milwaukee, WI, USA; B. Bhushan, Ohio State University, Columbus, OH, USA (Eds)

**Green Tribology**
Biomimetics, Energy Conservation and Sustainability

**Features**
- Presents green tribology
- Important for lubrication engineering
- Gives information on biomimetic surfaces, self-cleaning surfaces, surface-healing friction and surface modification and friction in living nature
- Important chapter on the Lotus effect and surface microstructuring
- Practical information on antifouling surfaces and tribology of wind power turbines

**Contents**

**Fields of interest**
Renewable and Green Energy; Tribology, Corrosion and Coatings; Surface and Interface Science, Thin Films

**Target groups**
Graduate

**Product Category**
Monograph

---

Due December 2011

2012. XVI, 160 p. 80 illus. (ERCOFTAC Series, Volume 18) Hardcover
- $129.00
ISBN 978-94-007-2505-8

Due November 2011

- approx. $179.00
ISBN 978-3-642-23724-9

Due April 2012

2012. 400 p. 150 illus. (Green Energy and Technology) Hardcover
- approx. $169.00
ISBN 978-3-642-23680-8
Computational Intelligence Paradigms in Advanced Pattern Classification

This monograph presents selected areas of application of pattern recognition and classification approaches including handwriting recognition, medical image analysis and interpretation, development of cognitive systems for image computer understanding, moving object detection, advanced image filtration and intelligent multi-object labelling and classification.

Features
- Presents theoretical foundations as well as recent advances in pattern classification using computational intelligence paradigms
- Includes a number of useful practical case studies
- Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Pattern Recognition

Target groups
Research

Product Category
Monograph

Ensembles in Machine Learning Applications

This book contains the extended papers presented at the 3rd Workshop on Supervised and Unsupervised Ensemble Methods and their Applications (SUEMA) that was held in conjunction with the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD 2010, Barcelona, Catalonia, Spain). As its two predecessors, its main theme was ensembles of supervised and unsupervised algorithms – advanced machine learning and data mining technique.

Features
- Recent research on Ensembles in Machine Learning Applications
- Edited outcome of the 3rd Workshop on Supervised and Unsupervised Ensemble Methods and Their Applications held in Barcelona on September 20, 2010
- Written by leading experts in the field

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Product Category
Monograph

Due October 2011

2011. 200 p. (Studies in Computational Intelligence, Volume 386) Hardcover
- $129.00
ISBN 978-3-642-24048-5

Due September 2011

2011. XX, 252 p. 78 illus., 28 in color. (Studies in Computational Intelligence, Volume 373) Hardcover
- $129.00
ISBN 978-3-642-22909-1

Due September 2011

2011. IX, 159 p. 67 illus., 5 in color. (Signals and Communication Technology) Hardcover
- $129.00
ISBN 978-3-642-21054-9
J. H. Pang, Nanyang Technological University, Singapore

Lead Free Solder
Mechanics and Reliability

Lead-free solders are used extensively as interconnection materials in electronic assemblies and play a critical role in the global semiconductor packaging and electronics manufacturing industry. Electronic products such as smart phones, notebooks and high performance computers rely on lead-free solder joints to connect IC chip components to printed circuit boards. Lead Free Solder: Mechanics and Reliability provides in-depth design knowledge on lead-free solder elastic-plastic-creep and strain-rate dependent deformation behavior and its application in failure assessment of solder joint reliability.

Features
► Discusses lead-free solder materials industry their selection and how they are currently used industry wide
► Focuses on mechanics of materials theory in elastic, plastic, creep, fatigue and fracture assessments
► Presents materials testing and characterization at the macro, micro, and nano scale
► Details how to use reliability test and analysis for thermal cycling, cyclic bending and drop impact

Contents

Fields of interests
Electronics and Microelectronics, Instrumentation; Optical and Electronic Materials; Continuum Mechanics and Mechanics of Materials

Target groups
Professional/practitioner

Product Category
Monograph

Due November 2011

► $129.00
ISBN 978-1-4614-0462-0

G. J. Parra-Montesinos, University of Michigan, Ann Arbor, MI, USA; H. W. Reinhardt, University of Stuttgart, Germany
A. E. Naaman, The University of Michigan, Ann Arbor, MI, USA (Ed.)

High Performance Fiber
Reinforced Cement Composites

6 HPF RCC 6

Contents
Dynamic logic (DL) recently had a highest impact on the development in several areas of modeling and algorithm design. The book discusses classical algorithms used for 30 to 50 years (where improvements are often measured by signal-to-clutter ratio), and also new areas, which did not previously exist. These achievements were recognized by National and International awards. Emerging areas include cognitive, emotional, intelligent systems, data mining, modeling of the mind, higher cognitive functions, evolution of languages and other. Classical areas include detection, recognition, tracking, fusion, prediction, inverse scattering, and financial prediction. All these classical areas are extended to using mixture models, which previously was considered unsolvable in most cases. Recent neuroimaging experiments proved that the brain-mind actually uses DL.

Features
- Presents a new Dynamic connection of fuzzy and crisp logic
- Written by leading experts in this field
- State-of-the-Art book

Contents

Fields of interests
Computational Intelligence; Artificial Intelligence (incl. Robotics); Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Product Category
Monograph

Due August 2011
2011. X, 198 p. 27 Illus. 18 in color. (Studies in Computational Intelligence, Volume 371) Hardcover
$129.00
ISBN 978-3-642-22829-2

智能计算机图形学

2011年，在计算机图形学中，智能技术的发展比其他研究领域更为前沿。然而，在过去的几十年里，智能计算机图形学技术的使用不断增加，更多的新研究和技术被引入了这个领域。本书的目标是展示近几十年来Intelligent Computer Graphics社区的发展，以及对我们未来的研究方向的展望。

特点
- 包含了最新的智能图形学领域的研究成果
- 由在这一领域领先的研究专家编著

内容
检测视觉收敛：适用于照明环境的视觉收敛、3D场景中的自然语言生成、对象识别、基于知识的分析和合成虚拟3D场景、校准、路径规划等。

领域
- 计算智能
- 自然语言生成技术
- 对象

目标人群
研究

产品类别
独著

智能车辆动力学与控制

智能车辆动力学与控制提供了一个全面的车辆控制系统和模型的开发，以及在这些车辆控制系统的应用。该控制系统的应用包括巡航控制、自动驾驶、ABS、自动车道保持、自动化高速公路、稳定性控制、发动机控制、被动、主动和半主动悬架、轮胎与路面摩擦力的估算、翻滚预防和混合动力电车。

特点
- 覆盖了车辆动力学和翻滚预防
- 强调了在混合动力车辆上的新进展
- 回顾了控制系统的设计和管理算法
- 提供了参考模型，使研究人员可以利用这些模型进行仿真和研究

内容
1. 引言
2. 横向车辆动力学
3. 侧向车辆控制
4. 长横向车辆动力学
5. 电子稳定性控制
6. 稳定性控制
7. 长横向车辆动力学
8. 学生车辆动力学
9. 实际车辆动力学

领域
- 汽车工程
- 汽车控制器
- 车辆控制
- 自动化车道保持
- 电子稳定性控制
- 空气动力学

目标人群
研究

产品类别
独著

德克萨斯大学达拉斯分校，美国

2011年。299 p. (Studies in Computational Intelligence, Volume 374) Hardcover
$129.00
ISBN 978-3-642-22906-0

88
Advanced Control of Turbofan Engines

Contents

Fields of interests
Aerospace Technology and Astronautics; Control, Robotics, Mechatronics; Control

Target groups
Research

Product Category
Professional book

Fractal Analysis in Machining

The concept of fractals is often considered to describe surface roughness. Fractals retain all the structural information and are characterized by a single descriptor, the fractal dimension, D. Fractal dimension is an intrinsic property of the surface and independent of the filter processing of measuring instrument as well as the sampling length scale. This book cover fractal analysis of surface roughness in different machining processes such as Computer Numeric Control (CNC) end milling, CNC turning, electrical discharge machining and cylindrical grinding. The content here presented adds a significant contribution to the existing literature, with interest to both industrial and academic public.

Contents
Fundamental Consideration.- Fractal Analysis in CNC End Milling.- Fractal Analysis in CNC Turning.- Fractal Analysis in Cylindrical Grinding.- Fractal Analysis in EDM.

Fields of interests
Engineering, general; Continuum Mechanics and Mechanics of Materials; Structural Materials

Target groups
Research

Product Category
Monograph
Fault Detection and Flight Data Measurement Demonstrated on Unmanned Air Vehicles using Neural Networks

This book considers two popular topics: fault detection and isolation (FDI) and flight data estimation using flush air data sensing (FADS) systems. Literature surveys, comparison tests, simulations and wind tunnel tests are performed. In both cases, a UAV platform is considered for demonstration purposes. In the first part of the book, FDI is considered for sensor faults where a neural network approach is implemented. FDI is applied both in academia and industry resulting in many publications over the past 50 years or so. However, few publications consider neural networks in comparison to traditional techniques such as observer based, parameter estimations and parity space approaches. The second part of this book focuses on how to estimate flight data (angle of attack, airspeed) using a matrix of pressure sensors and a neural network model.

Data-driven Controller Design The H2 Approach

Data-Based Controller Design presents a comprehensive analysis of data-based control design. It brings together the different data-based design methods that have been presented in the literature since the late 1990s. To the best knowledge of the author, these data-based design methods have never been collected in a single text, analyzed in depth or compared to each other, and this severely limits their widespread application. In this book, these methods will be presented under a common theoretical framework, which fits also a large family of adaptive control methods: the MRAC (Model Reference Adaptive Control) methods. This common theoretical framework has been developed and presented very recently. The book is primarily intended for PhD students and researchers - senior or junior - in control systems.

Features
- The book will present simulation examples along the text
- Practical applications of the concepts and methodologies will be presented in a specific chapter
- The concepts in this book are being used, under the author’s supervision, for developing new software products in an automation company

Contents
- Definitions
- H2 Performance Criteria
- One-shot Optimization - the VRFT Method
- Interactive Optimization
- Convergence to the Globally Optimal Controller
- Cost Function Shaping
- Computations
- Experimental Results

Fields of interests
- Control, Robotics, Mechatronics; Appl.Mathematics/Computational Methods of Engineering
- Target groups
- Research
- Product Category
- Monograph

Due October 2011

2011. 210 p. 57 illus., 25 in color. (Lecture Notes in Control and Information Sciences, Volume 419)
Softcover

$109.00
ISBN 978-3-642-24051-5

Due December 2011

2012. XX, 221 p. 106 illus. (Communications and Control Engineering) Hardcover

$129.00
ISBN 978-94-007-2299-6

Due September 2011

2011. XXII, 350 p. 70 illus. Hardcover

approx. $139.00
ISBN 978-3-7091-0941-0

Yearbook on Space Policy 2009/2010

Space for Society

Contents
- Part I. - Chapter 1: European space activities in the global context (Spyros Pagratis): Global political and economic trends - Worldwide space policies and strategies - Worldwide space budgets and revenues - The security dimension - Chapter 2: Developments in space policies, programmes and technologies throughout the world and in Europe (Spyros Pagratis): Space policies and programmes - Space transportation - Space sciences and exploration - Satellite applications - Technology developments - Part II. - Views and Insights: Space in the financial and economic crisis (Christophe Venet) - The legal personality of the European Union and its effects on the development of space activities in Europe (Lesley Jane Smith) - Institutional development of satellite navigation in Europe (Heike Wieland) - The new 2010 U.S. space policy Michael Sheehan) - The potential for transatlantic cooperation in the International Space Station programme and in space exploration (Ian Pryke) - Trends in shaping space policies around the world (Deganit Paikowsky and Isaac Ben Israel) - Space applications after Copenhagen (Simonetta Cheli) - Satellite Earth observation and disaster management - Lessons and needs after the Indian Ocean tsunami and the Haiti earthquake (Ray Harris) - Implications of new trends in small satellite development (Rainer Sandau) - Part III. - Facts and Figures (Blandina Baranes and Spyros Pagratis) - List of figures and tables - About the Authors - Index.

Fields of interests
- Aerospace Technology and Astronautics; Political Science; Air and Space Law
- Target groups
- Research
- Product Category
- Monograph

Springer Wien New York

90
Functional Observers for Dynamical Systems

The theory of linear functional observers, which is the subject of this book, is increasingly becoming a popular researched topic because of the many advantages it presents in state observation and control system design. This book presents recent information on the current state of the art research in this field. This book will serve as a useful reference to researchers in this area of research to understand the fundamental concepts relevant to the theory of functional observers and to gather most recent advancements in the field. This book is useful to academics and postgraduate students researching into the theory of linear functional observers.

Features

- Latest research on Linear Functional State and Unknown Input Observers
- Useful to postgraduate students and academics researching into the theory of linear functional observers
- Useful reference to researchers in this area to understand the fundamentals involved in the theory of linear functional observers

Contents


Fields of interests

Control; Systems Theory, Control

Target groups

Research

Product Category

Monograph

Embedded Automation in Human-Agent Environment

This research book proposes a general conceptual framework for the development of automation in human-agents environments that will allow human-agent teams to work effectively and efficiently. We examine various schemes to implement artificial intelligence techniques in agents. The text is directed to the scientists, application engineers, professors and students of all disciplines, interested in the agency methodology and applications.

Features

- Presents a general conceptual framework for the development of automation in human-agents environments
- Recent Advances of Embedded Automation in Human-Agent Environment
- Written by leading experts in the field

Contents

1 Introduction to Embedded Automation.- 2 Innovation in Modern Artificial Intelligence.- 3 Research Directions in Automation.- 4 Agent System Frameworks.- 5 Agent Interoperability and Adaptation.- 6 Enhancing Autonomy.- 7 Improving Agent Architectures.- 8 Agent Oriented Programming.- 9 Creating an Agent Factory.- 10 Case Study Background - Sudoku.- 11 Problem Solving Workshop.- 12 Future and Direction.

Fields of interests

Computational Intelligence; Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction

Target groups

Research

Product Category

Monograph

Photoelectrochemical Hydrogen Production

This research book proposes a general conceptual framework for the development of automation in human-agents environments that will allow human-agent teams to work effectively and efficiently. We examine various schemes to implement artificial intelligence techniques in agents. The text is directed to the scientists, application engineers, professors and students of all disciplines, interested in the agency methodology and applications.

Features

- Emphasizes defect chemical aspects of metal oxide photoelectrodes
- Provides chapters dedicated to state-of-the-art materials and devices, measurement techniques, and combinatorial techniques to find new photoelectrode materials
- Offers valuable discussion of business perspectives and economic outlook

Contents


Fields of interests

Renewable and Green Energy; Optical and Electronic Materials; Energy Systems

Target groups

Professional/practitioner

Product Category

Monograph
L. Wang, RMIT University, Melbourne, VIC, Australia; H. Garnier, CRAN, Nancy, France (Eds)

**System Identification, Environmental Modelling, and Control System Design**

**Contents**

**Fields of interests**
- Control, Monitoring/Environmental Analysis; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences

**Target groups**
- Graduate

**Product Category**
- Contributed volume

---

**Fatigue of Beta Processed and Beta Heat-treated Titanium Alloys**

**Contents**
- Introduction.- 1.1 Survey of fatigue life assessment methods.- 2. Metallurgy and microstructure.- 2.1 The general metallurgy of titanium alloys.- 2.2 Conventional thermomechanical processing of alloys like Ti-6Al-4V.- 2.3 β processing and β heat-treatment.- 2.4 Crystallography of the β → α phase transition.- 2.5 Microstructure of β annealed Ti-6Al-4V ELI thick plate.- 3 Fatigue crack initiation.- 3.1 Microstructural initiation sites in near-α and α – β alloys: literature.- 3.2 Microstructural initiation sites: β annealed Ti-6Al-4V ELI thick plate.- 3.3 Metallurgical defects.- 4 Fatigue initiation lives.- 4.1 Microstructural factors.- 4.2 Fatigue life – microstructure trends.- 4.2.1 Unnotched (smooth specimen) fatigue.- 4.2.2 Notched fatigue.- 4.3 Summary.- 5 Short/small fatigue crack growth.- 5.1 Introduction.- 5.1.1 Significance of short/small cracks.- 5.1.2 Definitions of short and small cracks.- 5.1.3 Size criteria.- 5.2 Short/small fatigue crack growth data from the literature.- 5.2.1 Coarse-grained fully lamellar IMI 685.- 5.2.2 Effects of microstructure: fully lamellar.- 5.2.3 Effects of microstructure: different types of microstructures.- 5.3 Summary.- 6 Long/large fatigue crack growth.- 6.1 Introduction.- 6.2 Fatigue thresholds.- 6.2.1 Fully lamellar microstructures.- 6.2.2 Different types of microstructures.- 6.3 Regions I and II fatigue crack growth in fully lamellar microstructures. [...]  

**Fields of interests**
- Engineering Design; Structural Materials; Structural Mechanics

**Target groups**
- Research

**Product Category**
- }


**Nonlinear Dynamic Phenomena in Mechanics**

*Contents*

*Fields of interests*
Theoretical and Applied Mechanics; Structural Mechanics; Vibration, Dynamical Systems, Control

*Target groups*
Research

*Product Category*
Contributed volume

---

**Innovations in Intelligent Machines -2**

*Intelligent Paradigms and Applications*
This research volume is a continuation of our previous volume on intelligent machines. We have laid the foundation of intelligent machines in Springer SCI Series Volume 70 by including the possible and successful applications of computational intelligence paradigms in machines for mimicking the human behaviour.

*Features*
- Recent research on Intelligent Machines
- Focuses on Intelligent Paradigms and Applications
- Written by leading experts in the field

*Contents*
From the content: Advances in Information Processing Paradigms. - The Extraction of Figure-related Sentences to Effectively Understand Figures. - Alignment-based Translation Unit for Simultaneous Japanese-English Spoken Dialogue Translation. - Automatic Collection of Useful Phrases for English Academic Writing. - An Effectively Focused Crawling System.

*Fields of interests*
Computational Intelligence; Artificial Intelligence (incl. Robotics)

*Target groups*
Research

*Product Category*
Monograph

---

**Detection and Identification of Rare Audiovisual Cues**

Machine learning builds models of the world using training data from the application domain and prior knowledge about the problem. The models are later applied to future data in order to estimate the current state of the world. An implied assumption is that the future is stochastically similar to the past. The approach fails when the system encounters situations that are not anticipated from the past experience. In contrast, successful natural organisms identify new unanticipated stimuli and situations and frequently generate appropriate responses.

*Features*
- Recent research in Detection and Identification of Rare Audiovisual Cues
- Scientific outcome of the European project DIRAC (Detection and Identification of Rare Audio-visual Cues)
- Written by leading experts in the field

*Contents*
Introduction. - The DIRAC project. - The detection of incongruent events, project survey and algorithms. - Alternative frameworks to detect meaningful novel events. - Dealing with meaningful novel events, what to do after detection. - How biological systems deal with novel and incongruent events.

*Fields of interests*
Computational Intelligence; Artificial Intelligence (incl. Robotics); Multimedia Information Systems

*Target groups*
Research

*Product Category*
Monograph

---

**Due September 2011**

- approx. $139.00
ISBN 978-94-007-2472-3

---

**Due September 2011**

2011. 350 p. (Studies in Computational Intelligence, Volume 376) Hardcover
- $179.00
ISBN 978-3-642-23189-6

---

**Due October 2011**

2011. 180 p. (Studies in Computational Intelligence, Volume 384) Hardcover
- $129.00
ISBN 978-3-642-24033-1
Q. Yu, P. Ampadu, University of Rochester, NY, USA

**Transient and Permanent Error Control for Networks-on-Chip**

This book addresses reliability and energy efficiency of on-chip networks using cooperative error control. It describes an efficient way to construct an adaptive error control codec capable of tracking noise conditions and adjusting the error correction strength at runtime. Methods are also presented to tackle joint transient and permanent error correction, exploiting the redundant resources already available on-chip. A parallel and flexible network simulator is also introduced, which facilitates examining the impact of various error control methods on network-on-chip performance.

**Contents**


**Fields of interests**

Circuits and Systems; Electronics and Microelectronics, Instrumentation; Nanotechnology and Microsystems

**Target groups**

Research

**Product Category**

Monograph

---

L. Yun, Marine Design & Research Institute of China, Shanghai, China; A. Bliault, Shell Corporation, Sola, Norway

**High Performance Marine Vessels**

High Performance Marine Vessels (HPMVs) range from the Fast Ferries, to the latest high speed Navy Craft, including competition power boats and hydroplanes; hydrofoils, hovercraft, catamarans and other multi-hull craft. "High Performance Marine Vessels" covers the main concepts of HPMVs and discusses historical background, design features, services that have been successful and not so successful, and some sample data of the range of HPMVs to date. Included is a comparison of all HPMV's craft and the differences between them and descriptions of performance (hydrodynamics and aerodynamics). Readers will find a comprehensive overview of the design, development and building of HPMVs.

**Contents**


**Fields of interests**

Automotive Engineering; Theoretical and Applied Mechanics; Engineering Design

**Target groups**

Research

**Product Category**

Monograph

---

C. Zhang, Applied Materials, Sunnyvale, CA, USA; R. Ordóñez, University of Dayton, OH, USA

**Extremum-Seeking Control and Applications**

A Numerical Optimization-Based Approach

Extremum-seeking control tracks a varying maximum or minimum in a performance function such as output or cost. It attempts to determine the optimal performance of a control system as it operates, thereby reducing downtime and the need for system analysis. Extremum-seeking Control and Applications is divided into two parts. In the first, the authors review existing analog-optimization-based extremum-seeking control including gradient-, perturbation- and sliding-mode-based control designs. They then propose a novel numerical-optimization-based extremum-seeking control based on optimization algorithms and state regulation.

**Contents**


**Fields of interests**

Control; Calculus of Variations and Optimal Control; Optimization; Automotive Engineering

**Target groups**

Professional/practitioner

**Product Category**

Monograph
Y. L. Zhao, National Institute of Standards and Technology, Gaithersburg, MD, USA; R. Brown, Mitutoyo America Corporation, Aurora, IL, USA; T. R. Kramer, National Institute of Standards and Technology, Gaithersburg, MD, USA; X. Xu, University of Auckland, Auckland, New Zealand

**Information Modeling for Interoperable Dimensional Metrology**

Dimensional metrology is an essential part of modern manufacturing technologies, but the basic theories and measurement methods are no longer sufficient for today’s digitized systems.

**Features**
- Gives readers an overview and in-depth understanding of a complete dimensional metrology system
- Enables readers to utilize basic theories and key technologies to solve the practical dimensional measurement problems in modern dimensional metrology practices
- Allows readers to integrate the information modeling techniques and data models described in the book with their own research work

**Contents**
1. Introduction.
3. Product Definition and Dimensional Metrology Systems.
5. Low-Level Dimensional Metrology Process Planning and Execution.
6. Quality Data Analysis and Reporting.
8. Dimensional Metrology for Manufacturing Quality Control.

**Fields of interests**
Manufacturing, Machines, Tools; Measurement Science and Instrumentation; Computer-Aided Engineering (CAD, CAE) and Design

**Target groups**
Research

**Product Category**
Monograph

Due September 2011


$129.00

ISBN 978-1-4471-2166-4
Blum, University of Sussex, UK

**Education, Community Engagement and Sustainable Development**

*Negotiating Environmental Knowledge in Monteverde, Costa Rica*

A growing body of research has given critical attention to diverse theories and practices of environmental education, and its potential contribution to addressing pressing global issues such as sustainable development and climate change. While much of this work has focused on perspectives and practices in Europe and North America, this book explores environmental learning within formal education, in programmes by non-governmental organisations, and in public education spaces in Monteverde, Costa Rica.

**Features**

▶ Describes the role of environmental education in pressing global issues such as sustainable development and climate change
▶ Explores diverse international perspectives with a focus on Costa Rica as an example
▶ The book will be of interest to researchers and practitioners interested in topics such as environmental education, sustainable development and science education

**Contents**

1 Introduction.
2 Education, Environment, Development and the Costa Rican State.
3 Environmental Education In Schools.
4 Environmental Education And Conservation Organisations.
5 Environmental Knowledge In Public Spaces.
6 Conclusions.
Appendix: Images of Monteverde.

**Fields of interests**

Sustainable Development; International and Comparative Education; Educational Policy and Politics

**Target groups**

Research

**Product Category**

Monograph

---

H. Fernando, Arizona State University, Tempe, AZ, USA; Z. Klaić, University of Zagreb, Croatia; J. L. McCulley, Arizona State University, Tempe, AZ, USA (Eds)

**National Security and Human Health Implications of Climate Change**

**Contents**

National Security and Human Health Implications of Climate Change: M.D. King; Islands in a Sea of Change: Climate Change, Health and Human Security in Small Island States; N. Lewis; Issues of Climate Change, Health, and National Security in Expanding Cities Worldwide; J.C.R. Hunt, S.E. Belcher; Climate Change, Tipping Elements and Security; K. Rasmussen, T. Birk; Interactions of Global Climate Change and Urban Climate in Different Climate Regions; R. Bornstein et al.; ENSO Forcing of Climate Variability over the North Atlantic / European Region in Warmer Climate Conditions; I.H. Bulić, A. Mohorovičić.

**Features**

▶ Supports introductory university courses on environmental studies
▶ Focuses on New Zealand but also relevant in the global context of evolving environmental issues confronting many industrialised and developing countries
▶ Offers the widest appeal for students and lecturers seeking a comprehensive overview of the current situation based on New Zealand experiences and perspectives

**Contents**

1. The Setting, Principles and Measures.
2. Approaches to Environmental Management.
3. Agencies and Laws.
4. Environmental Indicators.
5. The Land in Question.
6. Freshwater.
7. Ocean and Coast.
8. The Air.

**Fields of interests**

Environment, general; Climate Change

**Target groups**

Research

**Product Category**

Monograph

---

*New Environmentalism Challenges and Responses in Managing New Zealand's Environmental Diversity*

The book presents a New Zealand case study of new environmentalism to give a fresh perspective and original analytical framework to distinguish it from existing ‘state of the environment’ reports and books that review only selected environmental issues and management responses. The discussion is aimed at the university student market and will not aim to be a polemic or a book that seeks to allocate blame or that advocates any particular management strategies. In this way the book aims to have the widest possible appeal for students and lecturers seeking a comprehensive overview of the current situation based on New Zealand experiences and perspectives.
Perspectives on Environmental Management and Technology in Asian River Basins

Asian river basins are undergoing rapid transformation. This volume considers the implications of the environmental change-development nexus for water management, river health and hazard awareness. As Biswas and Tortajada (2011) have recently commented, water management in Asia will likely change more in the next twenty years than in the last 2000 years. Critical environmental trends include decreasing flows of water and sediment due to dam construction and increased water extraction, land use change (especially forest removal), encroachment and degradation of wetlands, increased water demand and concerns about water security, urban expansion and associated pollution of rivers and contamination of groundwater reserves.

Contents

Fields of interests
Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution / Nature Conservation / Physical Geography

Target groups
Research

Product Category

Due September 2011
2011. V, 100 p. 11 illus. (SpringerBriefs in Geography, 0) Softcover
► $49.95
ISBN 978-94-007-2329-0

Due November 2011
2011 2012. 50 p. 7 illus. color. (SpringerBriefs in Earth System Sciences) Softcover
► approx. $49.95
ISBN 978-3-642-23443-9
R. Jain, L. Lee, University of the Pacific, Stockton, CA, USA (Eds)

**Fiber Reinforced Polymer (FRP) Composites for Infrastructure Applications**

Focusing on Innovation, Technology Implementation and Sustainability

**Contents**

1. Introduction to FRP Composites
2. Sustainability in Infrastructure Design - Part I: Durability and Service Life
3. Environmental Degradation of Interlaminar Shear Strength in Carbon/Epoxy Composite
4. Predicting Hygrothermal Degradation of Composites in Accelerated Testing
5. Effects of Ultraviolet Radiation and Condensation on Static and Dynamic Compressive Behavior of Nanophased Glass / Epoxy Composites
6. FRP Reinforced Concrete Exposed to Elevated Temperatures: The Role of Viscosity on Bond Strength
7. Load Testing and Load Distribution of Fiber Reinforced Polymer Strengthened Bridges: Multi-Year Post Construction / Post Retrofit Performance Evaluation
8. Steel-Free Bridge Decks Reinforce with FRP Composites
9. The Utilization of Recycled Thermoplastic Composites for Civil and Military Load Bearing Applications
10. Structural Response, Health-Monitoring, and Performance Evaluation Of CFRP Post-Tensioned, In-Service, Long-Span, Precast/Prestressed Box Girder Bridges
11. Life Cycle Cost Comparison of FRP and RC Bridge Decks

**Fields of interests**

Sustainable Development; Building Materials; Civil Engineering

**Target groups**

Research

**Product Category**

Contributed volume

**Due November 2011**

**Hardcover**


$189.00

ISBN 978-94-007-2459-4

**Due November 2011**

2012. XIII, 309 p. 135 illus., 101 in color. (Strategies for Sustainability, Volume) Hardcover 

$179.00

ISBN 978-94-007-2356-6

**Due February 2012**

2012. XII, 360 p. 113 illus. Hardcover 

$179.00


**V. Lagutov**, Azov Center for Watershed Cooperation, Novocherkassk, Russia (Ed.)

**Environmental Security in Watersheds: The Sea of Azov**

Watersheds, supplying crucial ecosystem services to humans, seem to be a logical territorial unit to integrate societal benefits and environmental needs in order to evaluate the sustainability of natural resource use patterns.

**Features**

- Azov is a unique ecosystem (the smallest, one of the most historically productive seas of the world)
- Interdisciplinary crosssectoral perspective of environmental security including specific regional peculiarities such as Cossack Communities
- Azov plays a rapidly growing strategic role as a communication corridor linking Europe and Asia, landlocked Caspian countries in the world

**Fields of interests**

Environment, general; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Sustainable Development

**Target groups**

Graduate

**Product Category**

Proceedings

**Due November 2011**

**Hardcover**


$189.00

ISBN 978-94-007-2459-4

**Due November 2011**

2012. XIII, 309 p. 135 illus., 101 in color. (Strategies for Sustainability, Volume) Hardcover 

$179.00

ISBN 978-94-007-2356-6

**S. Rajagopal**, Radboud University Nijmegen, The Netherlands; H. A. Jenner, KEMA Nederland B.V., Arnhem, The Netherlands; V. P. Venugopalan, Bhabha Atomic Research Center, Kalpakkam, India (Eds)

**Operational and Environmental Consequences of Large Industrial Cooling Water Systems**

**Contents**

General Overview: Entrainment of Fish Larvae, What is the Risk for 0+ Fish?: Fish Impingement and Prevention Seen in the Light of Population Dynamics; The Ecology of Fouling; Chemistry of Chlorination; Chlorination for Biofouling Control; Control of Microbial Fouling andMIC (Microbially Influenced Corrosion) in Raw Water Systems; Chlorine By-Products and their Environmental Effects; Alternatives for Chlorine; Cooling Water Systems – Design Aspects for Minimisation of Biofouling and Environmental Impact; Monitoring of Biofouling; Implications of the Discharge of Heated Cooling Water; Environmental Effects of Power Plant Induced Thermal and Chlorine Stress on Phytoplankton; Impact of Condenser Discharge on Intertidal Fauna: Sand Crabs as Indicator Organisms; Chlorine Stress Evaluation using Microalgal Bioassay; Exotics or Alien Nuisance Species; The Strength of Modelling Biotic and Abiotic Factors Like Temperature and Chlorine in and Around Plants.

**Fields of interests**

Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Freshwater & Marine Ecology; Environmental Management

**Target groups**

Research

**Product Category**

Contributed volume
Reviews of Environmental Contamination and Toxicology attempts to provide concise, critical reviews of timely advances, philosophy and significant areas of accomplished or needed endeavor in the total field of xenobiotics, in any segment of the environment, as well as toxicological implications.

**Contents**


**Fields of interests**

Ecotoxicology; Environmental Management; Waste Management/Waste Technology

**Target groups**

Research

**Product Category**

Contributed volume

---

D. M. Whitacre, Summerfield, NC, USA (Ed.)

**Reviews of Environmental Contamination and Toxicology**

Due December 2011

2012. VI, 146 p. 5 illus. (Reviews of Environmental Contamination and Toxicology, Volume 215)

Hardcover

► $129.00


---

J. Westervelt, G. Cohen, U.S. Army Engineer Research and Development Center, Champaign, IL, USA (Eds)

**Ecologist-Developed Spatially-Explicit Dynamic Landscape Models**

**Contents**


**Fields of interests**

Monitoring/Environmental Analysis; Computer Appl. in Life Sciences

**Target groups**

Research

**Product Category**

Contributed volume

---

J. D. Gatrell, G. D. Bierly, Indiana State University, Terre Haute, IN, USA; R. R. Jensen, Brigham Young University, Provo, UT, USA

**Research Design and Proposal Writing in Spatial Science**

Due January 2012

2012. XI, 162 p. 55 illus. (Modeling Dynamic Systems)

Hardcover

► approx. $129.00

ISBN 978-1-4614-1256-4

---

Due November 2011


Hardcover

► $129.00

ISBN 978-94-007-2280-4
D. Lóczy, Institute of Environmental Sciences, Pécs, Hungary; M. Stankoviansky, Comenius University, Bratislava, Slovakia; A. Kotarba, Polish Academy of Sciences, Kraków, Poland (Eds)

**Recent Landform Evolution**

The Carpatho-Balkan-Dinaric Region

The Carpatho-Balkanic Geomorphological Commission and the International Association of Geomorphologists (IAG) Carpatho-Balkan-Dinaric Regional Working Group, promote networking between researchers and the exchange of research experience.

**Features**

- A comprehensive and uniform treatment of a lesser-known region i.e. the Carpatho-Balkan-Dinaric Region
- Presentation of many findings previously not available in English
- Abundant case studies and illustrations

**Contents**


**Fields of interests**

Physical Geography; Geomorphology; Geocology/Natural Processes

**Target groups**

Research

**Product Category**

Monograph

---

**Due December 2011**

2012. X, 390 p. 120 illus., 84 in color. (Springer Geography) Hardcover

► $179.00

ISBN 978-94-007-2447-1
Aspects of African Ecology and their Historical Perspectives

In view of the rapidly changing ecology of Africa, this work provides benchmarks for some of the major, and more neglected, aspects, with an accent on historical data to enable habitats to be seen in relation to their previous state, forming a background reference work to understanding how the ecology of Africa has been shaped by its past. Reviewing historical data wherever possible it adopts an holistic view treating man as well as animals, with an accent on diseases both human and animal which have been a potent force in shaping Africa's ecology, a role neglected in ecological studies.

Features
► African ecology, undergraduate to post graduate level
► Its comprehensive approach makes it a unique contribution to the ecological literature, which should provide a standard reference for students and teachers of African ecology for many years to come
► Its historical approach provides benchmarks against which present conditions can be evaluated
► Contains 29 chapters plus appendix, with 221 maps and figures, and 148 monochrome plates

Contents
Introduction.- The Abiotic Environment.- The Floral Environment.- Abundance of Populations.- Animal Parasites and Diseases.- Conclusion.- Appendices

Fields of interests
Physical Geography; Nature Conservation; Meteorology/Climatology

Target groups
Research

Product Category
Monograph

Due November 2011
2012. XXVIII, 1638 p. 218 illus. (Springer Geography) Hardcover
► approx. $209.00
ISBN 978-3-642-22871-1
NEW SERIES

Transcultural Research – Heidelberg Studies on Asia and Europe in a Global Context

M. Herren-Oesch, A. Michaels, R. G. Wagner (Eds)

Heidelberg Studies on Asia and Europe in a Global Context presents peer-reviewed books by members of the Cluster of Excellence „Asia and Europe in a Global Context: Shifting Asymmetries in Cultural Flows” as well as scholars from both historical and empirical disciplines who are working on new emerging fields that cross existing disciplinary boundaries. The book series will examine processes of cultural exchange in an interdisciplinary way and analyze shifting asymmetries in cultural flows, while eschewing strictly geographical definitions of „Asia” or „Europe”. The aim is to stimulate fruitful new theoretical debates regarding the cultural exchange between Asia and Europe from the Bronze Age to the present. Heidelberg Studies on Asia and Europe in a Global Context will acquaint readers with problems of globalization by focusing on four research areas: government and administration; public spheres; health and environment; historicities and heritage.

C. B. Brosius, R. Wenzlhuemer, Karl Jaspers Centre, Heidelberg, Germany (Eds)

Transcultural Turbulences Towards a Multi-Sited Reading of Image Flows

Today, hardly anything moves as fast across the globe as images and media. This fact opens new avenues to explore social and cultural change, but also poses new theoretical challenges of how to grasp and better understand these changes and flows. Moreover, such movements across geophysical and cultural borders have a historical depth that enables us to explore globalisation and localisation in new ways. Transculturality is still a relatively new field of research in the Humanities through which we sharpen our competence and ‘literacy’ to come to terms with the complexity of globalised cultures. This volume ventures into new domains of research on the transculturality of images and addresses the need to develop new or modify established often ethno- and Eurocentric interpretations of what happens when images travel. It does so by bringing together cutting-edge research from fields such as art history, cultural anthropology, colonial history, Islamic studies, religious studies and literary criticism.

Features
► Describes Transculturality, a relatively new field of research in the humanities explo
► Explores new domains of research on the transculturality of images holistically

Contents
Introduction.- Visual Cosmopolitanism.- Circulating Images.

Fields of interest
Regional and Cultural Studies; Interdisciplinary Studies; Anthropology

Target groups
Research

Product Category
Monograph

Due August 2011

► $179.00
ISBN 978-3-642-18392-8

C. M. Joll, Chulalongkorn University, Bangkok, Thailand

Muslim Merit-making in Thailand’s Far-South

This volume provides an ethnographic description of Muslim merit-making rhetoric, rituals and rationales in Thailand’s Malay far-south. This study is situated in Cabetigo, one of Pattani’s oldest and most important Malay communities that has been subjected to a range of Thai and Islamic influences over the last hundred years. The volume describes religious rhetoric related to merit-making being conducted in both Thai and Malay, that the spiritual currency of merit is generated through the performance of locally occurring Malay adat, and globally normative amal ‘ibadat.

Features
► An ethnographic description of lived Islam among Urban Malays in South Thailand
► A much needed counter-balance to descriptions of Islam in South Thailand offered by political scientists and security specialists
► An contemporary account of the impact that Thai and Islamic influences have had on Islam in South Thailand
► A study that brings together interests in linguistic anthropology and the anthropology

Contents

Fields of interest
Religious Studies; Anthropology; Regional and Cultural Studies

Target groups
Research

Product Category
Monograph

Due December 2011

2012. 200 p. 19 illus., 3 in color. (Muslims in Global Societies Series, Volume 4) Hardcover
► $139.00
ISBN 978-94-007-2484-6
The Three Paths of Justice
Court Proceedings, Arbitration, and Mediation in England

This book presents a concise account of the English system of civil litigation, covering court proceedings in England and Wales. It is an original and important study of a system which is the historical root of the US litigation system. The volume offers a comprehensive and properly balanced account of the entire range of dispute resolution techniques. As the first book on this subject to be published in the USA, it enables American lawyers to gain an overview of the main institutions of English Civil Procedure, including mediation and arbitration. It will render the English system of civil justice accessible to law students in the US, practitioners of law, professors, judges, and policymakers.

Features
- First book on English system of civil litigation in the USA
- Original, concise, and important study of a system rooted in US litigation
- Accessible to professors, judges, policy-makers, practitioners of law and law students in the US

Contents
1. Introduction
2. Principles of Civil Justice
3. First Instance Proceedings
4. Appeals and Finality
5. Costs
6. Enforcement of Court Judgments and Orders
7. Protective Relief
8. Multi-Party Litigation
9. Mediation
10. Arbitration in England

Fields of interests
International & Foreign Law/Comparative Law; Civil Procedure Law; Civil Law

Target groups
Research

Product Category
Monograph

A Comparative Look at Regulation of Corporate Tax Avoidance

This volume provides a fascinating look at the anti-tax avoidance strategies employed by more than fifteen countries in eastern and western Europe, Canada, the Pacific Rim, Asia, Africa, and the United States.

Features
- One of a kind compilation of the tax avoidance laws of most major countries
- Provides easy comparison of major features of each country’s anti-avoidance laws
- Opens a window on future developments in anti-avoidance law
- Invaluable guide for academics studying statutory interpretation and substance over form principles

Contents
I. Preface; Karen B. Brown.- II. Overview of Country Reports; Karen B. Brown.- III. Country Reports: Australia; Maurice Cashmere.- Canada; Carl McArthur.- China; Kevin Holmes.- Croatia; Natasa Zunic Kovacevic.- France; Daniel Gutmann.- Germany; Ulrich Palm.- Hungary; Eva Erdos, Zoltan Nagy and Zoltan Varga.- Italy; Carlo Garbarino.- Japan; Keigo Fuchi.- Netherlands; Raymond Luja.- New Zealand; Zoë Prebble and John Prebble.- Poland; Bogumil Brezezinski and Krzysztof Lasinski-Sulecki.- Slovenia; Nana Sumrada.- Taiwan; Keh-Chang GEE and Yuan-Chun (Martin) Lan.- United Kingdom; Sandra Eden.- United States; Tracy Kaye.- IV. Appendix (Diagram of Anti-Avoidance Law by Country).

Fields of interests
International & Foreign Law/Comparative Law; Business Taxation/Tax Law; Financial Law/Fiscal Law

Target groups
Research

Product Category
Contributed volume

Due October 2011
2012. XVI, 256 p. (Ius Gentium: Comparative Perspectives on Law and Justice, Volume 10)
Hardcover
$139.00
ISBN 978-94-007-2293-4

Due November 2011
2012. XVI, 368 p. (Ius Gentium: Comparative Perspectives on Law and Justice, Volume 12)
Hardcover
$189.00

Due November 2011
2012. IV, 669 p. 12 illus., 8 in color. Hardcover
$349.00
B. Bünger, Seevetal, Germany

Deficits in EU and US Mandatory Environmental Information Disclosure

Legal, Comparative Legal and Economic Facets of Pollutant Release Inventories

It is the publicity about the Pollutant Release Inventory's data which creates an incentive for firms to achieve emission reductions. Accordingly, public access to environmental information constitutes a core characteristic of the aforementioned inventory. Here, in essence, two facets arise. First, with regard to the collection, it is disputed whether such information, which may comprise confidential commercial and industrial information in the EU as well as trade secrets in the US, can be protected under fundamental and constitutional property rights respectively.

Contents

Fields of interests
Commercial Law; International & Foreign Law/Comparative Law

Target groups
Research

Product Category
Monograph

Due October 2011
► $239.00
ISBN 978-3-642-22756-1

B. Clark, University of Strathclyde, Glasgow, UK

Lawyers and Mediation

This book charts the historical and current interaction between lawyers and mediation in both the common law and civil law world and analyses a number of issues relevant to lawyers' part in the process. Lawyers have in the past and continue to play many roles in the context of mediation. While some are champions for the process, many remain on the fringes and apathetic, while others are openly sceptical or even anti-mediation in their stance. Yet others may have embraced mediation but, it is argued, for cynical, disingenuous reasons.

Features
► Discussion of lawyers' relationship with mediation across the common law and civil law divide
► Draws on the author's own significant research and experience in the field as well as collating relevant research and experience from across the globe
► Particularly timely given recent and proposed reforms to civil justice systems globally
► Speaks to important debates surrounding substantive and procedural justice, access to justice and the role of courts in society, the 'crisis in lawyers' professionalism' and trends in legal education

Fields of interests
Civil Procedure Law; European Law/Public International Law; International & Foreign Law/Comparative Law

Target groups
Research

Product Category
Monograph

Due December 2011
2012. 200 p. Hardcover
► approx. $139.00
ISBN 978-3-642-23473-6

J. J. du Plessis, Deakin University, Geelong, VIC, Australia; B. Großfeld, University of Muenster, Germany; C. Luttermann, Catholic University of Eichstätt-Ingolstadt, Germany; I. Saenger, O. Sandrock, M. Casper, University of Muenster, Germany

German Corporate Governance in International and European Context

Contents
An Overview of German Business or Enterprise Law and the One-Tier and Two-Tier Board Systems Contrasted.- An Overview of the Corporate Governance Debate in Germany.- The General Meeting and the Management Board as Company Organs.- The Supervisory Board as Company Organ.- The German System of Supervisory Codetermination by Employees.- The Impact of European Development on German Codetermination and German Corporate Law.- Accounting as the Documentary Proof of Good Corporate Governance.- Banking on Trust: The German Financial Sector, Global Capital Markets and Corporate Finance and Governance.- Corporate Governance and Corporate Compliance.- Corporate Governance in the EU, the OECD Principles of Corporate Governance and Corporate Governance in Selected Other Jurisdictions.- European and German Provisions in English for Purposes of Chapter 7.

Fields of interests
Commercial Law; International & Foreign Law/Comparative Law; Management/Business for Professionals

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

Due December 2011
► $139.00
ISBN 978-3-642-23004-2
C. Herrmann, University of Passau, Germany; J. P. Terhechte, University of Hamburg, Germany (Eds)

European Yearbook of International Economic Law (EYIEL), Vol. 3 (2012)

The third volume of the European Yearbook of International Economic Law focuses on two major topics of current academic and political interest. Firstly, it addresses the 10th anniversary of China’s accession to the WTO and its implications; secondly, it deals with different legal aspects of global energy markets.

Feature

Contents

From the contents: Topics.- Special Focus I: Ten Years of China’s WTO Membership.- Special Focus II: Global Energy Markets and International Economic Law.- Regional Integration.- Institutions.

Fields of interests

European Law/Public International Law; International Economics; Political Science

Target groups

Research

Product Category

Contributed volume

---

F. A. Goudappel, H. S. Raulus, Erasmus University Rotterdam, The Netherlands (Eds)

The Future of Asylum in the European Union

Problems, proposals and human rights

Features

- Comprehensive and theoretical but still practical approach to asylum issues
- Combines EU asylum procedures with human rights aspects
- Multidisciplinary approach

Contents


Fields of interest

European Law/Public International Law

Target groups

Research

Product Category

Contributed volume

---

S. C. Grover, Lakehead University, Thunder Bay, ON, Canada

Child Soldier Victims of Genocidal Forcible Transfer

Exonerating Child Soldiers Charged With Grave Conflict-related International Crimes

This book provides an original legal analysis of child soldiers recruited into armed groups or forces committing mass atrocities and/or genocide as the victims of the genocidal forcible transfer of children.

Features

- Provides an original analysis of child soldiers recruited into armed groups or forces committing mass atrocities and/or genocide as the victims of genocidal forcible transfer of children
- Analyzes various modes of judicial and non-judicial accountability mechanisms for child soldiers charged with international crimes and discusses their inapplicability
- Challenges various anthropological accounts of child soldiers’ alleged accountability for conflict-related international crimes as members of armed groups or forces committing mass atrocities and/or genocide

Contents


Fields of interest

European Law/Public International Law

Target groups

Research

Product Category

Monograph

---

Due November 2011

2012. XVI, 644 p. 14 illus., 7 in color. (European Yearbook of International Economic Law, Volume 3)

Hardcover

$239.00

ISBN 978-3-642-23308-1

Due September 2011

2011. VIII, 192 p. Hardcover

$119.00


Due December 2011

2012. XIV, 340 p. Hardcover

$139.00

ISBN 978-3-642-23613-6
**News 9/2011**

**Legislative Delegation**

**The Erosion of Normative Limits in Modern Constitutionalism**

An overarching question of contemporary constitutionalism is whether equilibriums devised prior to the emergence of the modern administrative-industrial state can be preserved or recreated by means of fundamental law. The book approaches this problem indirectly, through the conceptual lens offered by constitutional developments relating to the adoption of normative limitations on the delegation of law-making authority. Three analytical strands (constitutional theory, constitutional history, and contemporary constitutional and administrative law) run through the argument. They merge into a broader account of the conceptual ramifications, the phenomenon, and the constitutional treatment of delegation in a number of paradigmatic legal systems. As it is argued, the development and failure of constitutional rules imposing limits on legislative delegation reveal the conditions for the possibility of classical limited government and, conversely, the erosion of normativity in contemporary constitutionalism.

**Feature**

- **Fields of interests**
  Constitutional Law; Political Science; Roman Law/Law History/Canon Law

**Target groups**

Research

**Product Category**

Monograph

---

**Yearbook of International Humanitarian Law - 2010**

General editor: M. Schmitt, Durham University, UK;
Managing editor: L. Arimatsu, The Royal Institute of International Affairs, London, UK

**Contents**


**Fields of interests**

International & Foreign Law/Comparative Law; European Law/Public International Law

**Target groups**

Research

**Product Category**

Contributed volume

---

**Public Services and the European Union**

Healthcare, Health Insurance and Education Services

Politically sensitive and economically important, welfare services such as health care, health insurance and education have opened up a heated debate in the EU. The application of EU law to welfare services raises discontent from the part of the Member States who perceive their systems to be under threat. Resisting to the application of the EU law is sometimes seen as part of protecting those values. This book suggests that this resistance is largely unjustified. EU law is not damaging to welfare systems, but it provides adequate balancing mechanisms to ensure that all interests are protected. The approach taken in analysing the impact of EU law on welfare services is to look at the negative integration process and answer the questions related to the extent to which EU law applies to welfare services and the kinds of safeguards the Court offers for these services. The proportionality principle distinguishes itself as the central element in balancing national and Community interests.

**Features**

- Makes clear the objections
- Member States have to EU law with respect to welfare services
- Answers questions related to EU law and welfare systems
- Offers alternative solutions to the negative harmonization process

**Contents**

Introduction.- The organisation of welfare.- The reach of internal market rules.- The application of the rules on competition.- Positive and soft law.

**Fields of interest**

European Law/Public International Law

**Target groups**

Research

**Product Category**

Monograph
The Law of Business Organizations
A Concise Overview of the German Corporate Law

This book gives a concise introduction to the German law of business organizations. After outlining the corporate legal framework within Germany, the book addresses some basic issues of international and European business law, such as the law applicable to corporations engaged in cross-border activities. Special emphasis is placed on some recent developments in the European Common Market. The book then describes the various types of German business organizations with a special focus on the German Limited Liability Company (GmbH) and the German Stock Corporation (AG). Key issues such as the incorporation of various business forms, questions of designing corporate contracts, corporate governance issues and the liability of shareholders and managers are also explained.

Features
- Concise overview of the German corporate law framework
- Introduction to key issues of German and EU corporate law for managers and foreign lawyers
- Includes case studies based on legal practice as well as numerous checklists

Contents
Introduction.- Stock Corporation (Aktiengesellschaft).- Limited Liability Company (GmbH).- Corporate Acquisitions in Germany.- Cross-border Corporate Activities.- Supplementary Material.- Appendix.

Fields of interests
Commercial Law; International & Foreign Law; Comparative Law; Management/Business for Professionals

Target groups
Professional/practitioner

Product Category
Professional book

Insider Dealing and Criminal Law
Dangerous Liaisons

This work is a multidisciplinary analysis of the issue of insider dealing from the perspective of the applicability of criminal law to regulate it. First, it examines the nature of its prohibition in the European Union and in the United States of America. The text includes a more extensive overview of prohibition in four Member States of the European Union (France, the United Kingdom, Luxembourg and Poland). Then, it summarises the arguments presented by ethicists and economists in favour of and against insider dealing. Further, it analyses the foundations of criminal law and justifications that are given for their application.

Features
- Two-step theory of criminalisation offers a new approach for application of criminal law
- The two-step criminalisation schema may be used in order to examine any proposition of a new criminal regulation as well as to evaluate already existing laws
- Analysis of insider dealing from the perspective of principles of criminal law
- Comparative study of insider dealing prohibition and case-law in four EU Member States
- Comparison of European and American insider dealing regulation

Contents
Introduction.- Insider dealing prohibition – basic construction, economic and ethical perspectives.
- Practical issues arising from the transposition of the Market Abuse Directive into the chosen Member States’ legal systems.
- Principles-based application of the criminal law.
- Alternative models of regulation of insider dealing.
- Conclusions.

Fields of interests
Commercial Law; Criminal Law; Law Theory/Law Philosophy

Target groups
Research

Product Category
Monograph

Privacy Impact Assessment

Contents
Foreword by Gary Marx.- Part 1 Setting the Scene.- 1 – Introduction to privacy impact assessment; David Wright and Paul de Hert.- 2 – A human rights perspective on privacy and data protection impact assessments; Paul de Hert.- 3 – (Regulatory) impact assessment and better regulation; David Parker.- 4 – Prior checking, a forerunner to privacy impact assessments; Gwendal Le Grand and Emilie Barrau.- Part 2 Five Countries Lead the Way.- 5 – PIAs in Australia: A work-in-progress report; Roger Clarke.- 6 – Privacy impact assessment – Great potential not often realised; Nigel Waters.- 7 – Privacy impact assessments in Canada; Robin Bayley and Colin Bennett.- 8 – PIA in New Zealand; John Edwards.- 9 – Privacy impact assessment in the UK; Adam Warren and Andrew Charlesworth.- 10 – PIA requirements and privacy decision-making in US government agencies; Kenneth Bamberger and Deirdre Mulligan.- Part 3 PIA in the Private Sector: Three Examples.- 11 – PIA: Cornerstone of privacy compliance in Nokia; Tobias Bräutigam.- 12 – How Siemens assesses privacy impacts; Florian Thoma.- 13 – Vodafone’s approach to privacy impact assessments; Stephen Deadman and Amanda Chandler.- Part 4 Specialised PIA: the Cases of the Financial Services Industry and the RFID PIA Framework.- 14 – The ISO PIA standard for financial services; Martin Ferris.- 15 – The RFID PIA – developed by industry, agreed by regulators; Sarah Spiemann.- 16 – Double-take: getting to the RFID PIA Framework; Laurent Beslay and Anne-Christine Lacoste.- Part 5 Specific Issues.- 17 – Surveillance: extending the limits of privacy impact assessment; Charles Raab and David Wright. [...]
Abiotic Stress Responses in Plants
Metabolism, Productivity and Sustainability

Contents

Fields of interests
Plant Sciences; Plant Biochemistry; Plant Anatomy/Development

Target groups
Professional/practitioner

Product Category
Contributed volume

Due December 2011
2012. XIX, 551 p. 63 illus., 14 in color. Hardcover ► $239.00
ISBN 978-1-4614-0633-4

Regenerative Therapy Using Blood-Derived Stem Cells

Contents

Fields of interests
Plant Sciences; Plant Biochemistry; Plant Anatomy/Development

Target groups
Professional/practitioner

Product Category
Contributed volume

Due November 2011
2011. VIII, 167 p. 11 illus., 8 in color. (Stem Cell Biology and Regenerative Medicine) Hardcover ► $189.00
ISBN 978-1-61779-470-4
Amino Acid Analysis
Methods and Protocols

Contents
Germline Development
Methods and Protocols

Contents

Fields of interest
Cell Biology; Developmental Biology

Target groups
Professional/practitioner

Product Category
Contributed volume

SELDI-TOF Mass Spectrometry
Methods and Protocols

Contents

Fields of interests
Proteomics; Spectroscopy/Spectrometry

Target groups
Professional/practitioner

Product Category
Contributed volume

Chemical and Physical Signatures for Microbial Forensics
Combining the disciplines of biological, physical and chemical science, microbial forensics has a rapidly rising profile in a world increasingly troubled by the threat of ‘biocrime’ and ‘bioterrorism’. This valuable resource is a major addition to a body of literature reckoned to lack sufficient breadth.

Features
► Presents the existing state of research for a variety of different phenotypic and trace signature systems associated with cultured microorganisms ► Interdisciplinary in scope ► Educates about the forensic potential of various chemical and physical signatures

Contents

Fields of interests
Bacteriology; Microbiology; Virology

Target groups
Research

Product Category
Contributed volume

Due December 2011
2012. XII, 380 p. 13 in color. (Methods in Molecular Biology, Volume 829) Hardcover
► $189.00
M. De Ley, Katholieke Universiteit Leuven, Heverlee, Belgium (Ed.)

**Cytokine Protocols**

Contents


**Fields of interests**

Cell Biology; Cytokines and Growth Factors

**Target groups**

Professional/practitioner

**Product Category**

Contributed volume

---

J. A. Douthwaite, R. H. Jackson, MedImmune Limited, Cambridge, UK (Eds)

**Ribosome Display and Related Technologies**

**Methods and Protocols**

Contents


**Fields of interest**

Protein Science

**Target groups**

Professional/practitioner

**Product Category**

Contributed volume

---

W. Dubitzky, University of Ulster, Coleraine, UK; O. Wolkenhauer, Universität Rostock, Germany; H. Yokota, Rensselaer Polytechnic Institute, Troy, NY, USA; K. Cho, Korea Advanced Institute of Science and Technology, Daejeon, Republic of Korea (Eds)

**Encyclopedia of Systems Biology**

Contents


**Fields of interests**

Systems Biology; Bioinformatics; Biochemistry, general

**Target groups**

Research

**Product Category**

Encyclo(a)edia

---

Due September 2012
eReference

2012. 3000 p. 950 illus., 350 in color. (In 4 volumes, not available separately)

► $1600.00

ISBN 978-1-4419-9863-7

Print + eReference

2012. 3000 p. 950 illus., 350 in color. (In 4 volumes, not available separately)

► $2050.00

ISBN 978-1-4419-9864-4

---

Due December 2011


Hardcover

► $119.00

ISBN 978-1-61779-438-4

Due November 2011

2012. XVI, 428 p. 57 illus., 1 in color. (Methods in Molecular Biology, Volume 805)

Hardcover

► $139.00

Origins of Life: The Primal Self-Organization

Contents


Fields of interests

Evolutionary Biology; Biochemistry, general; Paleontology

Target groups

Research

Product Category

Contributed volume

A Geographic Perspective of Cuban Landscapes

Beginning in the era of the Spanish conquest and taking the reader right up to the present day, this book focuses on how the landscape of Cuba has changed and evolved into the environment we see today. It illustrates the range of factors – economic, political and cultural – that have determined Cuba’s physical geography, and explores the shifting conservation measures which have been instituted in response to new methods in agriculture and land management.

Features

► New satellite imagery and GIS data from Cuba presented as land-use maps ► Novel approach, combining historical and modern analysis to correlate land use patterns with socio-economic factors ► Interdisciplinary look at environmental change in relation to governance, conservation, business and technology ► First comprehensive work of this nature in this region, and an unprecedented level of detail

Contents


Fields of interests

Landscape Ecology; Physical Geography; Geography (general)

Target groups

Research

Product Category

Monograph

Technological Innovations in Major World Oil Crops, Volume 2

Perspectives

The present volume presents essential information on advancements in oilseed production, processing and utilization. Advances in the technology of seed processing to produce oil and oil quality for edible and industrial applications are well presented, followed by hybrid technology, biotechnology, oil technology and meal quality for animal nutrition. The following areas are also covered: the potential for oil in developing biodiesel markets, fatty acid long chains and their derivative, pollination management, and safety of pollinators from harmful effects of pesticides.

Features

► Extensive coverage on the oil crops field ► Written by expert scientists with unique perspectives ► A source of guidance for researchers, scientists, and teachers

Contents

Preface.- Hybrid Technology.- Oil Technology.- Biotechnology.- Breeding Oil Quality for Edible and Industrial Applications in Oilseed Rape and Linseed.- Biochemistry of Fatty Acids.- In Vitro Mutagenesis and Genetic Improvement.- Economic Impact Assessment of Oilseed IPM Programs.- Agro-Industrial By-Products Utilization in Animal Nutrition.- Pollination in Oil Crops- Recent Advances and Future Strategies.- Oil Crops as Potential Sources of Biofuels.- Withering Yellow Revolution in Indian Context.- Future Perspectives of Major World Oil Crops.

Fields of interests

Plant Breeding/Biotechnology; Plant Sciences

Target groups

Research

Product Category

Contributed volume
Microbial Technologies in Advanced Biofuels Production

Concerns over dwindling fossil fuel reserves and impending climate changes have focused attention worldwide on the need to discover alternative, sustainable energy sources and fuels. Biofuels, already produced on a massive industrial scale, are seen as one answer to these problems.

Features
► Internationally recognized experts contribute specific technical chapters on individual areas of research ► Provides an authoritative review of the various options under development for the production of advanced biofuels as alternative energy sources ► Details present progress and future prospects

Contents

Fields of interests
Microbiology; Biochemistry, general; Immunology

Target groups
Professional/practitioner

Product Category
Contributed volume

Selenium
Its Molecular Biology and Role in Human Health

Contents
Foreword.- Preface.- Dedication.- Acknowledgements.- Chapter 1- History of selenium research.- Part I. Selenocysteine biosynthesis and incorporation into proteins.- Chapter 2- Selenocysteine biosynthesis and the replacement of selenocysteine with cysteine in the pathway.- Chapter 3- Molecular mechanism of eukaryotic selenocysteine incorporation.- Chapter 4- SECIS binding proteins regulate the expression of the selenoprotein.- Chapter 5- A ribosomal perspective on the mechanism of selenocysteine incorporation.- Chapter 6- Chemical basis for the use of selenocysteine.- Chapter 7- Evolutionary basis for the use of selenocysteine.- Chapter 8- Selenocysteine lyase: Mechanism, structure and biological role.- Part II. Selenoproteins and selenoproteins in health.- Chapter 9- Selenoproteins and selenoproteomes.- Chapter 10- Structural characterization of mammalian selenoproteins.- Chapter 11- Selenoproteins: Hierarchy, requirements and biomarkers.- Chapter 12- Selenoproteins and the thioreredoxin system.- Chapter 13- Selenoproteins of the glutathione peroxidase family.- Chapter 14- Glutathione peroxidase 4.- Chapter 15- Selenium transport into protein.- Chapter 16- Structural characterisation of mammalian selenoproteins.- Chapter 17- Selenoproteins and the thioreredoxin system.- Chapter 18- Selenoproteins in nerve system development, function and degeneration.- Chapter 19- Selenoproteins in cardiovascular redox pathology.- Chapter 20- Glutathione peroxidase 1 and diabetes. [...]

Fields of interests
Biochemistry; general; Nutrition; Immunology

Target groups
Professional/practitioner

Product Category
Contributed volume

Bone Research Protocols

Contents

Fields of interests
Cell Biology; Orthopedics

Target groups
Professional/practitioner

Product Category
Contributed volume
**Recent Freshwater Ostracods of the World**

Crustacea, Ostracoda, Podocopida

Their story began 500 million years ago, but we only started to get to know them in 1746, when Linne described the first ostracod species. Vividly portraying the freshwater ostracods, this comprehensive reference work gathers the knowledge gained during some 250 years, but which to date has remained scattered throughout the literature. It starts with an introduction to the class Ostracoda with a special focus on freshwater ostracods and highlights practical methods in their study. The systematic part includes an introduction to all families; identification keys for all subfamilies, genera and species; diagnoses for each subfamily and genus; and lists of synonyms and distribution of species. The text is richly illustrated with distribution maps, line drawings of key generic characteristics, and numerous SEM photographs.

**Features**

- A comprehensive review
- Richly illustrated
- Answers the question: Where do I start to study freshwater ostracods?

**Contents**

Introduction.- Material and Methods.- Superfamily Cytheroidea Baird 1850 (Suborder Cythero- copina Gründel 1867).- Superfamily Darwinuloidea Brady and Norman 1889 (Suborder Darwinolo- copina Brady and Norman 1889).- Superfamily Cypridoidea Baird 1845 (Suborder Cypridocopina Jones 1901).- References.- Index.

**Fields of interests**

Animal Systematics/Taxonomy/ Biogeography; Animal Anatomy / Morphology / Histology; Invertebrates

**Target groups**

Research

**Product Category**

Monograph

---

**Contributed volume**

---

**Due December 2011**

2012. X, 430 p. 102 illus., 24 in color. Hardcover

$209.00

ISBN 978-3-642-22513-0

---

**Due November 2011**

2012. X, 296 p. 312 illus., 9 in color. Hardcover

approx. $209.00

ISBN 978-3-642-21809-5

---

**Due December 2011**

2012. XIII, 236 p. 16 illus., 13 in color. (Advances in Plant Biology, Volume 3) Hardcover

$189.00

Carbon Sequestration in Urban Ecosystems

Urbanization drastically alters the ecosystems structure and functions, disrupting cycling of C and other elements along with water. It alters the energy balance and influences climate at local, regional and global scales. In 2008, urban population exceeded the rural population. In 2050, 70% of the world population will live in urban centers. The number of megacities (10 million inhabitants) increased from three in 1975 to 19 in 2007, and is projected to be 27 in 2025. Rapid urbanization is altering the ecosystem C budget. Yet, urban ecosystems have a large C sink capacity in soils and biota. Judicious planning and effective management can enhance C pool in urban ecosystems, and off-set some of the anthropogenic emissions. Principal components with regards to C sequestration include home lawns and turfs, urban forests, green roofs, park and recreational/sports facilities and urban agriculture.

Features
► Urban ecosystem and climate change ► Carbon sequestration in urban soils and biota ► Sustainable management of urban ecosystems

Contents

Fields of interests
Agriculture; Soil Science & Conservation; Climate Change

Target groups
Professional/practitioner

Product Category
Contributed volume

Edible Medicinal And Non-Medicinal Plants

This book continues as volume 3 of a multi-compendium on Edible Medicinal and Non-Medicinal Plants. It covers edible fruits/seeds used fresh or processed, as vegetables, spices, stimulants, edible oils and beverages. It encompasses species from the following families: Ginkgoaceae, Gnetaceae, Juglandaceae, Lauraceae, Lecythidaceae, Magnoliaceae, Malpighiaceae, Malvaceae, Marantaceae, Meliaceae, Moraceae, Moringaceae, Muntingiaceae, Musaceae, Myristicaceae and Myrtaceae. This work will be of significant interest to scientists, researchers, medical practitioners, pharmacologists, ethnobotanists, horticulturists, food nutritionists, agriculturists, botanists, conservationists, lecturers, students and the general public. Topics covered include: taxonomy; common/English and vernacular names; origin and distribution; agroecology; edible plant parts and uses; botany; nutritive and pharmacological properties; medicinal uses and research findings; nonedible uses; and selected references.

Features
► More than 400 coloured illustrations per volume ► Referenced up-to-date information on nutritive and medicinal properties ► Common and vernacular names to help in plant identification ► Medical and scientific glossaries

Contents

Fields of interests
Plant Sciences; Agriculture; Biomedicine general

Target groups
Research

Product Category
Monograph

Measuring Roots

An Updated Approach

Roots represent half of the plant body – and arguably the more interesting half.

Features
► Written by experts ► Richly illustrated ► Covers both academic and practical aspects

Contents

Fields of interests
Plant Physiology; Biological Techniques; Agriculture

Target groups
Research

Product Category
Contributed volume
Post-Fire Management and Restoration of Southern European Forests

Contents
Setting the scene for post-fire management.- Land cover change and fire regime in Europe.- Recent advances in evaluating the effects of fire on flora, fauna and soil.- Economic assessment of fire damage in Europe.- Fire hazard and combustibility of European forest types.- Fire ecology and post-fire restoration approaches in Southern European Forest types.- Post-fire management of serotinous pine forests.- Post-fire management of non-serotinous pine forests.- Post-fire management of Mediterranean broadleaved forests.- Post-fire management of cork oak forests.- Post-fire management of exotic woody species.- Post-fire management of newly fire affected threatened forest types: biodiversity hotspots.- Post-fire management of Mediterranean shrublands.

Fields of interests
Forestry Management; Environmental Management; Applied Ecology

Target groups
Research

Product Category
Contributed volume
Private or Socialistic Forestry?
Forest Transition in Finland vs. Deforestation in the Tropics

Contents
1. Rationale of the Book. 1.1 Problem of Continuous Tropical Deforestation. 1.2 Research on Causes of Tropical Deforestation. 1.3 Forest Transitions in Finland. 1.4 Role of Theories and Purpose of the Book. 1.5 Structure of the Book. References.- 2. Theory, Method and Data. 2.1 Sustained Yield Industrial Forestry. 2.2 Existing Theories of Forest Transition. 2.3 Theory of Ecological Economics. 2.4 Theory of Institutional Economics. 2.5 Theories of Property Rights and Public Goods. 2.6 Forest-based Development Theory. 2.7 Universal System Causality Model of Forest Transition. 2.8 Methods and Data. 2.9 Discussion. References.- 3. Evolution of Preindustrial Forestry in Finland. 3.1 Hunting and Gathering Economy. 3.2 Shifting Cultivation. 3.3 Conversion of Forests for Agriculture. 3.4 Industrial Exploitation of Forests. 3.5 Great Land Reform. 3.6 State Regulatory Institutions. 3.7 Informal Institutions. 3.8 International Impacts. 3.9 Discussion. References.- 4. Transition to Industrial Forestry in Finland. 4.1 De Facto Transition 1900–1960. 4.2 Ecological Conditions. 4.3 Informal Institutions. 4.4 Formal Institutions. 4.5 Enforcement of Institutions. 4.6 Forest-based Development. 4.7 Coevolution of Forestry and Society. 4.8 Inter-Sector Factors. 4.9 International Factors. 4.10 Transition to Postindustrial Forestry after 1960. 4.11 Discussion and Conclusions. References.- 5. Deforestation in the Tropics. 5.1 Deforestation Tragedy of Socialist Forestry. 5.2 Causes of deforestation in poor and less poor tropical countries. 5.3 Underlying causes of expansion of plantations forests among tropical countries. [...]
**Signaling and Communication in Plant Symbioses**

A multiplicity of biotrophic microorganisms interact with plants in nature, forming symbiotic relationships that range from mutualism to antagonism. Microorganisms that have adopted biotrophy as a lifestyle are able to colonize the plant and often to cross the plant cell boundaries by forming intracellular structures that are the site of nutrient uptake/exchange.

**Features**

- This volume focuses on the genetic, molecular and cellular components involved in the communication between partners of well-known symbioses, but also reports on the advances for less studied systems.
- With contributions by international experts.
- With numerous drawings and color photographs.

**Contents**

The role of diffusible signals in the establishment of rhizobial and mycorrhizal symbioses.
- Infection of Lotus japonicus roots by Mesorhizobium loti.
- Signalling and re-structuring of the plant cell architecture in AM symbiosis.
- Common pathways in legume and arbuscular mycorrhizal symbioses.
- Signalling and communication in the actinorhizal symbioses.
- Signalling in the cyanobacterial-plant symbioses.
- Signalling in ectomycorrhizal symbioses.
- Signalling in the Epichloë festucae – perennial ryegrass mutualistic symbiosis.
- Plant infection by biotrophic fungal and oomycete pathogens.
- Compatibility in biotrophic plant-fungal interactions: Ustilago maydis and friends.
- Compatible plant-root knot nematode interaction and parallels with symbiosis.

**Fields of interests**

Plant Ecology; Plant Sciences; Plant Physiology

**Target groups**

Research

**Product Category**

Contributed volume

---

**Pathobiology and Molecular Biology of the Metabolic Syndrome**

A first “pathobiologist’s view” giving only a short clinical/medical background but a condensed overview about biochemical pathways closely related to several facets of the Metabolic Syndrome.

**Features**

- Condensed pathobiologist's view on the major facets of the Metabolic Syndrome.
- Focus on specific signalling pathways and molecular mechanisms that are involved in the Metabolic Syndrome.
- Connection between subclinical inflammation, insulin resistance and cancer is highlighted.

**Contents**

Preface.
- Chapter 1 Definition of the Metabolic Syndrome.
- Chapter 2 Insulin signaling and insulin resistance.
- Chapter 3 Adipose tissue inflammation and hypoxia.
- Chapter 4 Mitochondrial dysfunction.
- Chapter 5 Nonalcoholic liver inflammation.
- Chapter 6 Dysregulation of apolipoprotein metabolism and disturbed lipid homeostasis.
- Chapter 7 Endothelial dysfunction.
- Chapter 8 Genetics of the Metabolic Syndrome.
- Chapter 9 Metabolic Syndrome and Ovarian Polycystosis.
- Chapter 10 Metabolic Syndrome and Cancer.
- Chapter 11 Animal Models of the Metabolic Syndrome.

**Fields of interests**

Metabolomics; Nutrition; Human Physiology

**Target groups**

Research

**Product Category**

Monograph

---

**Continuous Cover Forestry**

Although the majority of the world’s forest ecosystems are dominated by uneven-sized multi-species stands, forest management practice and theory has focused on the development of plantation monocultures to maximize the supply of timber at low cost. Societal expectations are changing, however, and uneven-aged multi-species ecosystems, selectively managed as Continuous Cover Forestry (CCF), are often believed to be superior to monocultures in addressing a wide range of expectations.

**Features**

- Information about continuous cover forest management is urgently needed.
- People and forest landowners want to avoid clearfelling.
- Forestry paradigm is changing for plantation forestry to near-natural management.

**Contents**

1 Historical Emergence and Current Application of CCF.
- 2 Forest Structure and Diversity.
- 3 Continuous Cover Forestry in Finland.
- 4 Regulation of Timber Yield Sustainability for Tropical and Subtropical Moist Forests: Ecosilvicultural Paradigms and Economic Constraints.
- 5 The Economics of Continuous Cover Forestry.
- 6 Optimizing Continuous Cover Forest Management.
- 7 Modelling Continuous Cover Forests.
- 8 Bootstrap simulation, Markov decision process models, and role of discounting in the valuation of ecological criteria in uneven-aged forest management.
- 9 Resource Assessment Techniques for Continuous Cover Forestry.

**Fields of interests**

Forestry; Forest Management; Environmental Management

**Target groups**

Research

**Product Category**

Contributed volume
C. D. Geddes, University of Maryland, Baltimore, MD, USA (Ed.)

Reviews in Fluorescence 2009

Features
► Chapters authored by known leading figures in the fluorescence field. New volume publishes annually ► Comprehensive coverage of the year's hottest and emerging topics ► Accessible utility in a single volume reference ► New volume publishes annually ► Comprehensive coverage of the year's hottest and emerging topics ► Accessible utility in a single volume reference

Contents
Herpetological Osteopathy
Annotated Bibliography of Amphibians and Reptiles

As scientific analysis of testable hypotheses has replaced the speculative approach to study of bone disease in recent and fossil amphibians and reptiles, the field has advanced from simply reporting observations to analyzing their implications.

Features
- ESM material containing full bibliography for easy searching
- The current effort delineates the information by publication, characterizes the contents of the publication, establishes the validity of the conclusions and provides a unique indexing system for identifying the pertinent literature by common and scientific names
- It represents an exhaustive literature compilation organized searching by subject, examination of articles for additional apparently pertinent citations and review of journal tables of content.

Contents
1. Introduction.
2. Glossary.
3. Pathology classification.
4. Summary of Osseous Pathology in Amphibians and Reptiles.
5. Annotated Bibliography A-C.
6. Annotated Bibliography D-G.
7. Annotated Bibliography H-L.
8. Annotated Bibliography M-N.
9. Annotated Bibliography O-R.
10. Annotated Bibliography S.
11. Annotated Bibliography T-Z.
12. Articles frequently cited in discussion of amphibian and/or reptile pathology.
13. Articles not reviewed.
14. List of scientific and common names.
15. Acknowledgements.

Fields of interest
Animal Ecology; Animal Anatomy / Morphology / Histology; Animal Physiology

Target groups
Graduate

Product Category
Monograph

Due January 2012
2012. XV, 470 p. 90 illus., 78 in color. Hardcover
$209.00

Due October 2011
2012. XV, 948 p. 99 illus., 29 in color. Hardcover
$279.00
ISBN 978-94-007-2228-6

Due October 2011
2012. XV, 837 p. 314 illus., 43 in color. Hardcover
$279.00
ISBN 978-94-007-2221-2

Microorganisms in Environmental Management

Contents
Foreword.
Preface.
1. Halophiles: taxonomy, diversity, physiology and applications.
2. Diversity of enteropathogens in river Narmada and their environmental and health implications.
3. Insights into the genetic relationships between environmental and clinical strains of Yersinia enterocolitica biovar.
4. Role of Microorganisms in remediation of contaminated soil.
5. Role of microbiologically rich compost in reducing biotic and abiotic stresses.
6. Exploitation of chitinolytic bacteria to chitin waste management.
7. Diversity of microbial carbonic anhydrases, their physiological role and applications.
8. Hepatotoxic and protease inhibitory metabolites in planktonic cyanobacteria collected from Central India.
9. Calcium carbonate biominalerization in ferralitic, tropical soils through the oxalate-carbonate pathway.
11. Molecular analyses of microbial activities involved in bioremediation.
13. Bioremediation, bioconversion and detoxification of organic compounds in pulp and paper mill effluent for environmental waste management.
14. Bacteriophage based technology for disinfection of different water systems.
15. Microbial mining of value added products from seaweed waste and their applications.
17. Management of Hospital Wastes with Potential Pathogenic Microbes.

Fields of interest
Microbiology; Agriculture; Biotechnology

Target groups
Research

Product Category
Contributed volume

Due October 2011
2012. XV, 837 p. 314 illus., 43 in color. Hardcover
$279.00
ISBN 978-94-007-2221-2

Microorganisms in Sustainable Agriculture and Biotechnology

Contents
Foreword.
Preface.
Part I. Microbes in Sustainable Agriculture.
1. Plant growth promotion by phytases and phytase-producing microbes due to amelioration in phosphorus availability.
2. Environmental and Nutritional benefits of biopreservation of animal feed.
3. Pivotal role of organic acid secretion by rhizobacteria for plant growth promotion and bioremediation.
5. Utilization of psychrotolerant phosphate solubilizing fungi in low temperature environments of mountain ecosystem.
6. Antimicrobial lipopeptides of Bacillus: Natural Weapons for Biocontrol of Plant Pathogens.
7. Frankia and actinorhizal symbiosis.
9. Genetic and antigenic diversity of ruminant pestiviruses: implications for diagnosis and control.
10. Cyanobacteria-PGPR interactions for effective nutrient and pest management strategies in agriculture.
11. Regulation of Antibiotics Production in Biocontrol Strains of Pseudomonas spp.
12. Exploiting Plant growth promoting rhizomicroorganisms for enhanced crop productivity.
Part II. Microbes in Biotechnology.
15. Metagenomics of saline habitats with respect to bacterial phylogeny and biocatalytic potential.
16. Laccases: The biocatalyst with industrial and biotechnological applications.

Fields of interest
Microbiology; Agriculture; Biotechnology

Target groups
Research

Product Category
Contributed volume

Due October 2011
2012. XV, 837 p. 314 illus., 43 in color. Hardcover
$279.00
ISBN 978-94-007-2221-2
**Forests in Development: A Vital Balance**

Forests in Development: A Vital Balance, shows some of the main advances in forestry over the six years spanning between the XII World Forestry Congress in Canada and the XIII WFC held in Buenos Aires.

**Features**
- Includes themes of production, forest protection, policies, environmental services, and economic aspects, linked by sustainability
- Focuses on the changes acting upon forests and forestry and the adaptation of policies, management and objectives
- Discusses drivers which regulate forest growth and its relation to the ecosystem and ecosystem services
- Proposes actions courses on Ecosystem health, taking into account a changing climate scenario
- Articles are written by leading authors in each of the topics mentioned in the book

**Contents**

**Fields of interests**
Forestry; Forestry Management; Climate Change

**Target groups**
Graduate

**Product Category**
Contributed volume

**Due December 2011**
2012. 200 p. 5 illus., 1 in color. Hardcover
- $129.00
ISBN 978-94-007-2575-1

**Oxidative Stress in Cancer Biology and Therapy**

**Contents**
Mitochondria-Mediated Oxidative Stress and Cancer Therapy.- The Role of Akt Pathway Signaling in Glucose Metabolism and Metabolic Oxidative Stress.- Enhancement of Cancer Therapy Using Ketogenic Diets.- Superoxide Dismutase and Cancer Therapy.- Radiosensitization and Chemosensitization of Multicellular Spheroids by 2-deoxy-D-glucose is Stimulated by a Combination of TNFα and Glucose deprivation-Induced Oxidative Stress.- Chemotherapy-Induced Oxidative Stress in Non-Targeted Normal Tissues.- Tetrahydrobiopterin and Endothelial Nitric Oxide Synthase: Implications for Radiation-Induced Endothelial Dysfunction and Normal Tissue Radiation Injury.- Amifostine and the Endogenous Cellular Antioxidant Enzyme Manganese Superoxide Dismutase in Radioprotection.- Redox Regulation of Stem Cell Compartments: The Convergence of Radiation-Induced Normal Tissue Damage and Oxidative Stress.- Functional Imaging in the Assessment of Normal Tissue Injury Following Radiotherapy.- Histone Deacetylase Inhibitors, Oxidative Stress, and Multiple Myeloma Therapy.- Curcumin, Oxidative Stress, and Cancer Therapy.- Oxidative Stress and Pancreatic Cancer.- Oxidative Stress and Photodynamic Therapy for Prostate Cancer.- Oxidative Stress in Prostate Cancer.- Role of Vitamin E in Prostate Cancer.- Pentoxifylline, Vitamin E, and Modification of Radiation Induced Fibrosis.- Antioxidants, Anorexia/Cachexia, and Oxidative Stress in Patients with Advanced-Stage Cancer.

**Fields of interests**
Oxidative Stress; Cancer Research; Cell Biology

**Target groups**
Professional/practitioner

**Product Category**
Contributed volume

**Due October 2011**
2012. XIV, 440 p. 66 illus., 20 in color. (Oxidative Stress in Applied Basic Research and Clinical Practice) Hardcover
- $209.00
ISBN 978-1-61779-396-7
Adaptation of Microbial Life to Environmental Extremes
Novel Research Results and Application

Features
- Highlights life in several unusual extreme environments
- Emphasizes succint treatment of novel applications
- Provides very thorough bibliographies, including tested websites for easy access to further information

Contents
Physico-chemical boundaries of life (Helga Stan-Lotter).- Microbial diversity in Deep Hypersaline Anoxic Basins (Francesca Mapelli, Sara Borin, Daniele Daffonchio).- Microbial speciation in the geothermal ecosystem (Guðmundur Oli Hreggvidsson, Solveig K. Petursdottir, Snaedis H. Björnsdottir, Olafur H. Fridjonsson).- Bacterial adaptation to hot and dry deserts (Thierry Heulin, Gilles De Luca, Mohamed Barakat, Arjan de Groot, Laurence Blanchard, Philippe Ortet, Wafa Achouak).- Extremophiles in Antarctica; life at low temperatures (David A. Pearce).- An-hydrobiotic rock-inhabiting cyanobacteria: Potential for astrobiochemistry and biotechnology (Daniela Billi).- Psychrophilic microorganisms as important source for biotechnological processes (Sergiu Fendrihan, Teodor G. Negoiță).- Halophilic microorganisms from man-made and natural hypersaline environments: physiology, ecology and biotechnological potential (Madalin Enache, Gabriela Popescu, Takashi Itoh, Masahiro Kamekura).- Applications of Extremophiles in Astrobiology: Habitability and Life Detection Strategies (Felipe Gómez, Victor Parro).- Extremophiles in spacecraft assembly clean rooms (Christine Moissl-Eichinger).

Fields of interests
Microbial Ecology; Microbiology; Biodiversity

Target groups
Research

Product Category
Professional book

Two Hybrid Technologies
Methods and Protocols

Contents

Fields of interests
Protein Science; Proteomics

Target groups
Professional/practitioner

Product Category
Contributed volume

Receptor-like Kinases in Plants
From Development to Defense

Sequencing projects have revealed the presence of at least several hundred receptor kinases in a typical plant genome.

Features
- Recent research findings on individual receptor kinases function are presented
- Focuses on the roles of receptor kinases, their signaling pathways, and the ways in which they are regulated
- State-of-the-art contents

Contents

Fields of interests
Membrane Biology; Protein-Ligand Interactions; Receptors

Target groups
Research

Product Category
Contributed volume
Crop Stress and its Management: Perspectives and Strategies

Contents

Fields of interests
Agriculture; Plant Biochemistry; Oxidative Stress

Target groups
Research

Product Category
Contributed volume

Secretions and Exudates in Biological Systems

Secretions and emissions in biological systems play important signaling roles within the organism but also in its communications with the surrounding environment.

Features
- This volume brings together state-of-the-art information regarding the role of secretions and emissions in different organs and organisms.
- Information about the biochemistry of flower volatiles and root exudates, and their role in attracting pollinators and soil microbial communities.
- No other book covers aspects related to biological secretion in such a holistic and integrative manner.

Contents

Fields of interests
Plant Sciences; Plant Biochemistry; Plant Physiology

Target groups
Research

Product Category
Contributed volume

Bones, Genetics, and Behavior of Rhesus Macaques

Macaca mulatta of Cayo Santiago and Beyond

Contents

Fields of interests
Evolutionary Biology; Anthropology; Developmental Biology

Target groups
Research

Product Category
Contributed volume
**Next Generation Microarray Bioinformatics Methods and Protocols**

**Contents**


**Fields of interest**

Bioinformatics

**Target groups**

Professional/practitioner

**Product Category**

Contributed volume

---

**Synthetic Gene Networks**

**Contents**


**Fields of interest**

Bioinformatics; Systems Biology

**Target groups**

Professional/practitioner

**Product Category**

Contributed volume

---

**mTOR Pathways and Protocols**

**Contents**

Mammalian Target of Rapamycin: A Signaling Kinase for every Aspect of Cellular Life.- Biochemical and Pharmacological Inhibition of mTOR by Rapamycin and an ATP-Competitive mTOR Inhibitor.- Evaluation of the Nutrient-Sensing mTOR Pathway.- mTOR Activity Under Hypoxia.- Isolation of the mTOR Complexes by Affinity Purification.- An in vitro Assay for the Kinase Activity of mTOR Complex 2.- Overexpression or Downregulation of mTOR in Mammalian Cells.- Detection of Cytoplasmic and Nuclear Functions of mTOR by Fractionation.- Evaluation of Rapamycin-Induced Cell Death.- Evaluation of mTOR-Regulated mRNA Translation.- A Genome-wide RNAi Screen for Polypeptides that Alter rpS6 Phosphorylation.- Immunohistochemical Analysis of mTOR activity in Tissues.- Assessing Cell Size and Cell Cycle Regulation in Cells With Altered TOR Activity.- Quantitative Visualization of Autophagy Induction by mTOR Inhibitors.- The in vivo Evaluation of Active-Site TOR Inhibitors (aTORi) in Models of BCR-ABL+ Leukemia.- Inducible raptor and rictor Knockout Mouse Embryonic Fibroblasts.- Expanding Human T Regulatory Cells with the mTOR-Inhibitor Rapamycin.- Rapamycin Induced Enhancement of Vaccine Efficacy in Mice.- Using a Retroviral RNAi System to Investigate in vivo mTOR Functions in T Cells.- Exploring Functional in Vivo Consequences of the Selective Genetic Ablation of mTOR Signaling in T Helper Lymphocytes.- Evaluating the Therapeutic Potential of mTOR Inhibitors Using Mouse Genetic.- Inhibition of PI3K-Akt-mTOR Signaling in Glioblastoma by mTORc1/2 Inhibitors. […]

**Fields of interest**

Cell Biology

**Target groups**

Professional/practitioner

**Product Category**

Contributed volume
Human Auditory Development

This volume will provide an important contemporary reference on hearing development and will lead to new ways of thinking about hearing in children and about remediation for children with hearing loss. Much of the material in this volume will document that a different model of hearing is needed to understand hearing during development. The book is expected to spur research in auditory development and in its application to pediatric audiology.

Features
- Provides an important contemporary reference on hearing development
- Will lead to new ways of thinking about hearing in children
- The book is expected to spur research in auditory development and in its application to pediatric audiology

Contents

Fields of interests
Neurobiology; Otorhinolaryngology; Neurosciences

Target groups
Research

Product Category
Contributed volume

Toxicity of Heavy Metals to Legumes and Bioremediation Potential of Rhizosphere Microbes

Contents
1 Heavy metal availability, uptake and signalling in legumes.- 2 Heavy metals as essential nutrients.- 3 Effects of heavy metals on germinating efficiency of legume seeds.- 4. Changes in phytohormones contents in legumes under heavy metal stress.- 5 Variation in response to heavy metals during vegetative growth of legumes.- 6 Rhizobium-legume symbiosis under metal stressed environment.- 7 Effect of sewage sludge/heavy metals on macromolecules and yield parameters of legumes.- 8 Sorption of heavy metals from aqueous solution by legumes.- 9 Phytochelatin synthases of legumes in response to heavy metals.- 10 Physiological process of legumes influenced by heavy metal application.- 11 Heavy metal induced oxidative damage.- 12 Induction of an antioxidant enzyme system and other oxidative stress markers associated with legumes.- 13 Heavy metal toxicity to nitrogen fixing microorganisms.- 14 How microsymbiont overcome metal stress?- 15 Bioremediation: Challenges and promises.- 16 Role of nitrogen fixers in decontamination/removal of heavy metal toxicity.- 17 Mycoremediation of metal contaminated soils.- 18 Microbially mediated transformation of heavy metals.- 19 Synergistic action of plant growth promoting rhizobacteria and nitrogen fixers in detoxifying the toxicity of heavy metals.- 20 Heavy metal toxicity to humans and strategies adopted for toxicity assessment

Fields of interests
Applied Ecology; Microbiology; Agriculture

Target groups
Research

Product Category
Contributed volume
M. Leikin, University of Haifa, Israel; M. Schwartz, Y. Tobin, Ben-Gurion University, Israel (Eds)

**Current Issues in Bilingualism**
Cognitive and Socio-linguistic Perspectives

As populations become more mobile, so interest grows in bi- and multilingualism, particularly in the context of education.

**Features**
- Features a multi-dimensional approach toward bilingualism issue (linguistic/psycholinguistic, socio-linguistic, and neurocognitive approaches)
- Includes investigation of spoken and written bilingualism
- Unique focus on biliteracy, tri-literacy and diglossia

**Contents**

**Fields of interests**
Linguistics (General); Psycholinguistics; Sociolinguistics

**Target groups**
Research

**Product Category**
Contributed volume

---

M. Pawlak, Adam Mickiewicz University, Kalisz, Poland (Ed.)

**New Perspectives on Individual Differences in Language Learning and Teaching**

The volume constitutes an attempt to capture the intricate relationship between individual learner differences and other variables which are of interest to theorists, researchers and practitioners representing such diverse branches of applied linguistics as psycholinguistics, sociolinguistics, pragmatics or language teaching methodology.

**Features**
- Provides an up-to-date account of theory and research on the role of individual variables in the process of learning and teaching foreign languages
- Focuses upon not only on traditionally recognized cognitive, affective and social factors, but also on learning deficits, as well as approaching all of these from the perspective of both learners and teachers
- Brings together contributions not only by Polish scholars but also leading international experts in the field of individual learner differences, thus striking the right balance between a Polish and more global perspective

**Contents**
Changing Perspectives on Individual Learner Differences.- Cognitive Factors and Instructed Language Acquisition.- Affective and Social Factors in Language Learning.- Individual Differences in Learning and Teaching Practices.

**Fields of interests**
Psycholinguistics; Sociolinguistics; Language Education

**Target groups**
Research

**Product Category**
Monograph

---

**Due November 2011**
2012. VIII, 270 p. 15 illus. (Literacy Studies, Volume 5)
Hardcover
- $139.00
ISBN 978-94-007-2326-9

**Due October 2011**
2011. XXV, 249 p. 12 illus. (Second Language Learning and Teaching) Hardcover
- $129.00
ISBN 978-3-642-20849-2
Chitosan for Biomaterials I
Polymeric Nanoparticles of Chitosan Derivatives as DNA and siRNA Carriers, by Y. K. Kim, H. L.

Features
- Highest Impact Factor of all publications ranked by ISI within Polymer Science Short and concise reports on physics and chemistry of polymers, each written by the world renowned experts - Still valid and useful after 5 or 10 years - The electronic version is available free of charge for standing order customers at: springer.com/series/12

Contents

Fields of interests
Biomaterials; Polymer Sciences; Medical Microbiology

Target groups
Research

Product Category
Monograph

Due August 2011
2011. XI, 236 p. 49 illus., 4 in color. (Advances in Biology, General) Hardcover
- approx. $239.00
ISBN 978-3-642-23113-1

Multiscale Fabrication of Functional Materials for Regenerative Medicine
Regenerative medicine demands new concepts and fabrication tools to improve our common knowledge about cell-cell and cell-environment interactions. In this work, Michele Bianchi shows that different kinds of signals, such as chemical, topographical, and electrical signals, can be arranged in a highly-controlled way. Furthermore, Michele uses scale lengths ranging from several micrometers to a few nanometers, through the employment of unconventional fabrication techniques. For each signal, Michele chose properly designed materials and fabrication methods. The external signals are capable of controlling cell adhesion and growth, opening the way for a systematic investigation of the environmental features affecting cell behaviour.

Features
- Nominated by the University of Bologna for a Springer Theses Prize - These results inspire the exploitation of unconventional fabrication techniques - Contribution to our understanding of cell-cell and cell-environment interactions

Contents

Fields of interests
Nanotechnology; Analytical Chemistry; Cell Biology

Target groups
Research

Product Category
Monograph

Due September 2011
2011. XI, 112 p. 71 illus., 16 in color. (Springer Theses) Hardcover
- $129.00
ISBN 978-3-642-22880-3

Materials Challenges and Testing for Supply of Energy and Resources
One major goal of the World Materials Research Institute Forum - WMRF is to promote young scientists in the field of materials science and engineering. To enhance the international knowledge exchange between young postdoctoral scientists all over the world, WMRF meanwhile regularly organizes joint workshops among the member institutes. These workshops also represent an increasingly appreciated platform to get known to each other and to build co-operations. For such workshops, various topics are selected, pointing to future perspectives and challenges in the field of Materials Science and Engineering.

Features
- Publishes the best contributions of the World Materials Research Institute Forum WMRF - Focused on challenging materials science and engineering topics - Discusses materials challenges for energy, resources and testing

Contents
Introduction. - Materials challenges for nuclear fission and fusion. - Materials challenges for water supply. - Challenges in conclusive, realistic and system oriented materials testing. - Extraction and recovery of scarce elements and minerals.

Fields of interests
Materials Science, general; Energy Technology; Energy, general

Target groups
Research

Product Category
Monograph

Due October 2011
2011. 250 p. 1 illus. in color. Hardcover
- $129.00
ISBN 978-3-642-23347-0
D. I. Millar, University of Edinburgh, UK

**Energetic Materials at Extreme Conditions**

David I.A. Millar’s thesis explores the effects of extreme conditions on energetic materials. His study identifies and structurally characterises new polymorphs obtained at high pressures and/or temperatures. The performance of energetic materials (pyrotechnics, propellants and explosives) can depend on a number of factors including sensitivity to detonation, detonation velocity, and chemical and thermal stability. Polymorphism and solid-state phase transitions may therefore have significant consequences for the performance and safety of energetic materials. In order to model the behaviour of these important materials effectively under operational conditions it is essential to obtain detailed structural information at a range of temperatures and pressures.

**Features**
- Nominated by the University of Edinburgh for a Springer Theses Prize
- Introductory chapters are an excellent way into high-pressure research and energetic materials for newcomers to the field
- Highly developed critical analysis and outline of opportunities for further research

**Contents**
- Introduction.
- Structural Studies of RDX.
- High-Pressure Structural Studies of CL-20.
- Structural Investigation of a Series of Inorganic Azides (Part 1).
- Structural Investigation of a Series of Inorganic Azides (Part 2).
- General Remarks.

**Fields of interests**
- Characterization and Evaluation of Materials; Physical Chemistry; Analytical Chemistry

**Target groups**
- Research

**Product Category**
- Monograph

---

S. Pearton, University of Florida, Gainesville, FL, USA (Ed.)

**GaN and ZnO-based Materials and Devices**

The AllInGaN and ZnO materials systems have proven to be one of the scientifically and technologically important areas of development over the past 15 years, with applications in UV/visible optoelectronics and in high-power/high-frequency microwave devices. The pace of advances in these areas has been remarkable and the wide band gap community relies on books like the one we are proposing to provide a review and summary of recent progress.

**Features**
- Most up-to-date book on the market covering recent advances in UV LEDs, nitride alloys for solar cell applications and GaN power switching devices
- Comprehensive reviews of GaN nanostructures
- Also covers recent advances in oxide electronics on flexible and transparent substrates

**Contents**
- UV LEDs.
- Non-Polar GaN Growth.
- High-Quality AlGaInN Alloys.
- Bulk AlN for UV LEDs.
- Enhancement of the Light-Extraction Efficiency of GaN-Based Light Emitting Diodes.
- GaN-Based Sensors.
- GaN HEMT Technology.
- GaN Power Devices.
- Nitride Nanostructures.
- Radiation-Induced Defects in GaN.
- Electron Injection Effects in GaN.
- Progress and Prospect of Rare-Earth Doped Compounds.
- Advances in PLD of ZnO and Related Compounds.
- ZnO Nanowires and p-Type Doping.
- Multifunctional ZnO Structures.
- ZnO/MgZnO Quantum Wells.
- GZO TFTs.

**Fields of interests**
- Optical and Electronic Materials; Crystallography; Surfaces and Interfaces, Thin Films

**Target groups**
- Graduate

**Product Category**
- Monograph

---

S. Sadewasser, Helmholtz-Zentrum Berlin für Materialien und Energie, Germany; T. Glatzel, Universität Basel, Switzerland (Eds)

**Kelvin Probe Force Microscopy Measuring and Compensating Electrostatic Forces**

Over the nearly 20 years of Kelvin probe force microscopy, an increasing interest in the technique and its applications has developed. This book gives a concise introduction into the method and describes various experimental techniques.

**Features**
- First book dedicated solely to Kelvin force microscopy
- Explains basics, realization, modulation and data interpretation
- Provides important application examples
- Useful reference to researchers and graduate students alike

**Contents**
- Introduction.
- Technical Aspects.
- Experimental technique and working modes.
- Phase Modulation Kelvin Probe Microscopy.
- Data interpretation, spatial resolution and deconvolution.
- Contribution of the numerical approach to Kelvin probe force microscopies.
- Quantum mechanical simulations of electrostatic tip-sample interactions.
- Selected Applications.
- Surface properties of III-V semiconductors.
- Electronic surface properties of semiconductors devices.
- Electronic characterization of low-dimensional systems (quantum/nano-structures).
- Electronic structure of molecular assemblies.
- KPFM for biochemical analysis.
- Local work function analysis of photo catalysts.
- Kelvin probe force microscopy with atomic resolution.

**Fields of interests**
- Surfaces and Interfaces, Thin Films; Thermodynamics; Engineering Thermodynamics, Heat and Mass Transfer

**Target groups**
- Professional/practitioner

**Product Category**
- Monograph

---

**Due September 2011**

2011. IX, 253 p. 137 illus., 90 in color. (Springer Theses) Hardcover
- $129.00
ISBN 978-3-642-23131-5

---

**Due December 2011**

2011. X, 600 p. 334 illus., 175 in color. (Springer Series in Materials Science, Volume 156) Hardcover
- $169.00
ISBN 978-3-642-23520-7

---

**Due September 2011**

- $129.00
ISBN 978-3-642-22565-9
R. Saravanan, M. P. Rani, The Madura College, Madurai, India

**Metal and Alloy Bonding - An Experimental Analysis**

**Charge Density in Metals and Alloys**

Charge density analysis of materials provides a firm basis for the evaluation of the properties of materials. The design and engineering of a new combination of metals requires a firm knowledge of intermolecular features. Recent advances in technology and high-speed computation have made the crystal X-ray diffraction technique a unique tool for the determination of charge density distribution in molecular crystal. Methods have been developed to make experimental probes capable of unraveling the features of charge densities in the intra- and inter-molecular regions of crystal structures. In Metal and Alloy Bonding - An Experimental Analysis, the structural details of materials are elucidated with the X-ray diffraction technique. Analyses of the charge density and the local and average structure are given to reveal the structural properties of technologically important materials.

**Features**
- Provides experimental results relating to the charge density in metals and alloys
- Includes a complete analysis of the structure, local distribution of atoms and electron distribution in core, valence and bonding region
- Gives readers the necessary knowledge of charge density to manipulate the manufacture of alloys for specific applications

**Contents**
1. Introduction.
2. Charge Density Analysis from X-Ray Diffraction.
3. Results and Discussion.
4. Conclusion.

**Fields of interests**
Metallic Materials; Operating Procedures, Materials Treatment; Physical Chemistry

**Target groups**
Professional/practitioner

**Product Category**
Professional book

**Due September 2011**

2011. XV, 235 p. 55 illus., 4 in color. Hardcover
- $129.00
ISBN 978-1-4471-2203-6
**Mathematics**

**Modelling of Physiological Flows**

**Contents**

**Fields of interests**
Computational Mathematics and Numerical Analysis; Human Physiology; Mathematical Modeling and Industrial Mathematics

**Target groups**
Research

**Product Category**
Monograph

---

**Due September 2011**

2011 X, 240 p. 151 illus., 1 in color. (MS&A, Volume 5) Hardcover

$109.00


---

**Due October 2011**

2012. X, 158 p. 43 illus., 38 in color. (Lecture Notes in Mathematics / Mathematical Biosciences Subseries, Volume 2035) Softcover

$49.95

ISBN 978-3-642-22989-3

---

**Remembering Sofya Kovalevskaya**

Sofia Kovalevskaya was a brilliant and determined young Russian woman of the 19th century who wanted to become a mathematician and who succeeded, in often difficult circumstances, in becoming arguably the first woman to have a professional university career in the way we understand it today. This memoir, written by a mathematician who specialises in symplectic geometry and integrable systems, is a personal exploration of the life, the writings and the mathematical achievements of a remarkable woman. It emphasises the originality of Kovalevskaya’s work and assesses her legacy and reputation as a mathematician and scientist. Her ideas are explained in a way that is accessible to a general audience, with diagrams, marginal notes and commentary to help explain the mathematical concepts and provide context.

**Contents**

**Fields of interests**
History of Mathematical Sciences; Theoretical and Applied Mechanics; Gender Studies

**Target groups**
Popular/general

**Product Category**
Popular science
Convexity and Optimization in Banach Spaces

An updated and revised edition of the 1986 title Convexity and Optimization in Banach Spaces, this book provides a self-contained presentation of basic results of the theory of convex sets and functions in infinite-dimensional spaces. The main emphasis is on applications to convex optimization and convex optimal control problems in Banach spaces. A distinctive feature is a strong emphasis on the connection between theory and application. This edition has been updated to include new results pertaining to advanced concepts of subdifferential for convex functions and new duality results in convex programming. The last chapter, concerned with convex control problems, has been rewritten and completed with new research concerning boundary control systems, the dynamic programming equations in optimal control theory and periodic optimal control problems.

Features
- This book provides a strong emphasis on the link between abstract theory and applications to convex optimization.
- Chapters end with an informative "bibliographic notes" section for further reading.
- Includes fundamental results of infinite-dimensional convex analysis.

Contents
Fundamentals of Functional Analysis.
- Convex Functions.
- Convex Programming.
- Convex Control Problems in Banach Spaces.

Fields of interest
Optimization

Target groups
Research

Product Category
Monograph

S. Benenti, Università di Torino, Italy

Hamiltonian Structures and Generating Families

This book is an enhanced version of an earlier Russian edition. Besides thorough revisions, more emphasis was put on reordering the topics according to a category-theoretical view. This allows the mathematical results to be stated, proved, and understood in a much easier and elegant way. From the reviews of the Russian edition: "The main accent is shifted to the application . . . in geometrical optics, thermostatics and control theory, and not to the Hamiltonian mechanics only. . . . To make the book fairly self-contained, full details of basic definitions and all proofs are included. In this way, the majority of the text can be read without the prerequisite of a course in geometry.

Features
- Enhanced version of Russian first edition.
- Focuses on Hamiltonian mechanics, as well as the application of modern mathematical methods of symplectic geometry and topology in geometrical optics, thermostatics and control theory.
- Self-contained with full details of basic notions of calculus on manifolds in the first two chapters.

Contents
Preface.
- Basic Notions of Calculus on Manifolds.
- Relations.
- Symplectic Relations on Symplectic Manifolds.
- Hamiltonian Optics in Euclidean Spaces.
- Control of Static Systems.
- Symplectic Relations on Cotangent Bundles.
- Canonical Lift on Cotangent Bundles.
- The Geometry of the Hamilton-Jacobi Equation.
- Hamiltonian Optics in Euclidean Spaces.
- Symplectic Manifolds.
- Canonical Lift on Cotangent Bundles.
- The Geometry of the Hamilton-Jacobi Equation.
- Hamiltonian Optics in Euclidean Spaces.
- Control of Static Systems.
- Supplementary Topics.
- Global Hamilton Principal Functions on S2 and H2.

Fields of interest
Global Analysis and Analysis on Manifolds; Systems Theory, Control; Mathematical Applications in the Physical Sciences

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

K. Berglund, University of Helsinki, Finland

The Vexing Case of Igor Shafarevich, a Russian Political Thinker

Features
- "The Shafarevich case" discussed in this study created a large controversy in the mathematics community at the beginning of the 1990s about a fundamental ethical principle: Can scientific honorary societies make demands to their members concerning their non-scientific views?
- Another, even bigger problem in Shafarevich's case is that, as this study shows, he was condemned wrongly, on the basis of superficial groundwork and tendentious reading of his texts. This study will hopefully set off Shafarevich's belated rehabilitation. Mathematicians are often fascinating personalities and Shafarevich is no exception.

Contents
1 igor shafarevich, a lightning rod for controversy.
- 2 shafarevich's early years in the young soviet state.
- 3 shafarevich, the human rights activist.
- 4 the first disputes about the soviet – and russian – future.
- 5 from under the rubble, shafarevich's and solzhenitsyn's joint project.
- 6 shafarevich's addresses until the early 1980s.
- 7 shafarevich's first statements during the era of glasnost.
- 8 russophobia.
- 9 the rapid political changes of the late 1980s early 1990s.
- 10 critique of techno-scientific civilisation.

Fields of interest
Mathematics in the Humanities and Social Sciences

Target groups
Research

Product Category
Monograph
Nonlinear PDE's and Applications
C.I.M.E. Summer School, Cetraro, Italy 2008, Editors: Luigi Ambrosio, Giuseppe Savaré

This volume collects the notes of the CIME course „Nonlinear PDE’s and applications” held in Cetraro (Italy) on June 23–28, 2008. It consists of four series of lectures, delivered by Stefano Bianchini (SISSA, Trieste), Eric A. Carlen (Rutgers University), Alexander Mielke (WIAS, Berlin), and Cédric Villani (Ecole Normale Superieure de Lyon). They presented a broad overview of far-reaching findings and exciting new developments concerning, in particular, optimal transport theory, nonlinear evolution equations, functional inequalities, and differential geometry.

Features
- A broad overview on some deep results and new exciting developments
- Contribution of leading experts
- Accessible introduction to new theories and results

Contents

Fields of interests
Analysis; Partial Differential Equations; Calculus of Variations and Optimal Control; Optimization

Target groups
Research

Product Category
Contributed volume

Contributions in Analytic and Algebraic Number Theory
Festschrift for S. J. Patterson

Features
- Contributed volume is dedicated to Samuel J. Patterson, and many of the articles in this volume were presented at the conference “Patterson 60++” at the University of Göttingen in July 2009 on the occasion of his 60th birthday
- This volume covers a broad range of topics within the vast field of number theory and appeals to a broad readership
- Contributions to the book are the work of an international and select group of first-rate experts in the field of analytic number theory

Contents

Fields of interest
Number Theory

Target groups
Research

Product Category
Contributed volume

Frontiers in Numerical Analysis
- Durham 2010

This book contains detailed lecture notes on four topics at the forefront of current research in computational mathematics. Each set of notes presents a self-contained guide to a current research area and has an extensive bibliography. In addition, most of the notes contain detailed proofs of the key results. The notes start from a level suitable for first year graduate students in applied mathematics, mathematical analysis or numerical analysis, and proceed to current research topics. The reader should therefore be able to gain quickly an insight into the important results and techniques in each area without recourse to the large research literature. Current (unsolved) problems are also described and directions for future research are given. This book is also suitable for professional mathematicians who require a succinct and accurate account of recent research in areas parallel to their own, and graduates in mathematical sciences.

Features
- Current research areas are introduced on the right level for first-year graduate students
- Topics are usually not covered in text books
- Authors are distinguished scientists in their field

Fields of interest
Computational Mathematics and Numerical Analysis

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook
Contents

Fields of interests
Optimization; Circuits and Systems; Algorithms

Target groups
Research

Product Category
Contributed volume

Sensors: Theory, Algorithms, and Applications

V. L. Boginski, University of Florida, Gainesville, FL, USA; C. Commander, Eglin AFB, FL, USA; P. M. Pardalos, University of Florida, Gainesville, FL, USA; Y. Ye, Stanford University, CA, USA (Eds)

Notions of Positivity and the Geometry of Polynomials

G. S. Chirikjian, Johns Hopkins University, Baltimore, MD, USA

Stochastic Models, Information Theory, and Lie Groups, Volume 2

Analytic Methods and Modern Applications

P. Brändén, Royal Institute of Technology, Stockholm, Sweden; M. Passare, Stockholm University, Sweden; M. Putinar, University of California, Santa Barbara, CA, USA (Eds)

The book consists of solicited articles from a select group of mathematicians and physicists working at the interface between positivity and the geometry, combinatorics or analysis of polynomials of one or several variables. It is dedicated to the memory of Julius Borcea (1968-2009), a distinguished mathematician, Professor at the University of Stockholm. With his extremely original contributions and broad vision, his impact on the topics of the planned volume cannot be underestimated. All contributors knew or have exchanged ideas with Dr. Borcea, and their articles reflect, at least partially, his heritage.

Feature
► At the interface between positivity and the geometry, combinatorics or analysis of polynomials of one or several variables solicited articles from a select group of mathematicians and physicists dedicated to the memory of Julius Borcea (1968-2009), a distinguished mathematician

Fields of interest
Analysis

Target groups
Research

Product Category
Contributed volume

Due December 2011

2011. X, 244 p. 73 illus., 56 in color. (Springer Optimization and Its Applications, Volume 61) Hardcover
► $124.00

Birkhäuser

Due September 2011

2011. XX, 404 p. 16 illus., 2 in color. (Trends in Mathematics) Hardcover
► $149.00
ISBN 978-3-0348-0141-6

Birkhäuser

Due December 2011

► approx. $59.95
S. Coen, Università di Bologna, Italy (Ed.)

Mathematicians in Bologna
1861–1960

The scientific personalities of L. Cremona, E. Beltrami, S. Pincherle, E. Enriques, Beppo Levi, G. Vitali, L. Tonelli, Beniamino Segre and of several other mathematicians who worked in Bologna in the century 1861–1960 are examined by different authors, in some cases providing different viewpoints. Most contributions in the volume are historical; they reproduce original documents, or they study the original works and their impact on later research. The achievements of other mathematicians are investigated for their present-day importance.

Features

► First book devoted to the study of the influence of the two world wars, ► Fascism and the setting up of the Italian Republic on scientific studies in Italy based on the scientific legacies of members of a single academic environment ► Significant and valuable contributions to algebraic geometry, differential geometry, operator and integration theory, real and complex analysis, mathematical physics, and studied in a unique historical context ► Ample account of the mathematical scientific milestones made at the University of Bologna, established in 1088, during the first century of the Italian state, 1861–1960

Fields of interest

History of Mathematical Sciences

Target groups

Research

Product Category

Contributed volume

Z. Cvetkovski, European University R. Macedonia, Skopje, Macedonia

Inequalities

Theorems, Techniques and Selected Problems

Features

► Contains 458 problems on Algebra-Inequalities ► Detailed solutions are given ► Theoretical background and techniques for proving inequalities are provided ► Ideal for participants of national and international mathematical contests

Contents


Fields of interest

Algebra; Popular Science in Mathematics/Computer Science/Natural Science/Technology; Mathematics Education

Target groups

Popular/general

Product Category

Reference work

P. Deuflhard, Zuse-Institut Berlin (ZIB), Germany

Newton Methods for Nonlinear Problems

Affine Invariance and Adaptive Algorithms

This book deals with the efficient numerical solution of challenging nonlinear problems in science and engineering, both in finite dimension (algebraic systems) and in infinite dimension (ordinary and partial differential equations). Its focus is on local and global Newton methods for direct problems or Gauss-Newton methods for inverse problems. The term 'affine invariance' means that the presented algorithms and their convergence analysis are invariant under one out of four subclasses of affine transformations of the problem to be solved. Compared to traditional textbooks, the distinguishing affine invariance approach leads to shorter theorems and proofs and permits the construction of fully adaptive algorithms. Lots of numerical illustrations, comparison tables, and exercises make the text useful in computational mathematics classes. At the same time, the book opens many directions for possible future research.

Fields of interests

Computational Mathematics and Numerical Analysis; Computational Science and Engineering; Ordinary Differential Equations

Target groups

Graduate

Product Category

Graduate/Advanced undergraduate textbook

Birkhäuser

Due December 2011

2012. XII, 550 p. 6 illus. Hardcover
► $179.00
ISBN 978-3-0348-0226-0

Due November 2011

2012. 370 p. Softcover
► $49.95
ISBN 978-3-642-23791-1

Due October 2011

► $74.95
ISBN 978-3-642-23898-7
Probability in Complex Physical Systems
In Honour of Erwin Bolthausen and Jürgen Gärtner

Probabilistic approaches have played a prominent role in the study of complex physical systems for more than thirty years. This volume collects twenty articles on various topics in this field, including self-interacting random walks and polymer models in random and non-random environments, branching processes, Parisi formulas and metastability in spin glasses, and hydrodynamic limits for gradient Gibbs models.

Features
► With contributions by international experts ► Introduces new concepts ► Includes a stimulating mixture of research articles and exclusive surveys on active research fields

Contents

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

Target groups
Research

Product Category
Contributed volume

Mathematical Aspects of Discontinuous Galerkin Methods

This book introduces the basic ideas to build discontinuous Galerkin methods and, at the same time, incorporates several recent mathematical developments. The presentation is to a large extent self-contained and is intended for graduate students and researchers in numerical analysis. The material covers a wide range of model problems, both steady and unsteady, elaborating from advection-reaction and diffusion problems up to the Navier-Stokes equations and Friedrichs’ systems. Both finite element and finite volume viewpoints are exploited to convey the main ideas underlying the design of the approximation.

Features
► Understanding the mathematical foundations helps the reader design methods for new applications ► Bridging the gap between finite volumes, finite elements, and discontinuous Galerkin methods ► The mathematical setting for the continuous model is a key to successful approximation methods

Contents
Basic concepts. - Steady advection-reaction. - Unsteady first-order PDEs. - PDEs with diffusion. - Additional topics on pure diffusion. - Incompressible flows. - Friedrichs’ Systems. - Implementation.

Fields of interests
Numerical Analysis; Computational Mathematics and Numerical Analysis; Appl.Mathematics/Computational Methods of Engineering

Target groups
Research

Product Category
Monograph

Operator Inequalities of the Jensen, Čebyšev and Grüss Type

This book introduces the basic ideas to build discontinuous Galerkin methods and, at the same time, incorporates several recent mathematical developments. The presentation is to a large extent self-contained and is intended for graduate students and researchers in numerical analysis. The material covers a wide range of model problems, both steady and unsteady, elaborating from advection-reaction and diffusion problems up to the Navier-Stokes equations and Friedrichs’ systems. Both finite element and finite volume viewpoints are exploited to convey the main ideas underlying the design of the approximation.

Features
► Understanding the mathematical foundations helps the reader design methods for new applications ► Bridging the gap between finite volumes, finite elements, and discontinuous Galerkin methods ► The mathematical setting for the continuous model is a key to successful approximation methods

Contents
Basic concepts. - Steady advection-reaction. - Unsteady first-order PDEs. - PDEs with diffusion. - Additional topics on pure diffusion. - Incompressible flows. - Friedrichs’ Systems. - Implementation.

Fields of interests
Numerical Analysis; Computational Mathematics and Numerical Analysis; Appl.Mathematics/Computational Methods of Engineering

Target groups
Research

Product Category
Monograph
A Panorama of Modern Operator Theory and Related Topics
The Israel Gohberg Memorial Volume

This book is dedicated to the memory of Israel Gohberg (1928–2009) – one of the great mathematicians of our time – who inspired innumerable fellow mathematicians and directed many students. The volume reflects the wide spectrum of Gohberg’s mathematical interests, with topics ranging from operator theory and linear algebra to integral and differential equations, complex analysis and engineering problems. It consists of more than 25 invited and peer-reviewed original research papers written by his former students, co-authors and friends.

Features
- Written by top experts in operator theory and its applications reflecting the exceptionally wide range of Gohberg’s mathematical achievements
- State of the art contributions to single and multivariable operator theory and its applications
- Not restricted to a specific issue. Rather it provides a wide picture of various directions, theoretical as well as applied ones
- Deals with topics that are central for operator theory and its applications and have been initiated and/or developed by Israel Gohberg

Fields of interests
Operator Theory; Functional Analysis; Several Complex Variables and Analytic Spaces

Target groups
Research

Product Category
Commemorative publication

W. Gautschi, Purdue University, West Lafayette, IN, USA

Numerical Analysis

Revised and updated, this second edition of Walter Gautschi’s successful Numerical Analysis explores computational methods for problems arising in the areas of classical analysis, approximation theory, and ordinary differential equations, among others. Topics included in the book are presented with a view toward stressing basic principles and maintaining simplicity and teachability as far as possible, while subjects requiring a higher level of technicality are referenced in detailed bibliographic notes at the end of each chapter. Readers are thus given the guidance and opportunity to pursue advanced modern topics in more depth.

Features
- Highly acclaimed style is simple and teachable
- Detailed bibliographic notes for further study
- Integrated with mathematical software for advanced computations
- Abundant exercises cover both theoretical and practical methods
- Complete, 350-page solutions manual provides exceptional instructional value

Contents

Fields of interests
Computational Mathematics and Numerical Analysis; Computational Science and Engineering; Ordinary Differential Equations

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

D. Goldfeld, Columbia University, NY, USA; J. Jorgenson, The City College of New York, NY, USA; P. Jones, Yale University, New Haven, CT, USA; D. Ramakrishnan, California Institute of Technology, Pasadena, CA, USA; K. A. Ribet, University of California at Berkeley, CA, USA; J. Tate, Harvard University, Cambridge, MA, USA (Eds)

Number Theory, Analysis and Geometry

In Memory of Serge Lang

Contents
- Preface.- Introduction (Tate).- Publications by Serge Lang.- Raynaud’s Group-Scheme and Reduction of Coverings ( Abravamovich).- The Modular Degree, Congruence Primes, and Multiplicity One (Agashe, Ribet, Stein).- Le théorème de Siegel-Shidlovsky revisté (Bertrand).- Some Aspects of Harmonic Analysis on $\text{SO}(2)$ and $\text{SO}(3), \text{SO}(2) \backslash \text{SO}(3)$ (Brenner, Sinton).- Differential Characters on Curves (Buium).- Weyl Group Mulpile Dirichlet Series of Type A_2 (Chinta, Gunnels).- Remarks on the Geometry of the Diffeomorphism Group of the Circle (Constantin, Kolev).- Harmonic Representatives For Cuspidal Cohomology Classes (Dodziuk, McGowan, Perry).- About the ABC Conjecture and an Alternative (van Frenkenhuijsen).- Unifying Themes Suggested by Belyi’s Theorem (Goldring).- On the Local Divisibility of Heegner Points ( Gross, Parson).- Uniform Estimates for Primitive Divisors in Elliptic Divisibility Sequences (Ingram, Silverman).- The Heat Kernel, Theta Inversion and Zetas on Gamma\text{K}(Jorgenson, Lang).- Applications of Heat Kernels on Abelian Groups: zeta(2n), Quadratic Reciprocity, Bessel Integrals (Karlsson).- Report on the Irreducibility of L-Functions (Katz).- On the Local Divisibility of Heegner Points (Katz).- Raynaud’s Group-Scheme and Reduction of Coverings (Abravamovich).- The Modular Degree, Congruence Primes, and Multiplicity One (Agashe, Ribet, Stein).- Le théorème de Siegel-Shidlovsky revisté (Bertrand).- Some Aspects of Harmonic Analysis on $\text{SO}(2)$ and $\text{SO}(3), \text{SO}(2) \backslash \text{SO}(3)$ (Brenner, Sinton).- Differential Characters on Curves (Buium).- Weyl Group Mulpile Dirichlet Series of Type A_2 (Chinta, Gunnels).- Remarks on the Geometry of the Diffeomorphism Group of the Circle (Constantin, Kolev).- Harmonic Representatives For Cuspidal Cohomology Classes (Dodziuk, McGowan, Perry).- About the ABC Conjecture and an Alternative (van Frenkenhuijsen).- Unifying Themes Suggested by Belyi’s Theorem (Goldring).- On the Local Divisibility of Heegner Points ( Gross, Parson).- Uniform Estimates for Primitive Divisors in Elliptic Divisibility Sequences (Ingram, Silverman).- The Heat Kernel, Theta Inversion and Zetas on Gamma\text{K}(Jorgenson, Lang).- Applications of Heat Kernels on Abelian Groups: zeta(2n), Quadratic Reciprocity, Bessel Integrals (Karlsson).- Report on the Irreducibility of L-Functions (Katz).- Remark on Fundamental Groups and Effective Diophantine Methods for Hyperbolic Curves (Kim). [...]
The purpose of these lecture notes is to provide an introduction to the theory of complex Monge–Ampère operators (definition, regularity issues, geometric properties of solutions, approximation) on compact Kähler manifolds (with or without boundary).

Features
- The first self-contained presentation of Krylov’s stochastic analysis for the complex Monge–Ampère equation
- A comprehensive presentation of Yau’s proof of the Calabi conjecture
- A great part of the material (both classical results and more recent)
- A pedagogical style, lectures accessible to non-experts.

Contents

Fields of interests
Several Complex Variables and Analytic Spaces; Differential Geometry; Partial Differential Equations

Target groups
Research

Product Category
Contributed volume

The Crossing of Heaven
Memoirs of a Mathematician
Preface by: I. Antoniou, Aristotle University of Thessaloniki, Greece

Among the group of physics honors students huddled in 1957 on a Colorado mountain watching Sputnik bisect the heavens, one young scientist was destined, three short years later, to become a key player in America’s own top-secret spy satellite program. One of our era’s most prolific mathematicians, Karl Gustafson was given just two weeks to write the first US spy satellite’s software. The project would fundamentally alter America’s Cold War strategy, and this autobiographical account of a remarkable academic life spent in the top flight tells this fascinating inside story for the first time.

Features
- Previously untold story of early computing and the world’s first spy satellite
- Unique accounts of personal interactions with Nobel laureates, Fields Medal winners, and other sometimes strange famous personalities in science
- Tales and secrets of high finance, and dangers therein

Contents

Fields of interests
Mathematics, general; Applications of Mathematics; Quantitative Finance

Target groups
Popular/general

Product Category
Biography
N. Herrmann, Leibniz Universität Hannover, Germany

**The Beauty of Everyday Mathematics**

Imagine that you've finally found a parking space after a long and harrowing search, but are now encountering some difficulty in trying to enter this space. Wouldn't it be great if you knew a formula that allowed you to enter the space without difficulty? Are you annoyed because your soda can doesn't remain upright during a picnic? Would you like to know why a mirror swaps right and left, but not top and bottom? Are you looking for a mathematical speech to toast your mother-in-law's 85th birthday? Or do you want to give your heart away mathematically? Dr. Norbert Herrmann provides amusing and entertaining solutions to these and many other problems that we encounter in everyday situations. "A book for teachers, students of mathematics, and anybody who likes unusual and amusing calculations."

**Features**

- Complicated mathematics presented in a generally understandable way
- Examples from everyday life are mathematized
- Many examples presented with a good sense of humor
- Small riddles and conjuring tricks guarantee an entertaining reading

**Contents**

Preface - The Soda Can Problem - The Mirror Problem - The Leg Problem - The Sketch Problem - the Parallel Parking Problem - the Parking Garage Problem - the 85th Birthday Problem - the Slippery-Ice of Bread-Slicing Problem - the Snail-Racehorse Problem - The Discus Thrower Problem - The Beer Coaster Problem - the Toasting Racehorse Problem - The Discus Thrower Problem - Slippery-Ice of Bread-Slicing Problem - the Snail-Garage Problem - the 85th Birthday Problem - The Parking Problem - The Leg Problem - The Sketch Problem -

**Fields of interest**

Mathematics, general; Education (general); Physics, general

**Target groups**

Popular/general

**Product Category**

Monograph

---

B. Howard, Boston College, Chestnut Hill, MA, USA; T. Yang, University of Wisconsin, Madison, WI, USA

**Intersections of Hirzebruch-Zagier Divisors and CM Cycles**

This monograph treats one case of a series of conjectures by S. Kudla, whose goal is to show that Fourier of Eisenstein series encode information about the Arakelov intersection theory of special cycles on Shimura varieties of orthogonal and unitary type. Here, the Eisenstein series is a Hilbert modular form of weight one over a real quadratic field, the Shimura variety is a classical Hilbert modular surface, and the special cycles are complex multiplication points and the Hirzebruch-Zagier divisors. By developing new techniques in deformation theory, the authors successfully compute the Arakelov intersection multiplicities of these divisors, and show that they agree with the Fourier coefficients of derivatives of Eisenstein series.

**Features**

- Develops new methods in explicit arithmetic intersection theory
- Develops new techniques for the study of Shimura varieties and automorphic forms, central objects in modern number theory
- Proves new cases of conjectures of S. Kudla

**Contents**

1. Introduction
2. Linear Algebra
3. Moduli Spaces of Abelian Surfaces
4. Eisenstein Series
5. The Main Results
6. Local Calculations

**Fields of interest**

Number Theory

**Target groups**

Research

**Product Category**

Monograph

---

I. Itenberg, IRMA, Université de Strasbourg, France; B. Jöricke, Institut des Hautes Études Scientifiques, Bures-sur-Yvette, France; M. Passare, Stockholm University, Sweden (Eds)

**Perspectives in Analysis, Geometry, and Topology**

On the Occasion of the 60th Birthday of Oleg Viro

**Contents**

Microstructured Materials: Inverse Problems

Complex, microstructured materials are widely used in industry and technology and include alloys, ceramics and composites. Focusing on non-destructive evaluation (NDE), this book explores in detail the mathematical modeling and inverse problems encountered when using ultrasound to investigate heterogeneous microstructured materials. The outstanding features of the text are firstly, a clear description of both linear and nonlinear mathematical models derived for modelling the propagation of ultrasonic deformation waves, and secondly, the provision of solutions to the corresponding inverse problems that determine the physical parameters of the models. The data are related to nonlinearities at both a macro- and micro-level, as well as to dispersion. The authors' goal has been to construct algorithms that allow us to determine the parameters within which we are required to characterize microstructure.

Features
► Mathematical modeling is based on physical principles
► Physical models are interwoven with inverse problems
► A novel concept of using solitary waves for NDE is proposed

Contents
Introduction.- 1 Inverse problems and non-destructive evaluation.- 2 Mathematical models of microstructured solids.- 3 Linear waves.- 4 Inverse problems for linear waves.- 5 Solitary waves in nonlinear models.- 6 Inverse problems for solitary waves.- 7 Summary.- References.- Index

Fields of interest
Partial Differential Equations; Mechanics; Continuum Mechanics and Mechanics of Materials

Target groups
Research

Product Category
Monograph

Stochastic Stability of Differential Equations

With contrib. by: G. N. Milstein, Ural State University, Ekaterinburg, Russia

Since the publication of the first edition of the present volume in 1980, the stochastic stability of differential equations has become a very popular subject of research in mathematics and engineering. To date exact formulas for the Lyapunov exponent, the criteria for the moment and almost sure stability, and for the existence of stationary and periodic solutions of stochastic differential equations have been widely used in the literature.

Features
► Completely revised and enlarged second edition
► Important new results are contained
► Useful for researchers and for students in graduate courses

Contents

Fields of interest
Probability Theory and Stochastic Processes; Mechanics

Target groups
Research

Product Category
Monograph

Due September 2011
2011. X, 162 p. 29 illus., 3 in color. (Springer Monographs in Mathematics) Hardcover
► $99.00
ISBN 978-3-642-21583-4

Due August 2011
► $129.00
ISBN 978-3-642-23279-4

Due November 2011
► $74.95
ISBN 978-1-4614-0501-6

H. Kielhöfer, University of Augsburg, Germany

Bifurcation Theory
An Introduction with Applications to Partial Differential Equations

In the past three decades, bifurcation theory has matured into a well-established and vibrant branch of mathematics. This book gives a unified presentation in an abstract setting of the main theorems in bifurcation theory, as well as more recent and lesser known results. It covers both the local and global theory of one-parameter bifurcations for operators acting in infinite-dimensional Banach spaces, and shows how to apply the theory to problems involving partial differential equations. In addition to existence, qualitative properties such as stability and nodal structure of bifurcating solutions are treated in depth. This volume will serve as an important reference for mathematicians, physicists, and theoretically-inclined engineers working in bifurcation theory and its applications to partial differential equations. The second edition is substantially and formally revised and new material is added. Among this is bifurcation with a two-dimensional kernel with applications, the buckling of the Euler rod, the appearance of Taylor vortices, the singular limit process of the Cahn-Hilliard model, and an application of this method to more complicated nonconvex variational problems.

Features
► Gives a unified presentation in an abstract setting
► Two new sections along with many revisions
► More references included

Contents
Introduction.- Global Theory.- Applications.

Fields of interest
Partial Differential Equations; Dynamical Systems and Ergodic Theory; Applications of Mathematics

Target groups
Research

Product Category
Graduate/Advanced undergraduate textbook
News 9/2011

R. Krömer, Siegen, Germany; Y. Chin-Drian, Université Nancy 2/ LHSP-Archives Poincaré, Nancy, France (Eds)

New Essays on Leibniz Reception
In Science and Philosophy of Science 1800-2000

Contents
Introduction Ralf Krömer and Yannick Chin-Drian.- The idea of number from Gauss to Cantor. The Leibnizian heritage and its surpassing Philippe Séguin.- The Reception of Leibniz’s Logic in 19th Century German Philosophy Volker Peckhaus.- Leibniz’s Metaphysics as an Epistemological Obstacle to the Mathematization of Nature: the View of a Late 19th Century Neo-Kantian, Kord Lasswitz François Willmann.- Peano and his School between Leibniz and Couturat: the influence in mathematics and in international language Erika Luciano.- Couturat’s reception of Leibniz Anne-Françoise Schmid.- Russell and Leibniz on the classification of propositions Nicholas Griffin.- Cassirer, Reader, Publisher, and Interpreter of Leibniz’s Philosophy Jean Seidengart.- Leibniz on Relativity. The Debate between Hans Reichenbach and Dietrich Mahnke on Leibniz’s Theory of Motion and Time Vincenzo De Risi.- Interpretations of Leibniz’s Mathesis universalis at the beginning of the XXTh Century David Rabouin.- Leibnizian traces in H.Weyl’s Philosophie der Mathematik und Naturwissenschaft Erhard Scholz.- Gödel, Leibniz and “Russell’s mathematical logic” Gabriella Crocco.- Chaitin, Leibniz and complexity Herbert Breger.- Abbreviations. Index

Fields of interests
History of Mathematical Sciences; Philosophy of Science

Target groups
Research

Product Category
Monograph

Viability of Hybrid Systems
A Controllability Operator Approach

Contents
1 Introduction. - 1.1 Motivation and History. - 1.2 Summary and Organization. - 1.3 Summary. - 2 Literature Review. - 2.1 Nerode et al Approach to Viability of Hybrid Systems [50],[71]. - 2.2 Aubin et al Approach to Viability of Hybrid Systems [15]. - 2.3 Deshpande [Varaiya Approach to Viability of Hybrid Systems [35]. - 2.4 Related Literature. - 2.5 Conclusion. - 3 Hybrid Model. - 3.1 Hybrid Phenomena and Hybrid Model. - 3.2 Hybrid Trajectories and their Ordering. - 3.3 Continuity, Fixed Points, and Correct Finite Control Automaton. - 3.4 Uncertainty in Hybrid Systems. - 3.5 The Three-Tank Problem. - 3.6 Nerode[Kohn Formalism for Hybrid Systems. - 3.7 Conclusion. - 4 Viability. - 4.1 Background. - 4.2 Time[Independent Viability Set. - 4.3 Fixed Point Approximation. - 4.4 Computation of TIC[COFPAA[i for Three Admissible Control Law Classes. - 4.4.1 Piecewise Constant Control. - 4.4.2 Piecewise Constant with Finite Switching. - 4.4.3 Piecewise Constant with Polynomial Control. - 4.5 Time[Dependent Viability Set. - 4.5.1 Piecewise Constant Control. - 4.6 Examples. - 4.6.1 Time[Independent Constraints. - 4.6.2 Time[Dependent Constraints. - 4.7 Conclusion. - 5 Robust Viability. - 5.1 Uncertainty and Robustness. - 5.2 Ordering of the Controllability Operator under Uncertainty. - 5.3 The Uncertain Controllability Operator and the Uncertainty Operator. - 5.4 Robust Viability. - 5.5 Robust Viability Control Design. - 5.6 Examples. - 5.7 Conclusion. - 6 Viability in Practice. - 6.1 Reachable Set Computation of the Controllability Operator. [...]
Automated Solution of Differential Equations by the Finite Element Method

The FEniCS Book

This book is a tutorial written by researchers and developers behind the FEniCS Project and explores an advanced, expressive approach to the development of mathematical software. The presentation spans mathematical background, software design and the use of FEniCS in applications. Theoretical aspects are complemented with computer code which is available as free/open source software. The book begins with a special introductory tutorial for beginners. Following are chapters in Part I addressing fundamental aspects of the approach to automating the creation of finite element solvers. Chapters in Part II address the design and implementation of the FEniCS software. Chapters in Part III present the application of FEniCS to a wide range of applications, including fluid flow, solid mechanics, electromagnetics and geophysics.

Features
- Unique synthesis of theory and computer code
- Takes readers from an introductory tutorial through to cutting-edge research in scientific computing
- Demonstrates a modern software approach to solving problems spanning fluid flow, solid mechanics, electromagnetics and geophysics

Fields of interests
Mathematical Software; Theoretical, Mathematical and Computational Physics; Numeric Computing

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

Distance Expanding Random Mappings, Thermodynamical Formalism, Gibbs Measures and Fractal Geometry

The theory of random dynamical systems originated from stochastic differential equations. It is intended to provide a framework and techniques to describe and analyze the evolution of dynamical systems when the input and output data are known only approximately, according to some probability distribution. The development of this field, in both the theory and applications, has gone in many directions. In this manuscript we introduce measurable expanding random dynamical systems, develop the thermodynamical formalism and establish, in particular, the exponential decay of correlations and analyticity of the expected pressure although the spectral gap property does not hold. This theory is then used to investigate fractal properties of conformal random systems. We prove a Bowen’s formula and develop the multifractal formalism of the Gibbs states.

Features
- Contains new results
- Complete treatment of the topic
- Originality of the topic

Contents

Fields of interest
Dynamical Systems and Ergodic Theory

Target groups
Research

Product Category
Monograph

Knots and Primes

An Introduction to Arithmetic Topology

This is a foundation for arithmetic topology - a new branch of mathematics which is focused upon the analogy between knot theory and number theory. Starting with an informative introduction to its origins, namely Gauss, this text provides a background on knots, three manifolds and number fields. Common aspects of both knot theory and number theory, for instance knots in three manifolds versus primes in a number field, are compared throughout the book.

Features
- Starts at an elementary level and builds up to a more advanced theoretical discussion
- Written by a world expert on arithmetic topology
- A large number of illustrative examples are provided throughout

Contents

Fields of interests
Number Theory; Topology; Mathematics, general

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook
Mathematics News 9/2011

A. Némethi, Á. Szilárd, Rényi Institute of Mathematics, Budapest, Hungary

Milnor Fiber Boundary of a Non-isolated Surface Singularity

Contents
1 Introduction.- 2 The topology of a hypersurface germ $f$ in three variables Milnor fiber.- 3 The topology of a pair $(f; g)$.- 4 Plumbing graphs and oriented plumbed 3-manifolds.- 5 Cyclic coverings of graphs.- 6 The graph $G_C$ of a pair $(f; g)$. The definition.- 7 The graph $G_C$. Properties.- 8 Examples. Homogeneous singularities.- 9 Examples. Families associated with plane curve singularities.- 10 The Main Algorithm.- 11 Proof of the Main Algorithm.- 12 The Collapsing Main Algorithm.- 13 Vertical/horizontal monodromies.- 14 The algebraic monodromy of $H_1(\partial F)$. Starting point.- 15 The ranks of $H_1(\partial F)$ and $H_1(\partial F \cap Vg)$ via plumbing.- 16 The characteristic polynomial of $\partial F$ via $P_\#$ and $P_\#$.- 18 The mixed Hodge structure of $H_1(\partial F)$.- 19 Homogeneous singularities.- 20 Cylinders of plane curve singularities: $f = f_0(xy)$.- 21 Germs $f$ of type $z f_0(xy)$.- 22 The $T_{0;0;0}$-family.- 23 Germs $f$ of type $x f_0(yz)$.- 24 Peculiar structures on $\partial F$.- 25 Examples. Homogeneous singularities.- 26 Examples. Families associated with plane curve singularities.- 27 The graph $G_C$ of a pair $(f; g)$. The definition.- 28 The graph $G_C$. Properties.- 29 Examples. Homogeneous singularities.- 30 Examples. Families associated with plane curve singularities.

Fields of interests
Several Complex Variables and Analytic Spaces; Algebraic Geometry; Algebraic Topology

Target groups
Research

Product Category
Monograph

Due November 2011

2012. XII, 236 p. (Lecture Notes in Mathematics, Volume 2037) Softcover
► $59.95
ISBN 978-3-642-23646-4

Due December 2011

► $99.00

Due November 2011

2012. X, 260 p. 130 illus., 125 in color. (Mathematics and Visualization) Hardcover
► $124.00
ISBN 978-3-642-23174-2

A. Nepomnyashchy, I. Simonovskii, Technion - Israel Institute of Technology, Haifa, Israel; J. C. Legros, Université Libre de Bruxelles, Belgium

Interfacial Convection in Multilayer Systems

This book gives a systematic investigation of convection in systems comprised of liquid layers with deformable interfaces. This new edition includes completely updated and new material on flows in ultra thin films and brings up to date progress made in the technology on micro and nano scales. Also, this revised edition will reflect progress in the dynamics of complex fluids.

Contents

Fields of interests
Partial Differential Equations; Fluid- and Aerodynamics; Theoretical, Mathematical and Computational Physics

Target groups
Research

Product Category
Monograph

R. Peikert, ETH Zürich, Switzerland; H. Hauser, University of Bergen, Norway; H. Carr, University of Leeds, UK; R. Fuchs, ETH Zürich, Switzerland (Eds)

Topological Methods in Data Analysis and Visualization II Theory, Algorithms, and Applications

When scientists analyze datasets in a search for underlying phenomena, patterns or causal factors, their first step is often an automatic or semi-automatic search for structures in the data. Of these feature-extraction methods, topological ones stand out due to their solid mathematical foundation. Topologically defined structures—as found in scalar, vector and tensor fields—have proven their merit in a wide range of scientific domains, and scientists have found them to be revealing in subjects such as physics, engineering, and medicine. Full of state-of-the-art research and contemporary hot topics in the subject, this volume is a selection of peer-reviewed papers originally presented at the fourth Workshop on Topology-Based Methods in Data Analysis and Visualization, TopoInVis 2011, held in Zurich, Switzerland.

Features
► Latest, peer-reviewed results in a growing research area ► Topic with close interaction of mathematics and computer science ► Many applications to science and engineering

Contents

Fields of interests
Visualization; Algorithms; Computing Methodologies

Target groups
Research

Product Category
Contributed volume
C. Perna, M. Sibillo, University of Salerno, Italy (Eds)

Mathematical and Statistical Methods for Actuarial Sciences and Finance

The book develops the capabilities arising from the cooperation between mathematicians and statisticians working in insurance and finance fields. It gathers some of the papers presented at the conference MAP2010, held in Ravello (Amalfi coast), and successively, after a reviewing process, worked out to this aim.

Features
► The book is the result of the Mathematical and Statistical interdisciplinary approach to the researches in the actuarial and financial topics ► The book aims at providing state of the art research in development, implementation and real world applications of statistical and mathematical models in actuarial and finance sciences ► The book offers the occasion for discussing problems of national and international interest

Contents
On the estimation in continuous limit of GARCH processes by G. Albano, F. Giordano, and C. Perna. - Variable selection in forecasting models for default risk by A. Amendola, M. Restaino, and L. Sensini. - Capital structure with firm’s net cash payouts by F. Borsotti, M.E. Mancino, and M. Ponzieri. - Convex ordering of Esscher and minimal payouts by F. Barsotti, M.E. Mancino, and M. Pon-

Fields of interests
Quantitative Finance; Statistics, general; Business/Management Science, general

Target groups
Research

Product Category
Contributed volume

O. Post, Humboldt University, Berlin, Germany

Spectral Analysis on Graph-Like Spaces

Small-radius tubular structures have attracted considerable attention in the last few years, and are frequently used in different areas such as Mathematical Physics, Spectral Geometry and Global Analysis. In this monograph, we analyse Laplace-like operators on thin tubular structures (“graph-like spaces”), and their natural limits on metric graphs. In particular, we explore norm resolvent convergence, convergence of the spectra and resonances. Since the underlying spaces in the thin radius limit change, and become singular in the limit, we develop new tools such as norm convergence of operators acting in different Hilbert spaces, an extension of the concept of boundary triples to partial differential operators, and an abstract definition of resonances via boundary triples.

Features
► A thorough analysis of quantum graphs and their approximations (graph-like spaces) ► A self-contained explanation of the tools needed (convergence of operators in different spaces, boundary triples) ► The book is accessible for a graduate student with some knowledge in functional analysis and operators on Hilbert spaces

Contents
1 Introduction. - 2 Graphs and associated Laplacians. - 3 Scales of Hilbert space and boundary triples. - 4 Two operators in different Hilbert spaces. - 5 Manifolds, tubular neighbourhoods and their perturbations. - 6 Plumber’s shop: Estimates for star graphs and related spaces. - 7 Global convergence results.

Fields of interests
Analysis; Functional Analysis; Operator Theory

Target groups
Research

Product Category
Monograph

B. Prakasa Rao, University of Hyderabad, India

Associated Sequences, Demimartingales and Nonparametric Inference

This book gives a comprehensive review of results for associated sequences and demimartingales developed so far, with special emphasis on demimartingales and related processes. Probabilistic properties of associated sequences, demimartingales and related processes are discussed in the first six chapters. Applications of some of these results to some problems in nonparametric statistical inference for such processes are investigated in the last three chapters.

Features
► Comprehensive survey of probabilistic properties of associated sequences ► Extensive discussion on demimartingales and related processes ► First book to deal with inferential aspects of such processes

Contents

Fields of interest
Probability Theory and Stochastic Processes

Target groups
Research

Product Category
Monograph

Due September 2011

Due November 2011
2012. X, 416 p. 29 illus. (Lecture Notes in Mathematics, Volume 2039) Softcover ► $89.95 ISBN 978-3-642-23839-0

Due December 2011
H. Riesel, The Royal Institute of Technology, Stockholm, Sweden

Prime Numbers and Computer Methods for Factorization

From the original hard cover edition: In the modern age of almost universal computer usage, practically every individual in a technologically developed society has routine access to the most up-to-date cryptographic technology that exists, the so-called RSA public-key cryptosystem. A major component of this system is the factorization of large numbers into their primes.

Features
- Affordable reprint of the successful, expanded second edition of a unique monograph
- Provides a unique perspective on the study of prime numbers and their importance in modern technology
- Applications remain relevant across the fields of modern computer science and information transmission

Contents

Fields of interests
Number Theory; Data Encryption; Algorithms

Target groups
Graduate

Product Category
Monograph

R. Z. Rios-Mercado, Y. A. Rios-Solís, Universidad Autónoma de Nuevo León, San Nicolás de los Garza, NL, Mexico (Eds)

Just-in-Time Systems

Contents
Z. Schuss, Tel Aviv University, Israel

**Nonlinear Filtering and Optimal Phase Tracking**

This book offers an analytical rather than measure-theoretical approach to the derivation of the partial differential equations of nonlinear filtering theory. The basis for this approach is the discrete numerical scheme used in Monte-Carlo simulations of stochastic differential equations and Wiener’s associated path integral representation of the transition probability density. Furthermore, it presents analytical methods for constructing asymptotic approximations to their solution and for synthesizing asymptotically optimal filters. It also offers a new approach to the phase tracking problem, based on optimizing the mean time to loss of lock.

**Features**
- Many exercises and examples included
- Balance between mathematical rigor and physical intuition
- An analytical rather than measure-theoretical approach to the derivation and solution of the partial differential equations of nonlinear filtering theory

**Contents**
- Diffusion and Stochastic Differential Equations
- Euler’s Simulation Scheme and Wiener’s Measure
- Nonlinear Filtering and Smoothing of Diffusions
- Small Noise Analysis of Zakai’s Equation
- Loss of Lock in Phase Trackers
- Loss of Lock in RADAR and Synchronization
- Phase Tracking with Optimal Lock Time

**Fields of Interests**
- Probability Theory and Stochastic Processes
- Theoretical, Mathematical and Computational Physics
- Partial Differential Equations

**Target groups**
Graduate

**Product Category**
Graduate/Advanced undergraduate textbook

A. N. Sengupta, Louisiana State University, Baton Rouge, LA, USA

**Representing Finite Groups**

**A Semisimple Introduction**

This graduate textbook presents the basics of representation theory for finite groups from the point of view of semisimple algebras and modules over them. The presentation interweaves insights from specific examples with development of general and powerful tools based on the notion of semisimplicity. The elegant ideas of commutant duality are introduced, along with an introduction to representations of unitary groups. The text progresses systematically and the presentation is friendly and inviting. Central concepts are revisited and explored from multiple viewpoints. Exercises at the end of the chapter help reinforce the material. Representing Finite Groups: A Semisimple Introduction would serve as a textbook for graduate and some advanced undergraduate courses in mathematics. Prerequisites include acquaintance with elementary group theory and some familiarity with rings and modules.

**Features**
- Presents basics of representation theory of finite groups from the point of view of semisimple algebras and modules over them
- Progresses systematically with a gentle and inviting pace
- Exercises at the end of the chapter help reinforce the material

**Contents**
- Concepts and Constructs
- Basic Examples
- The Group Algebra
- More Group Algebra
- Simply Semisimple
- Representations of Sn
- Characters
- Induced Representations
- Commutant Duality
- Character Duality
- Representations of U(N)
- PS: Algebra

**Fields of Interests**
- Group Theory and Generalizations
- Quantum Physics
- Applications of Mathematics

**Target groups**
Graduate

**Product Category**
Graduate/Advanced undergraduate textbook

K. Tapp, Saint Joseph’s University, Philadelphia, PA, USA

**Symmetry**

**A Mathematical Exploration**

This textbook is perfect for a math course for non-math majors, with the goal of encouraging effective analytical thinking and exposing students to elegant mathematical ideas. It includes many topics commonly found in sampler courses, like Platonic solids, Euler’s formula, irrational numbers, countable sets, permutations, and a proof of the Pythagorean Theorem.

**Features**
- Symmetry is an ideal topic for a one semester math course for non-math majors
- Includes many topics commonly found in sampler courses, but weaves these topics into a single compelling story about symmetry
- Encourages effective analytical thinking and exposes non-math majors to elegant mathematical ideas
- Contains excellent exercises for the intended audience; these exercises should help students attain good understanding of the main points
- Hints of humor and easily accessible language coupled with a plethora of exercises provides the necessary motivation for a non-math major in a mathematics oriented class
- Contains hundreds of beautiful illustrations

**Contents**
- Preface
- 1 Introduction to Symmetry
- 2 The Algebra of Symmetry
- 3 Isomorphism
- 4 The Classification Theorems
- 5 Subgroups and Product Groups
- 6 Permutations
- 7 Symmetries of Solid Objects
- 8 The Five Platonic Solids
- 9 Symmetry and Optimization
- 10 What is a Number?
- 11 Cantor’s Infinity
- 12 Euclidean Space
- 13 Symmetry and Matrices

**Fields of Interests**
- Mathematics, general
- Geometry
- Mathematics in the Humanities and Social Sciences

**Target groups**
Lower undergraduate

**Product Category**
Undergraduate textbook
Handbook of Optimization in Complex Networks
Theory and Applications

Contents
G. F. Torres del Castillo, Ciudad Universitaria, Pue., México

Differentiable Manifolds
A Theoretical Physics Approach

This textbook explores the theory behind differentiable manifolds and investigates various physics applications along the way. Basic concepts, such as differentiable manifolds, differentiable mappings, tangent vectors, vector fields, and differential forms, are briefly introduced in the first three chapters. Chapter 4 gives a concise introduction to differential geometry needed in subsequent chapters. Chapters 5 and 6 provide interesting applications to connections and Riemannian manifolds. Lie groups and Hamiltonian mechanics are closely examined in the last two chapters. Included throughout the book are a collection of exercises of varying degrees of difficulty. Differentiable Manifolds is intended for graduate students and researchers interested in a theoretical physics approach to differential geometry and general relativity.

Contents

Fields of interests
Manifolds and Cell Complexes (incl. Diff.Topology); Mechanics; Mathematical Methods in Physics

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook
K. Williams (Ed.)
Nexus Network Journal 13,2
Architecture and Mathematics

Contents

Fields of interests
Mathematics, general; Architectural History and Theory

Target groups
Research

Product Category
Contributed volume

D. W. Yeung, Hong Kong Shue Yan University, China; L. A. Petrosyan, Saint Petersburg State University, Russia

Subgame Consistent Economic Optimization
An Advanced Cooperative Dynamic Game Analysis

Features
- The first title on the topic of subgame consistent economic optimization
- Illustrates the potential of cooperative dynamic games to help formulate new policy on previously unsolvable market problems
- Valuable as both a research reference and as a textbook, with exercises included throughout the book
- Suitable for an interdisciplinary audience of game theorists, economists, mathematicians, policy makers, and corporate planners

Contents

Fields of interests
Game Theory, Economics, Social and Behavioral Sciences; Game Theory/Mathematical Methods; Optimization

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

Available
$109.00
ISBN 978-3-0348-0170-6

Due December 2011
2012. XIV, 370 p. 2 illus. (Static & Dynamic Game Theory: Foundations & Applications) Hardcover
$74.95
C. Woodford, C. Phillips, University of Newcastle upon Tyne, UK

Numerical Methods with Worked Examples: Matlab Edition

This book is for students following an introductory course in numerical methods, numerical techniques or numerical analysis. It introduces MATLAB as a computing environment for experimenting with numerical methods.

Features
- In this book numerical methods are presented in problem – solution – discussion order so that underlying theory is inferred naturally from experiment and experience
- Teaching approach allows for learning the theory by using the methods
- Accessible to a broad, non-specialist readership
- Fully documented MATLAB code freely downloadable from extras.springer.com
- The book aims to encourage the reader to begin programming as quickly as possible.
- Exercises with answers, complete programs and sample codes are provided throughout the book
- As Matlab dependent material is separated from the main text, the book may be used in conjunction with any programming system

Contents
1. Basic Matlab.
2. Linear Equations.
4. Curve Fitting.
5. Numerical Integration.
7. Linear Programming.
8. Optimization.
10. Eigenvalues and Eigenvectors.

Fields of interests
Applications of Mathematics; Applied Mathematics/Computational Methods of Engineering; Computer Applications in Chemistry

Target groups
Upper undergraduate

Product Category
Undergraduate textbook

Z. Yosibash, Ben-Gurion University, Beer-Sheva, Israel

Singularities in Elliptic Boundary Value Problems and Elasticity and Their Connection with Failure Initiation

Features
- Many solved example problems
- Explicit mathematical expressions
- Solutions to selected exercises in the book

Contents
Preface. An Introduction to the p- and hp-versions of the Finite Element Method.

<table>
<thead>
<tr>
<th>Field of interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computational Mathematics and Numerical Analysis; Theoretical and Applied Mechanics; Applied Mathematics/Computational Methods of Engineering</td>
</tr>
</tbody>
</table>

Target groups
Research

Product Category
Monograph

F. Zhang, Nova Southeastern University, Fort Lauderdale, FL, USA

Matrix Theory
Basic Results and Techniques

The aim of this book is to concisely present fundamental ideas, results, and techniques in linear algebra and mainly matrix theory. The book contains ten chapters covering various topics ranging from similarity and special types of matrices to Schur complements and matrix normality. Each chapter focuses on the results, techniques, and methods that are beautiful, interesting, and representative, followed by carefully selected problems.

Features
- Updated and revised edition
- Includes a new chapter on matrix inequalities, and a new chapter with updated material on numerical ranges and radii and matrix norms
- Includes more than 1000 exercises
- Aids the reader in mastering basic matrix results and techniques that are useful for applications in various fields such as mathematics, statistics, physics, computer science, and engineering

Contents

<table>
<thead>
<tr>
<th>Field of interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear and Multilinear Algebras, Matrix Theory; Operator Theory</td>
</tr>
</tbody>
</table>

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook
Practical ECG Holter

100 Cases

As arrhythmias may be transient in nature and not seen during the shorter recording times of the standard ECG, ECG Holter monitoring allowsthe physician to make better informed decisions for the cardiac patient. The devices are worn by patients on an outpatient basis for days or weeks and can also be implanted subcutaneously. ECG Holter recordings are especially useful since they can be programmed individually for activation and specific tracing analysis. Designed for rapid study, this book contains 100 illustrative cases in ECG Holter monitoring. Each case consists of a tracing followed by a brief explanation of the findings. 100 Cases in ECG Holter is the perfect resource for busy physicians looking to optimize their skills at interpreting ECG Holter readings.

Features

- A quick study of 100 ECG Holter tracings accompanied by brief explanatory text
- A perfect resource for busy physicians looking to optimize their skills at interpreting ECG Holter readings
- Contains 100 illustrative cases in ECG Holter monitoring

Contents

Case studies. - Conclusion.

Fields of interests
Cardiology; Internal Medicine

Target groups
Professional/practitioner

Product Category
Professional book

J. Pickard, University of Cambridge, UK; N. Akalan, Hacettepe University, Ankara, Turkey; V. Benes, UVN Stresovice, Prague, Czech Republic; C. Di Rocco, Universita Cattolica del Sacro Cuore, Rome, Italy; V. V. Dolenc, University of Ljubljana, Slovenia; J. Lobo Antunes, Universidade Lisboa, Lisbon, Portugal; J. Schramm, Universitätsklinikum Bonn, Germany; M. Sindou, Hôpital Neurologique Pierre Wertheimer, Lyon, France; Z. H. Rappaport, Rabin Medical Center, Petah-Tiqva, Israel (Eds)

Advances and Technical Standards in Neurosurgery

Features

- Present fields of neurosurgery in which important recent advances have been made
- Written by specialists
- In the fields presented detailed descriptions of standard operative procedures and in-depth reviews of established knowledge

Contents


Fields of interest
Neurosurgery

Target groups
Graduate

Product Category
Monograph

G. J. Anderson, The Queensland Institute of Medical Research, Brisbane, QLD, Australia; G. D. McLaren, University of California Irvine, Long Beach, CA, USA (Eds)

Iron Physiology and Pathophysiology in Humans

Features

- Excellent resource
- Chapters are written by world renowned experts
- Most current and up-to-date text

Contents


Fields of interests
Clinical Nutrition; Nutrition; Gastroenterology

Target groups
Professional/practitioner

Product Category
Contributed volume

Due November 2011

Due December 2011

2012. 115 p. 200 illus. Softcover
$49.95

2012. Approx. 250 p. 80 illus., 30 in color. (Advances and Technical Standards in Neurosurgery, Volume 38) Hardcover
$189.00
ISBN 978-3-7091-0675-4

Due December 2011

2011. XXII, 966 p. 74 illus., 47 in color. (Nutrition and Health) Hardcover
$279.00

SpringerWienNewYork

Medicine & Public Health

Humana Press

151
Hydrocephalus
Selected papers from the International Workshop in Crete, 2010

Contents
I Importance of the Work of Professor Marmarou.- 5th International Hydrocephalus Workshop, Crete, Greece, May 20-23, 2010: Themes and Highlights.- Modelling of CSF Dynamics – Legacy of Professor Anthony Marmarou.- II Importance of Data, Especially from Randomized Controlled Trials.- Ethical Considerations in Hydrocephalus Research that Involves Children and Adults.- Conservative versus Surgical Management of Idiopathic Normal Pressure Hydrocephalus: a prospective randomized controlled double blind trial; study protocol.- Ten Years of Clinical Experience in the Use of Fixed-Pressure vs. Programmable Valves: A Retrospective Study of 159 Patients.- III Magnetic Resonance Imaging as a Powerful Tool.- Changes of fractional anisotropy (FA) and apparent diffusion coefficient (ADC) in patients with idiopathic normal pressure hydrocephalus: A surrogate imaging marker for co-existing microvascular disease?.- Quantification of normal CSF flow through the aqueduct using PC-Cine MRI at 3T.- Correlation between tap test and CSF aqueductal stroke volume in idiopathic normal pressure hydrocephalus.- IV Basic Science: The Aquaporin Story.- Overview of the CSF dual outflow system.- Hydrocephalus and aquaporins. The role of aquaporin-1.- Hydrocephalus and aquaporins. The role of aquaporin-4.- Acetazolamide-induced Decrease of Apical Fluid Flow in Choroid Plexus is Associated with Nonessential Changes in Aquaporin-1 Expression.- V Experimental Studies: Hydrocephalus. [...] 

Fields of interest
Neurosurgery

Target groups
Professional/practitioner

Product Category
Contributed volume

Coronary Artery Disease
New Approaches without Traditional Revascularization

Coronary Artery Disease is directed towards individuals with an interest in the clinical treatment of patients with unrevascularizable angina. It explores a variety of treatment options in the setting of a sound scientific background and provide guidance and predictions for future direction in this rapidly developing field. It fulfills an unmet need and is greeted with significant enthusiasm by the practicing internal medicine, family practice and cardiovascular clinicians.

Features
► Only textbook available detailing current approaches and future directions in the management of the unrevascularizable patient ► Provides a comprehensive framework within which the practicing clinician can expand their knowledge of current practice with this group of patients. ► Written in experts in the field of Coronary Artery Disease

Contents
Epidemiology of Cardiovascular Disease and Refractory Angina.- Basic Science Concepts.- Natural History in Humans.- Therapeutic Goals in Patients with Refractory Angina.- Medical Therapy for Chronic Refractory Angina.- External Counterpulsation.- Transmyocardial Laser Revascularization.- Invasive and Device Management of Refractory Angina.- Cardiac Transplantation for Ischemic Heart Disease.- Alternative Therapies for Chronic Refractory Coronary Artery Disease.- Nonspecific Placebo Effects.- Prognostic Implication of Depression in Ischemic Syndromes

Fields of interest
Cardiology

Target groups
Professional/practitioner

Product Category
Reference work

Crohn’s Disease and Ulcerative Colitis
From Epidemiology and Immunobiology to a Rational Diagnostic and Therapeutic Approach

Contents

Fields of interest
Gastroenterology

Target groups
Professional/practitioner

Product Category
Contributed volume
Dural Cavernous Sinus Fistulas Diagnosis and Endovascular Therapy

Dural cavernous sinus fistulas (DCSFs) are benign vascular diseases consisting in an arteriovenous shunt at the cavernous sinus that if misdiagnosed can lead to potentially serious ophthalmologic complications.

Features
- A complete guide to the diagnosis and treatment of dural cavernous sinus fistula
- Includes sections on anatomy, etiology and pathogenesis
- Explains the role of the most modern imaging techniques
- Discusses the various transvenous techniques for successful endovascular treatment
- Contains many informative illustrations, some in color

Contents

Fields of interests
Imaging / Radiology; Diagnostic Radiology; Neuroradiology

Target groups
Professional/practitioner

Product Category
Contributed volume

Children’s Upper and Lower Limb Fractures

This book starts appropriately in considering the principles which should govern our care of the injured child and the background factors which influence fracture epidemiology. Knowing how to manage the multiply injured child and recognizing the one who has been non-accidentally injured are essential skills in our specialty. Injuries to the growth plate are not always easy to recognize and manage, but, if we fail to do so, the long-term consequences may be serious. Succeeding chapters describe childhood injuries and fractures regionally. Conservative fracture management has not been forgotten amidst the plethora of newer methods of surgical fixation.

Features
- Small comprehensive books, containing numerous illustrations
- Concise format
- State-of-the-art information on pediatric orthopaedics

Contents

Fields of interests
Orthopedics; Conservative Orthopedics; Surgical Orthopedics

Target groups
Professional/practitioner

Product Category
Contributed volume

Due September 2011

2010. XIV, 326 p. 742 illus., 540 in color. (Medical Radiology / Diagnostic Imaging) Softcover
- approx. $119.00
ISBN 978-3-642-23597-9

Available
2011. XI, 171 p. 138 illus., 18 in color. Softcover
- $39.95

M. Benson, Orthopaedic Centre, Oxford, UK; K. Parsch, Olgahospital, Stuttgart, Germany; M. Macnicol, Royal Hospital for Sick Children and Princess Margaret Rose Orthopaedic Hospital, Edinburgh, UK; J. Fixsen, Great Ormond Street Hospital for Sick Children, London, UK; K. Parsch, Olgahospital, Stuttgart, Germany; M. Macnicol, Royal Hospital for Sick Children and Princess Margaret Rose Orthopaedic Hospital, Edinburgh, UK (Eds)

Children’s Spinal Disorders and Fractures

This book brings together the congenital, acquired and traumatic conditions which may affect the child’s cervical and thoraco-lumbar spine. The immature spine poses considerable diagnostic dilemmas and radiographs are often difficult to interpret. The aetiology of deformity, its assessment, monitoring and treatment are comprehensively described. Back pain in children receives special attention. Care has been taken to identify symptoms and signs which should raise our level of anxiety and those which are likely to resolve. Where surgery is necessary the principles and risks are defined.

Features
- Small comprehensive books, containing numerous illustrations
- Concise format
- State-of-the-art information on pediatric orthopaedics

Contents

Fields of interests
Orthopedics; Conservative Orthopedics; Medicine & Public Health; Orthopaedic Centre, Oxford, UK; M. Benson, Orthopaedic Centre, Oxford, UK; K. Parsch, Olgahospital, Stuttgart, Germany; M. Macnicol, Royal Hospital for Sick Children and Princess Margaret Rose Orthopaedic Hospital, Edinburgh, UK (Eds)

Target groups
Professional/practitioner

Product Category
Contributed volume
Radiotherapy from Radiobiology and Physics Perspective

**Features**
- Updated information on radiotherapy physics, technology and radiobiology
- Explanation of the rationale in using radiation in the treatment of cancer
- Presentation of two major disciplines in one book
- Easy accessibility to information for both under- and postgraduate students to use in their courses
- Textbook for oncology registrars in their preparation for exams
- Comprehensive overview of the major aspect of treatment with radiotherapy

**Contents**
Radiation interaction with matter.
- Elements of radiobiology.
- Tumour characteristics, development and response to radiation.
- Fractionation and altered fractionation in radiotherapy.
- Treatment planning techniques.
- Proton therapy: radiobiology and physics aspects of treatment.
- Predictive assays and treatment delivery verification.

**Fields of interest**
Radiotherapy

**Target groups**
Professional/practitioner

**Product Category**
Monograph

---

**Thyroid Cancer**

The American Cancer Society recently estimated that about 45,000 new cases of thyroid cancer will be diagnosed in the United States, with three-quarters occurring in women. The overall 5-year survival rate is about 97%, making it one of the least lethal cancers. We are experiencing an epidemic of well-differentiated thyroid cancer, in part due to the widespread use of imaging modalities that detect thyroid nodules and micrometastases. Concurrently, there have been a number of recent advances in surgical treatment, as well as diagnostic modalities that allow us to detect small amounts of residual local and metastatic disease.

**Features**
- Provides a broad overview of the pathology, pathophysiology, diagnosis and management of thyroid cancer.
- An emphasis on recent evidence-based information.
- Illustrated with both detailed line drawings and clinical photos.

**Contents**
Preface.
- Contributors.
- Pathology and Classification of Thyroid Cancer.
- Molecular Biology of Thyroid Cancer.
- Thyroid Nodules.
- Ultrasound Imaging and Thyroid Cancer.
- Fine Needle Aspiration of the Thyroid.
- Thyroid Cancer Staging.
- Papillary Thyroid Carcinoma.
- Follicular Thyroid Carcinoma.
- Medullary Thyroid Carcinoma.
- Anaplastic Thyroid Carcinoma.
- Thyroid Lymphoma.
- Surgical Management of Thyroid Cancer.
- Radioactive Iodine Therapy.
- External Beam Radiation Therapy in the Treatment of Differentiated Thyroid Cancers.
- Targeted Therapies of Thyroid Cancer.

**Fields of interests**
Internal Medicine; Oncology

**Target groups**
Professional/practitioner

**Product Category**
Contributed volume

---

**Learning Neuroimaging**

100 Essential Cases

This book is intended as an introduction to neuroradiology and aims to provide the reader with a comprehensive overview of this highly specialized radiological subspecialty. One hundred illustrated cases from clinical practice are presented in a standard way. Each case is supported by representative images and is divided into three parts: a brief summary of the patient’s medical history, a discussion of the disease, and a description of the most characteristic imaging features of the disorder. The focus is not only on common neuroradiological entities such as stroke and acute head trauma but also on less frequent disorders that the practitioner should recognize. Learning Neuroimaging: 100 Essential Cases is an ideal resource for neuroradiology and radiology residents, neurology residents, neurosurgery residents, nurses, radiology technicians, and medical students.

**Features**
- Clear, comprehensive introduction to neuroradiology.
- Includes 100 cases from clinical practice that are presented in a standard way and supported by representative images.
- Covers both common and less frequent disorders.

**Contents**
Brain Tumors.
- Orbit and Sellar Region.
- Ear.
- Nasal and Paranasal Sinuses.
- Oro-cerebral Region.
- Spine.
- Pediatric Neuroimaging.
- Vascular Diseases.
- Diffusion and Spectroscopy.
- DTI and Bold MR Imaging.
- Miscellaneous.

**Fields of interests**
Neuroradiology; Imaging / Radiology; Diagnostic Radiology

**Target groups**
Professional/practitioner

**Product Category**
Professional book

---

**Due December 2011**

2012. XVI, 383 p. 135 illus., 110 in color. (Endocrine Updates, Volume 30) Hardcover
- $219.00
  ISBN 978-1-4614-0874-1

**Due November 2011**

2012. VIII, 102 p. 100 illus., 21 in color. (Learning Imaging, Volume 1) Softcover
- $59.95
  ISBN 978-3-642-22998-5

---

**Due December 2011**

2012. Approx. 250 p. 25 illus. in color. Softcover
- approx. $49.95
Comparative Effectiveness and Efficacy Research and Analysis for Practice (CEERAP)

Applications in Health Care

F. Chiappelli, UCLA, Los Angeles, CA, USA (Ed.)

Imaging in Pediatric Pulmonology

R. Cleveland, Children’s Hospital Boston, MA, USA (Ed.)
F. Dammacco, University of Bari, Italy (Ed.)

**HCV Infection and Cryoglobulinemia**

The first observation of cold-induced precipitation of serum proteins dates back to 1933, when Wintrobe and Buell first described an unusual case of multiple myeloma in a woman whose serum reversibly precipitated at cold temperatures. In 1947 Lerner and Watson showed cold-precipitable proteins to be gammaglobulins and called them ‘cryoglobulins’ and the corresponding clinical condition ‘cryoglobulinemia’.

**Features**

- Comprehensive review of cryoglobulinemia, for scientists and specialists involved in several disciplines, including internal medicine, hepatology, hematology, oncology, infectious diseases, rheumatology, nephrology and dermatology
- Immediate of style, striking illustrations, and color plates
- Irreplaceable source of update for general practitioners, graduate and postgraduate students

**Contents**

- Hepatitis C Virus infection and the role of the immune system
- Cryoglobulinemia: immunological characterization, serological abnormalities and histopathological changes
- Structural and genetic features, cytokines and chemokines in cryoglobulinemia
- Cellular compartments of HCV infection (and replication)
- Mechanism(s) of cryoprecipitation
- Clinical manifestations of cryoglobulinemia
- HCV infection, cryoglobulinemia and non-Hodgkin’s lymphomas
- Therapy of cryoglobulinemia

**Fields of interest**

- Hepatology
- Internal Medicine
- Infectious Diseases

**Target groups**

- Professional/practitioner

**Product Category**

- Contributed volume

---

E. Diamanti-Kandarakis, Medical School University of Athens, Greece; A. C. Gore, University of Texas at Austin, TX, USA (Eds)

**Endocrine Disruptors and Puberty**

**Contents**

- Introduction to endocrine disruptors and puberty
- In utero exposure to environmental chemicals
- Lessons from maternal cigarette smoking and its effects on gonad development and puberty
- Reproductive Neuroendocrine Targets of Developmental Exposure to Endocrine Disruptors
- Endocrine disruptors and puberty disorders from mice to men (and women)
- Thyroid hormone regulation of mammalian reproductive development and the potential impact of endocrine disrupting chemicals
- Developmental exposure to endocrine disruptors and ovarian function
- Developmental exposure to environmental endocrine disruptors and adverse effects on mammary gland development
- Developmental exposure to endocrine disruptors and male urogenital tract malformations
- EDC exposures and the development of reproductive and non-reproductive behaviors
- Adipocytes as target cells for endocrine disruption
- Altered Glucose Homeostasis Resulting From Developmental Exposures To Endocrine Disruptors
- Developmental Exposure To Endocrine Disrupting Chemicals: Is there a Connection with Birth and Childhood Weights?
- The Impact Of Endocrine Disruptors On Female Pubertal Timing
- The Influence of endocrine disruptors and puberty on mammary gland development
- Secular Trends in Pubertal Timing: A Role for Environmental Chemical Exposure?

**Fields of interest**

- Endocrinology
- Oncology
- Pharmacology/Toxicology

**Target groups**

- Professional/practitioner

**Product Category**

- Contributed volume

---

C. H. Dunphy, University of North Carolina Hospitals, Chapel Hills, NC, USA (Ed.)

**Frozen Section Library: Lymph Nodes**

The Frozen Section Library series provides concise, user-friendly, site specific handbooks that are well illustrated and highlight the pitfalls, artifacts and differential diagnosis issues that arise in the hurried frozen section scenario.

**Features**

- Convenient reference for intraoperative consultation
- Addresses commonly encountered challenges
- Guide for differential diagnosis

**Contents**

- Intraoperative Consultations of Tissue for Evaluation of Hematolymphoid Disorders or Malignancies: Appropriate Handling, Including Touch Preparation Cytology Versus Frozen Section
- Applications of Touch Preparation Cytology to Intraoperative Consultations: Lymph Nodes and Extranodal Tissues for Evaluation of Hematolymphoid Disorders
- Applications of Frozen Section to Intraoperative Consultations of Extranodal Tissues for Evaluation of Hematolymphoid Disorders and Diagnostic Pitfalls of Frozen Section to Intraoperative Consultations of Lymph Nodes for Evaluation of Hematolymphoid Disorders
- The Role of Fine Needle Aspiration (FNA) and FNA Biopsy in Evaluating Hematolymphoid Disorders and Malignancies in Lymph Nodes and Extranodal Tissues
- Applications of Frozen Section to Intraoperative Consultations of Metastatic Malignancies Involving Lymph Nodes
- Pitfalls of Frozen Section to Intraoperative Consultations of Evaluating Lymph Nodes for Involvement by Metastatic Malignancies: Benign Processes (Lesions) Mimicking Metastatic Carcinoma

**Fields of interest**

- Pathology

**Target groups**

- Professional/practitioner

**Product Category**

- Handbook

---

Due November 2011

2011. X, 419 p. 60 illus., 48 in color. Hardcover
- $219.00

Due January 2012

2012. XII, 412 p. 19 illus., 11 in color. (Contemporary Endocrinology) Hardcover
- $219.00
ISBN 978-1-60761-560-6

Due December 2011

2012. XV, 135 p. 71 illus., 69 in color. (Frozen Section Library, Volume 10) Softcover
- approx. $139.00
Contributed volume

**Title:** Dupuytren's Disease and Related Hyperproliferative Disorders  
**Product Category:** Professional/practitioner  
**Target groups:** Orthopedics; Surgical Orthopedics; General Medicine & Public Health

This book is based on results of the 2010 International Symposium on Dupuytren's disease held in Miami, Florida, but it also includes new data and additional chapters.

**Features**
- Based on presentations at the first symposium for 40 years to be devoted to Dupuytren's disease
- Provides up-to-date information on the epidemiology, biology, and pathology of the disease
- Examines the indications for and techniques of radiotherapy, minimally invasive treatment, and open surgery
- Considers the role of non-medical treatment and describes the appropriate care of relapse and complications

**Contents**
- Epidemiology & Pathology: Principles of Medical Treatment  
- Principles of Minimal Invasive Treatment  
- Radiotherapy in Early Stage Disease  
- Principles of Open Surgical Treatment  
- Special Care for Relapse 
- Complications  
- Non-medical Treatment of Functional Impairment  
- Physical Therapy  
- Related Topics: Radiotherapy in Early Stage Morbus Krabbe  
- Surgical Treatment of Advanced Morbus Ledderhose  
- Abstract Section: Various Grouped Topics

**Fields of interests**
- Orthopedics  
- Surgical Orthopedics  
- General Practice / Family Medicine

**Target groups**
- Professional/practitioner

**Product Category**
- Contributed volume

---

**Title:** Anal and Rectal Diseases: A Concise Manual  
**Product Category:** Professional/practitioner  
**Target groups:** Gastroenterology; General Medicine & Public Health

Anal and Rectal Diseases: A Concise Manual provides a succinct reference on the subject for clinicians, including primary care physicians, gastroenterologists, general surgeons, physicians' assistants and nurse practitioners.

**Features**
- Presents new technology in diagnostics  
- Features high quality illustrations including line drawings, tables and photographs  
- Consistent structural style for ease of use  
- Provides up-to-date management guidelines and precious clinical pearls

**Contents**
- General Information  
- Diagnostic procedures  
- Benign anorectal disorders  
- Neoplasms of the anus  
- Neoplasms of the rectum  
- Infectious disorders of the anus and rectum  
- Miscellaneous anorectal conditions  
- Surgery for anal fissure  
- Surgery for anorectal abscess  
- Surgery for rectcele  
- Surgical management of anal incontinence  
- Surgery for hemorrhoids  
- Surgery for hidradenitis suppurativa  
- Surgery for anorectal fistula  
- Surgery for rectal prolapsed  
- Surgery for rectovaginal fistula  
- Ileoanal anastomosis  
- Bowel reconstruction following low anterior resection  
- Transanal resection of rectal lesions  
- Laparoscopic rectal resection  
- Surgery for rectal cancer  
- Surgical colostomy and ileostomy  
- Surgery for rectal foreign body  
- Anesthesia for anorectal surgery  
- Suggested reading

**Fields of interests**
- Primary Care Medicine  
- Gastroenterology  
- General Surgery

**Target groups**
- Professional/practitioner

**Product Category**
- Professional book

---

**Title:** MRI Handbook  
**Product Category:** MR Physics, Patient Positioning, and Protocols  
**Target groups:** Neuroradiology  

MRI Handbook presents a concise review of the physical principles underlying magnetic resonance imaging (MRI), explaining MR physics, patient positioning, and protocols in an easy-to-read format.

**Features**
- Extensive images reveal patient positioning techniques for all major anatomic areas relevant to MR imaging
- Highly illustrated, concise guide useful for daily practice
- Introduces the basic physical principles in an easy-to-understand format

**Contents**
- Part I: Basic MRI Principles  
- A Brief History of Magnetic Resonance Imaging  
- Fundamentals of Magnetic Resonance Imaging  
- The Relaxation Concept in MRI  
- MRI Pulse Sequences  
- MR Imaging Parameters and Options  
- Part II: MR Safety  
- Patient Positioning  
- Protocol Design  
- Graphical Prescription and MR Applications for Anatomical Regions  
- Introduction to Safe Clinical Scanning  
- Central Nervous System: MRI Protocols  
- Imaging Parameters and Graphical Prescriptions  
- Musculoskeletal Imaging: MRI Protocols  
- Imaging Parameters and Graphical Prescriptions  
- Body Imaging: MRI Protocols  
- Imaging Parameters and Graphical Prescriptions  
- Breast Imaging: MRI Protocols  
- Imaging Parameters and Graphical Prescriptions

**Fields of interests**
- Imaging / Radiology  
- Diagnostic Radiology  
- Neuroradiology

**Target groups**
- Professional/practitioner

**Product Category**
- Handbook

---

**Due December 2011**
**$239.00**  
ISBN 978-3-642-22696-0

**Due December 2011**
2012. X, 282 p. 120 illus., 85 in color. Softcover  
**$49.95**  

**Due December 2011**
2012. X, 382 p. 173 illus., 133 in color. Softcover  
**approx. $49.95**  

---

C. Eaton, The Hand Center, Jupiter, FL, USA;  
M. H. Seegenschmiedt, Strahlencentrum Hamburg, Germany;  
A. Bayat, University of Manchester, UK;  
G. Gabbiani, University of Geneva, Switzerland;  
P. Werker, University of Groningen, The Netherlands;  
W. Wach, Dupuytren e.V., Germany (Eds)

E. D. Ehrenpreis, NorthShore University Health System, Highland Park, IL, USA;  
S. Avital, Meir Medical Center, Tel Aviv, Israel;  
M. Singer, NorthShore University Health System, Evanston, IL, USA (Eds)
F. Falter, Papworth Hospital, Cambridge, UK (Ed.)

**Bedside Procedures in the ICU**

This handbook is a guide to best practice in interventions commonly encountered in the ICU. It is clinically orientated providing step-by-step explanations and illustrations of most invasive procedures, check lists to make sure the indication is right, check lists to ensure appropriate assessment once the procedure has been carried out.

**Features**
- A portable, practical book on bedside procedures in ICU
- ICU is an environment with a high incidence of interventions, most textbooks mention them but do not provide detailed guidance on how to perform them, when to perform them and how to assess it after the procedure
- There are a number of highly specialised books in various subspecialties (neuro-ICU, cardiac ICU...) that explain certain procedures
- However, these books are too specialised for the general intensivist
- This book aims to give step-by-step guidance as to what can be done and how it is to be done across all subspecialties

**Contents**
- Sedation and analgesia
- Airway Management and Intubation
- Bronchoscopy
- Percutaneous Dilatational Tracheostomy
- Arterial and Venous Catheter Insertion
- Advanced Non-Invasive Hemodynamic Monitoring
- Temporary cardiac pacing
- DC Cardioversion
- Pericardiocentesis
- Intercostal chest drain insertion
- Percutaneous Endoscopic Gastrostomy Tube Placement
- Gastrostomy Balloon Tube Tamponade
- Acute Compartment Syndrome
- Abdominal Compartment Syndrome
- Ultrasound Guided Procedures
- Renal Replacement Therapy
- Lumbar Puncture
- External Ventricular Drain Insertion
- Intracranial Pressure Measurement

**Fields of interests**
- Intensive / Critical Care Medicine
- Emergency Medicine

**Target groups**
- Professional/practitioner

**Product Category**
- Handbook

---

S. H. Faro, F. B. Mohamed, Temple University, Philadelphia, PA, USA; M. Law, University of Southern California, Los Angeles, CA, USA; J. T. Ulmer, Milwaukee, WI, USA (Eds)

**Functional Neuroradiology**

**Principles and Clinical Applications**

**Contents**

**Fields of interests**
- Imaging / Radiology
- Diagnostic Radiology
- Neuroradiology

**Target groups**
- Professional/practitioner

**Product Category**
- Professional book

---

L. G. Feld, Carolinas Medical Center, Charlotte, NC, USA; F. J. Kaskel, Montefiore Medical Center, Bronx, NY, USA (Eds)

**Fluid and Electrolytes in Pediatrics**

**A Comprehensive Handbook**

One of the time-honored foundations of the practice of pediatric medicine is the understanding and application of the principles of fluid, electrolyte and acid-base disorders.

**Features**
- Written by pioneers and experts in their respective fields
- The ‘go to’ source for pediatricians, residents, students and allied health professionals
- Presents unique information with extensive tables, lists, and algorithms

**Contents**
- From the contents Section I: Disorders of Sodium Homeostasis
  - General Overview of Sodium Balance and Renal Regulation
  - Section II: Disorders of Water Homeostasis
  - General Overview of Potassium Balance and Renal Regulation
  - Section IV: Disorders of Calcium Homeostasis
  - General Overview of Calcium Balance and Renal Regulation
  - Section V: Disorders of Magnesium Homeostasis
  - General Overview of Magnesium Balance and Renal Regulation
  - Section VI: Disorders of Phosphorus Homeostasis
  - General Overview of Phosphorus Balance and Renal Regulation
  - Section VII: Disorders of Acid-Based Homeostasis
  - Normal Acid-Based Homeostasis

**Fields of interests**
- Clinical Nutrition
- Pediatrics
- Primary Care Medicine

**Target groups**
- Professional/practitioner

**Product Category**
- Contributed volume
Chest Imaging
An Algorithmic Approach to Learning

The chest X-ray (CXR) or chest radiograph remains the most commonly ordered imaging study in medicine, yet paradoxically is often the most complex to learn, recall, and master effective and accurate interpretation. The chest radiograph includes all thoracic anatomy and provides a high yield, given the low cost and single source. This guide presents a structured lexicon for use by readers to reproducibly describe radiographic abnormalities of the chest detected on plain film CXRs. The lexicon is designed to provide readers with clinically significant differentiation of abnormalities detected. The content is structured to relate specific combinations of distinct radiographic findings to classes/groupings of pathological etiologies of those findings. Recognizing the individual findings and identifying their combination or lack of combination with other individual findings allows readers to create effective differential diagnoses that can then be further evaluated using other imaging procedures and/or non-radiographic clinical information.

Features
► Presents a structured lexicon for use by readers
► Provides readers with clinically significant differentiation of abnormalities detected
► Content is structured to relate specific combinations of distinct radiographic findings to classes/groupings of pathological etiologies

Contents

Fields of interests
Imaging / Radiology; Diagnostic Radiology

Target groups
Professional/practitioner

Product Category
Professional book

Targeted Therapeutics in Melanoma

Melanoma is an increasingly important public health problem.

Features
► Describes both established signal transduction inhibitors as well as emerging molecularly-guided immunotherapies
► Places exciting developments in basic biological understanding into a practical clinical context
► The first book on melanoma devoted entirely to targeted therapeutics
► Includes the most up-to-date data from current clinical Phase I-III trials
► Written by high-profile authors representing the world’s leaders in their field

Contents

Fields of interests
Oncology; Cancer Research

Target groups
Research

Product Category
Contributed volume

Practical Procedures in Elective Orthopaedic Surgery

Upper Extremity and Spine

Contents
Practical Procedures in Orthopaedic Surgery
Joint Aspiration/injection, Bone Graft Harvesting and Lower Limb Amputations

This highly illustrated text book will be an essential guide for surgeons in training, providing step by step approaches to performing joint aspiration/injection, bone graft harvesting and lower limb amputations.

Features
- State-of-the-art contents.
- Provides examples and step-by-step instructions with numerous illustrations.
- With contributions by international experts.

Contents

Fields of interests
Orthopedics; Surgical Orthopedics; Conservative Orthopedics

Target groups
Professional/practitioner

Product Category
Contributed volume

Hand Bone Age
A Digital Atlas of Skeletal Maturity

In the past, determination of bone maturity relied on visual evaluation of skeletal development in the hand and wrist, most commonly using the Greulich and Pyle atlas. The Gilsanz and Ratib digital atlas takes advantage of digital imaging and provides a more effective and objective approach to assessment of skeletal maturity. The atlas integrates the key morphological features of ossification in the bones of the hand and wrist and provides idealized, sex- and age-specific images of skeletal development. An important new feature of this revised second edition is the inclusion of a description and user manual for an iPhone/iPad App that can be purchased and used separately from the book. The App can be easily employed to calculate the deviation of the patient’s age from the normal range and to predict a possible growth delay.

Features
- Easy-to-use digital atlas
- Gold standard for bone age assessment
- Idealized, sex- and age-specific images of skeletal development
- iPhone/iPad App available for separate purchase and use

Contents

Fields of interests
Imaging / Radiology; Diagnostic Radiology; Endocrinology

Target groups
Professional/practitioner

Product Category
Professional book
Contributed volume

Target groups
Dermatology; Oncology; Plastic Surgery

Directions.
CONSENSUS TERMINOLOGY
scopy.
Experimental Applications and Future
Diagnosis and Reflectance Confocal Microscopy.
Automation of Diagnosis and Reflectance Confocal Microscopy.
Experimental Applications and Future Directions.
CONSENSUS TERMINOLOGY GLOSSARY.

Fields of interests
Dermatology; Oncology; Plastic Surgery

Target groups
Professional/practitioner

Product Category
Professional book

Due November 2011
$59.95
ISBN 978-1-61779-384-4

Due December 2011
2012. XII, 214 p. 98 illus., 92 in color. (Current Clinical Pathology) Hardcover
$189.00
ISBN 978-1-61779-393-6

Due December 2011
$219.00
ISBN 978-3-642-21996-2

R. Hofmann-Wellenhof, Medical University Graz, Austria; G. Pellacani, University of Modena, Italy; J. Malvehy, University Hospital Clinic, Barcelona, Spain; H. P. Soyer, University of Queensland, Brisbane, Australia (Eds)

Reflectance Confocal Microscopy for Skin Diseases

Features
★ This unique book encompasses the most relevant and up-to-date aspects of RCM (reflectance confocal microscopy) ★ It serves as a helpful hands-on guide for confocal imaging for dermatologists ★ It includes a chapter devoted to bridging the gap between dermoscopy, RCM and histopathology ★ All chapters are lavishly illustrated and reader-friendly structured

Contents

Features
★ Completely updated ★ Illustrations and ECGs throughout ★ Easy to read format

Contents

Fields of interests
General Practice / Family Medicine; Primary Care Medicine; Cardiology

Target groups
Professional/practitioner

Product Category
Professional/practitioner

Due November 2011
2012. VII, 163 p. 18 illus., 11 in color. (Current Clinical Practice) Softcover
$59.95
ISBN 978-1-61779-384-4

Due December 2011
2012. XII, 214 p. 98 illus., 92 in color. (Current Clinical Pathology) Hardcover
$189.00
ISBN 978-1-61779-393-6

P. Hui, Yale University, New Haven, CT USA (Ed.)

Gestational Trophoblastic Disease
Diagnostic and Molecular Genetic Pathology

In this volume Dr Hui has brought together a comprehensive overview of gestational trophoblastic disease that includes all the currently recognized entities: complete and partial hydatidiform moles, placental site trophoblastic tumor, epithelioid trophoblastic tumor, gestational choriocarcinoma, persistent gestational trophoblastic neoplasia, placental site nodule and exaggerated placental site reaction. Each entity is reviewed in detail, with emphasis on genetic background, clinical presentation, pathologic findings and ancillary studies, differential diagnosis and clinicopathological correlations.

Features
★ Comprehensive presentation of histological diagnosis and differential diagnoses of GTD ★ In-depth reviews of the molecular genetic background of GTD, epidemiology and risk factors ★ Updates of current therapeutic options for GTD ★ In-depth discussions of applications of molecular genetic pathology in GTD

Contents

Fields of interest
Pathology

Target groups
Professional/practitioner

Product Category
Professional/practitioner

Due December 2011
$219.00
ISBN 978-3-642-21996-2

S. Hollenberg, S. Heitner, Cooper University Hospital, Camden, NJ, USA

Cardiology in Family Practice
A Practical Guide

A concise summary of the most important medical and scientific topics concerning cardiovascular medicine in the primary care environment, this new edition of Cardiology in Family Practice has been updated with cutting-edge information and useful tips. Written in an easy-to-read format (background, diagnosis and disease management) and emphasizing practical techniques for evaluation and treatment, the authors explain the basic mechanisms underlying cardiovascular disease states and the treatment strategies that arise from them. Topics include stable angina, acute coronary syndromes, arrhythmias, hypertension, pericardial and valvular diseases, and hyperlipidemia. New figures have been added to each chapter in this edition. This book is a must-have for primary care physicians who wish to keep up to date with the rapidly changing field of cardiology.

Features
★ Complete updated ★ Illustrations and ECGs throughout ★ Easy to read format

Contents

Fields of interests
General Practice / Family Medicine; Primary Care Medicine; Cardiology

Target groups
Professional/practitioner

Product Category
Professional book

Due November 2011
2012. VII, 163 p. 18 illus., 11 in color. (Current Clinical Practice) Softcover
$59.95
ISBN 978-1-61779-384-4

Due December 2011
2012. XII, 214 p. 98 illus., 92 in color. (Current Clinical Pathology) Hardcover
$189.00
ISBN 978-1-61779-393-6
Disorders of Sex Development
An Integrated Approach to Management

Contents
The molecular basis of gonadal development and disorders of sex development.- Embryology of the human genital tract.- The hormones regulating sex development.- Questions about gender — children with atypical gender development.- Abnormal embryology in DSD.- 46XX Disorders of Sex Development.- 46,XY DSD.- Mixed Sex chromosome (aneuploidy) and ovo-testicular DSD.- Non-hormone DSD.- Multiple malformation syndromes in DSD.- The neonate with ambiguous genitalia.- DSD later in childhood.- The adolescent or young adult with DSD.- Imaging in DSD.- Surgical treatment in infancy.- Laparoscopy for DSD.- The family.- Genetic Counselling.- Cultural differences and controversies about timing of management.- Medical management of adolescents and young adults.- Gynaecological management.- Psychological Management in Adolescence and Beyond.- Short, medium and long-term outcomes following surgery for DSD at Royal Children’s Hospital.- Long-term outcome of DSD: a world view.- Complete Androgen Insensitivity Syndrome (A guide for parents and patients).

Fields of interests
Pediatrics; Human Genetics

Target groups
Professional/practitioner

Product Category
Contributed volume

Due December 2011
2012. XV, 340 p. 128 illus., 57 in color. Hardcover
► $219.00
ISBN 978-3-642-22963-3

Women’s Health in Interventional Radiology

Written as a concise, clinical guide to major interventional procedures impacting upon women’s health, Women’s Health in Interventional Radiology focuses on a wide range of vascular and non-vascular interventions commonly performed in daily practice, including those related to the pelvis, fallopian tube, spine, and lower extremities. Chapters provide key clinical background information on each intervention, including pathophysiology, clinical manifestations, basic anatomy, and imaging features, before moving on to step-by-step explanations of the techniques. Accompanied by high-quality illustrations and images throughout, chapters also include technical hints, pearls, and pitfalls, postoperative care guidelines, outcomes data, and complications. Written by an expert group of experienced interventionalists, this book promises the reader a comprehensive overview of interventions currently performed to treat problems affecting the health of women and is a valuable resource for both practicing physicians and those in training.

Contents

Fields of interests
Interventional Radiology; Imaging / Radiology

Target groups
Professional/practitioner

Product Category
Professional book

Due December 2011
2012. XIV, 138 p. 76 illus., 38 in color. Softcover
► approx. $59.99
ISBN 978-1-4419-5875-4

Dermatology
Illustrated Study Guide and Comprehensive Board Review

A fully-illustrated, note-packed volume of information, Dermatology: Illustrated Study Guide and Comprehensive Board Review fulfills a real need for a single study guide for the Dermatology Board Exam. Written by a previous Chief Resident of Dermatology at the University of Illinois at Chicago Medical Center, the text focuses on presenting comprehensive information in an easy-to-understand, easy-to-remember format. Tips, tricks, short lists, and tables fill every inch of this book—a must-have for any dermatology resident.

Features
► Hundreds of author notes pinpointing important information ► Acts as a concise go-to review book for the Dermatology Board exam ► Information presented mainly in an easy-to-read format ► Scores of mnemonics and memory tricks to mentally organize information ► Over 500 high-quality images placed parallel to the represented skin disorder ► Life after Boards—a discussion of life after the exam

Contents

Fields of interests
Dermatology; Primary Care Medicine

Target groups
Professional/practitioner

Product Category
Professional book

Due October 2011
2011. VI, 342 p. 179 illus., 174 in color. Softcover
► $69.95

>
Epidemiology
The Key to Prevention

This book is meant for adoption in first courses on epidemiology in Medical Schools and Faculties of Public Health in developing and transition countries and in workshops in these countries, taught for example by members of international organizations.

Features
- Covers in a comprehensive fashion infectious and noninfectious disease epidemiology
- Offers a completely unified and coherent approach to epidemiology
- Presents case studies for the Vietnamese Health infrastructure and culture

Contents

Fields of interests
Epidemiology; Biostatistics; Statistics for Life Sciences, Medicine, Health Sciences

Target groups
Graduate

Product Category
Monograph

Due October 2011

2011. XIII, 266 p. 5 illus. (Statistics for Biology and Health) Hardcover
► $79.95

Due September 2011

2nd Edition. 2010. XII, 250 p. 198 illus., 146 in color. (Medical Radiology / Diagnostic Imaging) Softcover
► approx. $119.00
ISBN 978-3-642-23586-3

Due January 2012

2012. 750 p. 107 illus., 13 in color. Hardcover
► approx. $349.00

Virtual Colonoscopy
A Practical Guide
Foreword by: A. L. Baert

Virtual colonoscopy is a rapidly evolving technique for the detection of tumoral lesions in the colon.

Features
- Includes the latest study results and developments in technology, as well as new illustrations
- All practical aspects of virtual colonoscopy are carefully explained
- The variability in application of the technique is addressed
- Imaging characteristics and pitfalls are considered in detail, with an extensive pictorial review of difficult lesions
- The contributors include a number of leaders in the field

Contents

Fields of interests
Imaging / Radiology; Diagnostic Radiology; Gastroenterology

Target groups
Professional/practitioner

Product Category
Contributed volume

Injury Research
Theories, Methods, and Approaches

Contents

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

Target groups
Research

Product Category
Contributed volume
**Laparoscopic Gastric Bypass**

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 surgical key steps are described in detail. This surgical guide book provides essential reference material to surgeons wishing to update their knowledge in this specific area.

**Features**
- Written by experts
- State-of-the-Art
- Contents with numerous color photographs

**Contents**
Creating the pneumoperitoneum – placing the trocar for the scope. - Hasson method (open technique). - Trocar with optical obturator. - Veress needle (closed technique)

**Fields of interest**
Minimally Invasive Surgery

**Target groups**
Professional/practitioner

**Product Category**
Monograph

---

**Pediatric Critical Care Study Guide**

**Text and Review**

**Features**
- True compendium of all that is needed to know in pediatric critical care
- Clear and concise presentation of key clinical information
- Of use to all staff within the pediatric critical care unit

**Contents**

**Fields of interest**
Intensive / Critical Care Medicine; Pediatrics; Internal Medicine

**Target groups**
Professional/practitioner

**Product Category**
Reference work

---

**Femoroacetabular Impingement**

This book is the first monograph to examine all aspects of femoroacetabular impingement (FAI), an important disease first described early in the twenty-first century. Comprising 27 chapters and including many color illustrations, the book contains a variety of points of view from more than 50 experts from 11 countries and represents an up-to-date compilation of professional knowledge on FAI. The full range of available surgical treatments is carefully described and evaluated, including arthroscopic treatment, the open and mini-open approaches, periacetabular osteotomy, hip resurfacing arthroplasty, and combined techniques. Differential diagnosis, imaging, postoperative management, and treatment outcome are also discussed in appropriate detail. It is hoped that this book will promote a comprehensive approach to what is a common pathology and thereby encourage further improvement in treatment.

**Features**
- First monograph on femoroacetabular impingement
- Describes the complete spectrum of available surgical treatments
- Explains how to achieve a correct diagnosis
- Presents suitable rehabilitation protocols
- Contains many color illustrations

**Contents**

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

**Target groups**
Professional/practitioner

**Product Category**
Contributed volume
Informed Consent, Proxy Consent, and Catholic Bioethics
For the Good of the Subject

G. Mazur, O.P., Pontifical University, Krakow, Poland

Features
- Offers a deeper and broader understanding of informed consent and proxy consent from the perspective of Christian ethics
- Assists those in the medical field understand and critically evaluate certain relatively recent and problematic approaches to consent in healthcare
- Provides an overview and analysis of the debates on informed and proxy consent in present-day American bioethical literature
- Provides the reader a background essential for a thorough understanding of the matter.

Contents

Fields of interests
Theory of Medicine/Bioethics; Ethics; Medical Law

Target groups
Research

Product Category
Monograph

Teaching Mindfulness
A Practical Guide for Clinicians and Educators
D. McCown, D. Reibel, Thomas Jefferson University, Philadelphia, PA, USA; M. S. Micozzi, Georgetown University, Washington, DC, USA

Features
- The first academic text on teaching mindfulness across a broad range of professional clinical settings
- Written from a sensitive secular perspective that acknowledges the Buddhist roots of the practice, as well as the full range of theistic and non-theistic traditions, with attention to the Jewish and Christian practices that are a central part of the authors’ identities

Contents
Part I: Clinical and Cultural Context: Chapter 1: Getting grounded (in our own instability).- Chapter 2: A history exercise to locate „mindfulness” now: Chapter 3: Building a „working” definition of mindfulness.- Part II: Authenticity, Authority, and Friendship: Chapter 4: The Person of the Teacher.- Chapter 5: The skills of the teacher.- Part III: Towards an „Empty” Curriculum: Chapter 6: Organizing the intentions of teaching.- Chapter 7: Fulfilling the intentions of teaching.- Chapter 8: Practices and resources.

Fields of interests
Complementary & Alternative Medicine; Primary Care Medicine; Health Psychology

Target groups
Professional/practitioner

Product Category
Monograph

Neonatal Cranial Ultrasonography
G. Meijler, University of Toronto, ON, Canada

Features
- A compact, easy-to-use guide to neonatal cranial ultrasonography for both the novice and the more experienced practitioner
- Provides essential information on the procedure itself and on the normal ultrasound anatomy
- Includes detailed consideration of fetal cerebral ultrasonography
- Contains many new high-quality ultrasound images, reflecting the improvements in image quality since the first edition

Contents

Fields of interests
Neuroradiology; Pediatrics

Target groups
Professional/practitioner

Product Category
Professional book
Interventional Oncology
A Practical Guide for the Interventional Radiologist

Features
- A concise guide to techniques in this rapidly evolving field
- Succinct and well organized – a definitive practical guide
- Presents the expertise of the most highly respected international authorities
- Puts radiological interventions into the greater context of cancer treatment
- Covers best practices, proper patient selection, and imaging for patient follow-up

Contents

Fields of interests
Interventional Radiology; Imaging / Radiology; Oncology

Target groups
Professional/practitioner

Product Category
Contributed volume

Due December 2011
2012. X, 222 p. 75 illus., 24 in color. Hardcover
➤ $179.00

MR Angiography of the Body Technique and Clinical Applications

Magnetic resonance angiography (MRA) continues to undergo exciting technological advances that are rapidly being translated into clinical practice. It also has evident advantages over other imaging modalities, including CT angiography and ultrasoundography. With the aid of numerous high-quality illustrations, this book reviews the current role of MRA of the body. It is divided into three sections. The first section is devoted to issues relating to image acquisition technique and sequences, which are explored in depth.

Features
- Considers in depth issues relating to image acquisition technique and sequences
- Explains in detail the clinical applications of MRA in various parts of the body
- Discusses the role of MRA in transplant patients
- Includes numerous high-quality illustrations
- Written by acknowledged experts in the field

Contents

Fields of interests
Imaging / Radiology; Diagnostic Radiology; Angiology

Target groups
Professional/practitioner

Product Category
Contributed volume

Handbook of Endovascular Peripheral Interventions

The Handbook of Endovascular Peripheral Interventions has been written to serve as a comprehensive guide for both the beginner and advanced interventionalist.

Features
- Addresses the diagnosis and management of Peripheral arterial disease
- Well-illustrated A ‘go-to’ guide on the currently available percutaneous techniques
- Provides cutting-edge research methodologies and insights into diagnoses

Contents

Fields of interests
Cardiology; Interventional Radiology; Vascular Surgery

Target groups
Professional/practitioner

Product Category
Handbook

Due December 2011
2012. X, 312 p. 78 illus., 34 in color. Softcover
➤ approx. $65.00

Due September 2011
2010. X, 178 p. 126 illus., 35 in color. (Medical Radiology / Diagnostic Imaging) Softcover
➤ approx. $119.00
ISBN 978-3-642-23590-0
Robotic Radiosurgery Treating Prostate Cancer and Related Genitourinary Applications

The treatment of prostate cancer continues to be problematic owing to serious side-effects, including erectile dysfunction and urinary incontinence. Robotic radiosurgery offers a novel, rapid, non-invasive outpatient treatment option that combines robotics, advanced image-guided spatial positioning, and motion detection with submillimeter precision. This book examines all aspects of the treatment of prostate cancer with robotic radiosurgery.

Features
- Presents current knowledge on all aspects of the treatment of prostate cancer by means of robotic radiosurgery
- Examines the problem of patient motion during radiation therapy and explains how robotic radiosurgery overcomes this
- Discusses in detail the role of hypofractionated radiation delivery using robotic radiosurgery
- Examines emerging genitourinary applications

Contents
Section 1: Introduction to Radiosurgery as a Multidisciplinary Practice.
Section 2: Historical and Current Prostate Cancer Issues.
Section 3: Prostate Motion.
Section 4: Hypofractionated Radiation Deliver.
Section 5: Emerging Applications.

Fields of interests
Imaging / Radiology; Oncology; Urology/Andrology

Target groups
Professional/practitioner

Product Category
Contributed volume

Due November 2011
2012, X, 312 p. 55 illus., 39 in color. Hardcover
➤ $229.00
ISBN 978-3-642-11494-6

Mitochondrial Dysfunction in Neurodegenerative Disorders

Gene expression studies have revealed diagnostic profiles and upregulation of specific pathways in many solid tumors. The explosion of new information in gene expression profiling could potentially lead to the development of tailored treatments in many solid tumors.

Features
- Presents a range of applications for oncological disease
- Useful and comprehensive resource
- Written by international opinion leaders in the field

Contents
Preface.
- Gene signatures and soft tissue sarcomas: status of art and perspectives.
- Heterogeneity of breast cancer: gene signatures and beyond.
- Gene signatures in CRC and liver metastasis.
- Gene signatures in Gastrointestinal Stomal Tumors (GIST).
- Pancreatic Cancer Genetics.
- Diagnostic, prognostic and therapeutic value of gene signatures in non-small-cell lung cancer.
- Gene signatures in Gastric Cancer.
- The role of epigenetics in cancer: from molecular function to high-throughput assays.
- Primary Epithelial Ovarian Neoplasms: New concepts concerning origin, pathogenesis and classification based on morphology, immunomarkers, molecular features and gene expression studies.
- Thyroid carcinoma: molecular signature by histotype specific mutations and gene expression patterns.

Fields of interests
Pathology; Oncology; Laboratory Medicine

Target groups
Professional/practitioner

Product Category
Contributed volume

Due December 2011
2012, XII, 201 p. 28 illus., 24 in color. (Current Clinical Pathology)
➤ $189.00
ISBN 978-1-61779-357-8

Diagnostic, Prognostic and Therapeutic Value of Gene Signatures

Due December 2011
Infection Control in the Intensive Care Unit

Intensive care is a rapidly changing area of medicine, and after four years from the 2nd edition the volume editors and authors have deemed necessary to update it. In the recent years, in fact, five new randomised controlled trials and five new meta-analyses demonstrate that selective decontamination of the digestive tract [SDD] is an antimicrobial prophylaxis to prevent severe infections of not only lower airways but also of blood. Additionally, SDD has been shown to reduce inflammation including multiple organ failure and mortality. An intriguing observation is the evidence that SDD using parenteral and enteral antimicrobials reduces rather than increases antimicrobial resistance. Moreover, a new chapter on microcirculation had been added. The volume will be an invaluable tool for all those requiring in depth knowledge in the ever expanding field of infection control.

Features
- Contains a new chapter on microcirculation
- The already existing chapters have been rearranged and updated on the basis of the most recent meta-analyses
- Particular attention is given to SDD
- Text is enriched by many tables and figures

Contents
Foreword-Preface. - Section 1: Essentials in Clinical Microbiology. - Section 2: Antimicrobials. - Section 3: Infection Control. - Section 4: Infections on ICU. - Section 5: Special Topics.

Fields of interests
Intensive / Critical Care Medicine; Internal Medicine; Pharmacy

Target groups
Professional/practitioner

Product Category
Contributed volume

Chronic Hepatitis C Virus
Advances in Treatment, Promise for the Future

Chronic Hepatitis C Virus: Lessons from the Past, Promise for the Future documents the monumental advances that have been made in our understanding of chronic HCV during the past decade.

Features
- New anti-viral therapy explored
- Outlines monumental advances in treatment
- Presents current and future treatment options

Contents

Fields of interests
Hepatology; Gastroenterology

Target groups
Professional/practitioner

Product Category
Contributed volume
Practical Handbook for Small-Gauge Vitrectomy
A Step-By-Step Introduction to Surgical Techniques

Since the development of 23G vitrectomy in 2004, the technique has revolutionized retinal surgery by overcoming a number of the problems associated with 20G and 25G systems and offering significant improvements in surgical capability and fluidics. This important book first discusses the instruments and equipment employed in 23G vitrectomy and then explains, step by step, the various surgical techniques with the aid of informative diagrams and many high-quality photos. In addition, videos are included that document the different procedures, from the straightforward to the demanding.

Features
► Offers a step-by-step explanation and guide to the use of 23G vitrectomy, the most modern retinal surgery technique
► Describes the various surgical procedures with the aid of informative diagrams and high-quality photos
► Includes videos that document the different procedures, from the straightforward to the demanding

Contents
Introduction to small-gauge vitrectomy.
- Equipment.
- General considerations and techniques of pars plana vitrectomy.
- Special techniques for pars plana vitrectomy.
- Conventional vitrectomy with 3-port trocar system.
- Bimanual vitrectomy with 4-port trocar system.
- Diabetic retinopathy.
- Dislocated IOL and dropped nucleus.
- Endophthalmitis.
- Detachment.
- Trauma.
- Surgical pearls.
- Appendix.

Fields of interest
Ophthalmology

Target groups
Professional/practitioner

Product Category
Monograph

MRI of the Gastrointestinal Tract

MRI has become an important tool in the management of patients with diseases of the gastrointestinal tract, such as rectal cancer and inflammatory bowel diseases. This book, written by distinguished experts in the field, discusses in detail the technical, practical, and clinical aspects of MRI of the gastrointestinal tract. The chapters on technique encompass the most recent developments and address such topics as contrast media, high field strength MRI, and perfusion MRI.

Features
► The most recent technical developments in MRI of the gastrointestinal tract are clearly explained and discussed
► Both well-established and novel clinical applications are described with the assistance of numerous high-quality illustrations
► All of the authors are recognized experts in the field
► The book is designed to be of value to both the novice and the experienced practitioner

Contents
Technique: MRI Sequences, Coils and Techniques.
- High-Field Strength.
- Contrast Media.
- Diffusion and Spectroscopy.
- Perfusion.
- Clinical Application: Esophagus and Stomach.
- Upper GI Tract Motility.
- Duodenum.
- Small Bowel.
- Enteroangiography.
- Small Bowel.
- Malignancy.
- MR of the Small Bowel.
- Colonography: Technique.
- Colonography: Results.
- Rectum.
- Bowel Motility and Visceral Sensitivity.
- Peritoneum.
- Adhesions and Bowel Obstruction.
- Acute Abdomen.
- Pelvic Floor.
- Anus.
- Subject Index.
- List of Contributors.

Fields of interest
Imaging / Radiology; Diagnostic Radiology; Gastroenterology

Target groups
Professional/practitioner

Product Category
Monograph

Coronary Heart Disease
Clinical, Pathological, Imaging, and Molecular Profiles

Features
► Comprehensive volume on ischemic heart disease
► Includes cardiovascular imaging, research, pathology and clinical cardiology
► Correlations of information from cases including clinical, pathological and imaging studies

Contents
Anatomy of Coronary Vessels.
- Cardiac Development.
- Echocardiographic Evaluation of Ischemic Heart Disease.
- Nuclear Imaging in Ischemic Heart Disease.
- Non-Invasive Coronary Artery Imaging.
- Invasive Coronary Angiography.
- Coronary Artery Anomalies.
- Pathology of Chronic Obstructive Coronary Disease.
- Vulnerable Plaque.
- Genetics of Coronary Heart Disease.
- Endothelium Biology in Cardiovascular Disease.
- Stem Cells and Atherosclerosis.
- Induced Pluripotential Stem Cells and the Prospects for Cardiac Cell Therapy.
- Regulation of Vasculogenesis and Angiogenesis.
- Chronic Stable Angina.
- Pathology of Sudden Death in Coronary Arterial Diseases.
- Acute Coronary Syndrome.
- Complications of Acute Myocardial Infarction.
- Healed Myocardial Infarction.
- Non-Atherosclerotic Ischemic Heart Disease.
- Catheter Based Revascularization.
- Surgical Treatment of Coronary Artery Disease.
- Non-Coronary Surgical Therapy for Ischemic Heart Disease.
- Refractory Angina.
- Mechanical Circulatory Support and Vascular Remodeling: Acute Catheter Based Support.
- Mechanical Circulatory Support and Vascular Remodeling: Surgical VAD.
- Diabetes and Coronary Heart Disease.
- Cardiovascular Disease in Women.

Fields of interest
Cardiology

Target groups
Professional/practitioner

Product Category
Contributed volume

Due December 2011
2012. XII, 234 p. 156 illus., 149 in color. With DVD.
Hardcover
► $189.00
ISBN 978-3-642-23293-0

Due September 2011
2010. X, 356 p. 265 illus., 43 in color. (Medical Radiology / Diagnostic Imaging) Softcover
► approx. $119.00
ISBN 978-3-642-23585-6

Due January 2012
2012. XX, 610 p. 751 illus., 201 in color. Hardcover
► $239.00
Pediatric Dialysis

Contents

Fields of interests
Pediatrics; Nephrology

Target groups
Professional/practitioner

Product Category
Handbook

Nocturia

Causes, Consequences and Clinical Approaches

Nocturia: Causes, Consequences and Clinical Approaches is the first volume exclusively on the topic of nocturia and is designed to be a comprehensive treatise on the subject. The volume is organized into 11 chapters first introducing and defining nocturia and its impact to patients and society, followed by chapters dealing with predictors and risk factors; relationship to sleep disorders; overactive bladder; and water homeostasis.

Fields of interest
Nephrology; Primary Care Medicine; Urology/Andrology

Target groups
Professional/practitioner

Product Category
Contributed volume

Critical issues for the Development of Sustainable E-health Solutions

Contents

Fields of interest
Health Informatics

Target groups
Research

Product Category
Monograph
T. Wilson, Winona State University, MN, USA;  
G. A. Bray, Louisiana State University, Baton Rouge, LA, USA; N. J. Temple, Athabasca University Centre for Science, AB, Canada; M. B. Struble, College of Saint Elizabeth, Morristown, NJ, USA (Eds)  

**Nutrition Guide for Physicians**

**Contents**  

**Fields of interests**  
Clinical Nutrition; Nutrition; Primary Care Medicine

**Target groups**  
Professional/practitioner

**Product Category**  
Contributed volume

---

**Due September 2011**  
2011. XXIV, 444 p. (Nutrition and Health) Softcover  
➤ approx. $49.95  
ISBN 978-1-61779-409-4
D. Baur, Nottingham University, UK

**NGOs as Legitimate Partners of Corporations**
A Political Conceptualization

**Features**
- First systematic conceptualization of NGOs as partners of corporations
- Innovative and critical view on the much applauded role of NGOs as partners of corporations
- First typology to clarify the blurred boundaries between NGOs, interest groups and activists

**Contents**

**Fields of interests**
Ethics; Political Science; Economics/Management Science, general

**Target groups**
Research

**Product Category**
Monograph

---

O. Belkind, University of Richmond, VA, USA

**Physical Systems**
Conceptual Pathways between Flat Spacetime and Matter

Based on the concept of a physical system, this book offers a new philosophical interpretation of classical mechanics and the Special Theory of Relativity. According to Belkind’s view the role of physical theory is to describe the motions of the parts of a physical system in relation to the motions of the whole. This approach provides a new perspective into the foundations of physical theory, where motions of parts and wholes of physical systems are taken to be fundamental, prior to spacetime, material properties and laws of motion.

**Features**
- Physical Systems offers a new philosophical framework for thinking about and analyzing the foundations of physical theory
- Offers a new basis for understanding physical reality, and introduces its own fresh approach for solving epistemological and metaphysical problems in the philosophy of physics
- The monograph is distinct in that it attempts to provide a philosophical foundation for the most basic physical concepts, while ushering new insights regarding these concepts

**Contents**

**Fields of interests**
Philosophy of Science; Astrophysics and Astroparticles

**Target groups**
Research

**Product Category**
Monograph

---

J. A. Blair, University of Windsor, ON, Canada

C. W. Tindale, University of Windsor, ON, Canada (Ed.)

**Groundwork in the Theory of Argumentation**
Selected Papers of J. Anthony Blair

**Contents**

**Fields of interests**
Logic; Comparative Linguistics; Literacy

**Target groups**
Research

**Product Category**
Monograph

---
News 9/2011

C. Corradetti, European Academy, Bolzano, Italy (Ed.)

Philosophical Dimensions of Human Rights
Some Contemporary Views

Contents

Fields of interests
Philosophy of Law; Political Science; European Law/Public International Law

Target groups
Research

Product Category
Contributed volume

H. T. Engelhardt, Rice University, Houston, TX, USA (Ed.)

Bioethics Critically Reconsidered
Having Second Thoughts

Bioethics developed as an academic and clinical discipline during the later part of the 20th century due to a variety of factors.

Features
- Focuses on the role of social/political ideology in the development of bioethics
- Has as its focus a retrospective on the ideological foundations of bioethics as a discipline
- Offers a variety of perspectives of the role that ideology plays in the discipline of bioethics
- Shows how the ideology of bioethics is both secularism and paternalism

Contents

Fields of interests
Ethics; Theory of Medicine/Bioethics

Target groups
Research

Product Category
Contributed volume

H. Lekke, University of Oslo, Norway

Early Stoic Epistemology

This book looks at the epistemological views and arguments of the early Stoics, in particular those of Chrysippus (3rd century BC), the third head of the Stoic school. It discusses such issues as the manner in which we perceive things and come to have notions of them, the reliability of arguments, the nature and variety of cognitive errors, and the possibility and nature of knowledge. Unlike most recent works on the subject, the aim of this book is to give a comprehensive account of Stoic epistemology as a whole as it was developed by Chrysippus. The emphasis lies - more than usual - on how the epistemological views of the Stoics are interrelated, not only among themselves, but also with views belonging to their physics and logic.

Features
- The first comprehensive modern study of Stoic epistemology, which greatly influenced e.g. Descartes
- Builds on and critically assesses the latest research on the subject
- Gives access to issues that, because of poor source material, are not easily accessible to even advanced students and specialists

Contents

Fields of interests
Epistemology; History of Philosophy; Philosophy of Mind

Target groups
Research

Product Category
Monograph

Due October 2011
2012. X, 194 p. (Philosophy and Medicine, Volume 10) Hardcover
$139.00
ISBN 978-94-007-2243-9

Due November 2011
2012. XXV, 311 p. 1 illus. Hardcover
$189.00
ISBN 978-94-007-2375-7

Due January 2012
approx. $139.00
ISBN 978-94-007-2152-4
M. Murphey

The Development of Quine’s Philosophy

This book covers W. V. Quine’s philosophic career from his early radical empiricism and behaviorism through his development of a series of skeptical doctrines regarding meaning, reference, and science. It shows what problems he tried to solve and what his solutions were. Result has been a series of highly controversial claims that have won him international fame. His work is still a center of controversy and has lead to an enormous literature of commentary.

Features

► Presents an overview of Quine’s entire career and philosophical development ► Highlights that Quine belongs in the tradition of the Vienna circle whose doctrines are undergoing a revival of interest at the present time ► Casts an interesting light on the debate over analyticity and the consequent problems raised in the philosophy of logic and mathematics

Contents

Introduction Chapter I. Logic and Philosophy Chapter II. Semantics and Ontology Chapter III. From Word and Object to The Roots of Reference Chapter IV. Last Revisions Chapter V. Conclusion Appendix Notes

Fields of interests

Philosophy (general); History; History of Philosophy

Target groups

Research

Product Category

Monograph

---

Due November 2011


► $139.00

ISBN 978-94-007-2368-9

---

Due October 2011

2011. V. 370 p. 23 illus. (Studies in German Idealism, Volume 13) Hardcover

► $189.00

ISBN 978-94-007-2450-1

---

Due December 2011


► approx. $229.00

**Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800-2010**

Contents


**Fields of interests**

Philosophy of Biology; Systems Biology; Medicine/Public Health, general

**Target groups**

Research

**Product Category**

Contributed volume

---

**Philosophy of Behavioral Biology**

Contents


**Fields of interests**

Philosophy of Biology; Philosophy of Science; Behavioural Sciences

**Target groups**

Research

**Product Category**

Contributed volume

---

**Imagined Causes: Hume’s Conception of Objects**

This book provides the first comprehensive account of Hume’s conception of objects in Book I of the Treatise. What, according to Hume, are objects? Ideas? Impressions? Mind-independent objects? All three? None of the above? Through a close textual analysis, I show that Hume thought that objects are imagined ideas. However, I argue that he struggled with two accounts of how and when we imagine such ideas. On the one hand, Hume believed that we always and universally imagine that objects are the causes of our perceptions. On the other hand, he thought that we only imagine such causes when we reach a “philosophical” level of thought. This tension manifests itself in Hume’s account of personal identity; a tension that, I argue, Hume acknowledges in the Appendix to the Treatise. As a result of presenting a detailed account of Hume’s conception of objects, we are forced to accommodate new interpretations of, at least, Hume’s notions of belief, personal identity, justification and causality.

**Fields of interests**

- The first comprehensive account of Hume’s conception of objects
- Discusses hotly debated claims in recent literature, such as why some causal relations are justified, and why Hume is not a “skeptical realist”
- Contains many analyses that sharply diverge from traditional accounts

**Target groups**

Research

**Product Category**

Monograph
Philosophy

K. Sadegh-Zadeh, University of Munster, Germany
Handbook of Analytic Philosophy of Medicine

Contents

Fields of interests
Philosophy of Medicine; Medicine/Public Health, general; Computational Biology/Bioinformatics

Target groups
Research

Product Category
Handbook

Radioactive Waste
Technical and Normative Aspects of its Disposal

Radioactive waste (above all highly radioactive wastes from nuclear installations) caused by research, medicine and technology must be disposed of safely. However both the strategies disputed for the disposal of radioactive waste as well as concrete proposals for choosing a location for final waste disposal are highly debatable. An appropriate disposal must conform to both complex, technical requirements and fulfill the radio-biological conditions to appropriately protect man and nature. Ethical, legal and social conditions must also be considered.

Features
► Provides an up-to-date informative basis to a highly controversial topic
► Interdisciplinarity approach: technical, biological, and political
► Comprehensive description of technical concepts and the legal situation in different countries

Contents

Fields of interests
Ethics; Waste Management/Waste Technology; Nuclear Engineering

Target groups
Research

Product Category
Monograph

Due September 2011
2012. XXX, 1126 p. 113 illus. (Philosophy and Medicine, Volume 113) Hardcover
► $559.00
ISBN 978-94-007-2259-0

Due September 2011
2011. XXIV, 468 p. 42 illus. (Ethics of Science and Technology Assessment, Volume 38) Hardcover
► $139.00
ISBN 978-3-642-22924-4

Due December 2011
► $189.00
ISBN 978-94-007-2389-4

M. Trobok, University of Rijeka, Croatia; N. Miščević, University of Maribor, Slovenia; B. Žarnić, University of Split, Croatia (Eds)
Between Logic and Reality
Modeling Inference, Action and Understanding

Contents

Fields of interest
Logic

Target groups
Research

Product Category
Contributed volume
### The Fullness of the Logos in the Key of Life

**Book II. Christo-Logos: Metaphysical Rhapsodies of Faith (Itinerarium mentis in deo)**

This highly personal account of a lifetime’s spiritual and philosophical enquiry charts the author’s journey of faith through contemporary culture.

**Features**
- Offers the fruits of life-long meditation; a philosophical witness detailing a spiritual journey in contemporary culture
- Explains how the rhapsodic mode mediates all spheres of reality, from incarnation to the transnatural destiny of the soul, elevating them into a sacred meditation

**Contents**
- Preface
- Pro-logos
- Pars I. A period of preparation for faith: The first sermon of Timothy: the dispossessed; the quest
- Pars II. Glimmerings
- Pars III. The window to the absolute
- Pars IV. Retracing our steps to the cave, illuminating it
- Pars V. In the pursuit of truth
- Pars VI. Embodiment: our inward drama situated within the world of life, nature, and the cosmos the third sermon of Timothy:....
- Pars VII. The mystery of incarnation
- Pars VIII. The constitutive archetypes: the image of god emerging at the furthest borders of conscious dealings with our primordial condition of contingent existence
- Pars IX. The inward sacredness
- Pars X. The transnatural destiny of the soul

**Fields of interests**
- Philosophy of Religion; Classical Philosophy; Metaphysics

**Target groups**
- Research

**Product Category**
- Monograph

---

### Philosophical Faith and the Future of Humanity

**Judicial Review of Legislation**

A Comparative Study of the United Kingdom, the Netherlands and South Africa

Constitutionalism is the permanent quest to control state power, of which the judicial review of legislation is a prime example. Although the judicial review of legislation is increasingly common in modern societies, it is not a finished project. This device still raises questions as to whether judicial review is justified, and how it may be structured. Yet, judicial review’s justification and its scope are seldom addressed in the same study, thereby making for an inconvenient divorce of these two related avenues of study. To narrow the divide, the object of this work is quite straightforward. Namely, is the idea of judicial review defensible, and what influences its design and scope?

**Features**
- The most extensive study of the recent attempts to allow the constitutional review
- The first study to compare the United Kingdom, the Netherlands and South Africa
- Links the justification of constitutional review with shaping the scope of such review

**Contents**
- Foreword
- Acknowledgement
- Chapter 1 Setting the scene
- Chapter 2 Three systems of judicial review
- Chapter 3 Judicial review and democracy
- Chapter 4 For a of review
- Chapter 5 Modalities of review
- Chapter 6 Content of review
- Chapter 7 Consequences of review
- Chapter 8 Constitutionalism personified
- Bibliography

**Fields of interests**
- Philosophy of Law; International & Foreign Law/Comparative Law; Public Law

**Target groups**
- Research

**Product Category**
- Monograph

---

### Available

- $59.95
- ISBN 978-94-007-2399-3

---

### Due November 2011

2012. XIV, 200 p. (Analecta Husserliana, Volume 111) Hardcover
- $139.00
- ISBN 978-94-007-2256-9

---

### Due September 2011

2011. XII, 450 p. 2 illus. Hardcover
- $189.00
- ISBN 978-94-007-2222-4
M. Winter, University of St. Thomas, St. Paul, MN, USA

Rethinking Virtue Ethics

Rethinking Virtue Ethics offers a model of Aristotelian virtue ethics based on a deductive paradigm. This book argues that, contrary to what many contemporary thinkers are inclined to believe, Aristotelian virtue ethics is consistent with at least some action-guiding moral principles being true unconditionally, and that a justification for general moral principles can be grounded in fundamental concepts within Aristotle’s theory. An analysis of ethical propositions that hold for the most part is proposed that fits well within the deductive paradigm developed. This unique interpretation of virtue ethics has implications for recent discussions of the virtues in social psychology, issues about how fundamental moral principles are known, questions about the justification of inalienable rights, debates about moral particularism and generalism, and discussions of moral realism and anti-realism.

Features
► Offers an original and unique contribution to a vibrant discussion in contemporary philosophy
► Provides a basis for seeing how to make a philosophical case for inalienable rights
► Explains how unconditional ethical principles are consistent with a virtue based approach to ethics
► Addresses some of the main challenges and objections to virtue ethics in contemporary literature

Fields of interests
Ethics; Personality and Social Psychology

Target groups
Research

Product Category
Monograph

Due September 2011

► $139.00
ISBN 978-94-007-2192-0
**New Series**

**Advances in the Physics of Particles and Nuclei - Volume 31**

The series Advances in the Physics of Particles and Nuclei (APPN) is devoted to the archiving, in printed high-quality book format, of the comprehensive, long shelf-life reviews published in The European Physical Journal A and C. APPN will be of benefit in particular to those librarians and research groups, who have chosen to have only electronic access to these journals. Occasionally, original material in review format and refereed by the series’ editorial board will also be included. This volume contains the following two reviews: Nora Brambilla et al.: Heavy Quarkonium: Progress, Puzzles and Opportunities Daniel Wicke: Properties of the Top Quark

**Contents**


**Fields of interests**

Elementary Particles, Quantum Field Theory; Astrophysics and Astroparticles; Nuclear Physics, Heavy Ions, Hadrons

**Target groups**

Research

**Product Category**

Monograph

---

**SpringerBriefs in Complexity**


SpringerBriefs in Complexity are a series of slim high-quality publications encompassing the entire spectrum of complex systems science and technology. Featuring compact volumes of 50 to 125 pages (approximately 20,000-45,000 words), Briefs are shorter than a conventional book but longer than a journal article. Thus Briefs serve as timely, concise tools for students, researchers, and professionals.

Typical texts for publication might include:

- A snapshot review of the current state of a hot or emerging field
- A concise introduction to core concepts that students must understand in order to make independent contributions
- An extended research report giving more details and discussion than is possible in a conventional journal article
- A manual describing underlying principles and best practices for an experimental or computational technique
- An essay exploring new ideas broader topics such as science and society

Briefs allow authors to present their ideas and readers to absorb them with minimal time investment. Briefs are published as part of Springer’s eBook collection, with millions of users worldwide. In addition, Briefs are available, just like books, for individual print and electronic purchase. Briefs are characterized by fast, global electronic dissemination, straightforward publishing agreements, easy-to-use manuscript preparation and formatting guidelines, and expedited production schedules. We aim for publication 8-12 weeks after acceptance.

SpringerBriefs in Complexity are an integral part of the Springer Complexity publishing program. Proposals should be sent to the responsible Springer editors or to a member of the Springer Complexity editorial and program advisory board (springer.com_complexity).

**Contents**


**Fields of interests**

Statistical Physics, Dynamical Systems and Complexity; Complexity; Game Theory, Economics, Social and Behav. Sciences

**Target groups**

Graduate

**Product Category**

Monograph

---

**Due September 2011**


- $129.00
- ISBN 978-3-642-23305-0

---

**Due October 2011**

2011. IX, 76 p. 4 illus. (SpringerBriefs in Complexity) Softcover

- $49.95
- ISBN 978-3-642-23922-9

---

E. Bertin, Ecole Normale Supérieure de Lyon, France

**A Concise Introduction to the Statistical Physics of Complex Systems**

This concise primer (based on lectures given at summer schools on complex systems and on a masters degree course in complex systems modeling) will provide graduate students and newcomers to the field with the basic knowledge of the concepts and methods of statistical physics and its potential for application to interdisciplinary topics. Indeed, in recent years, statistical physics has begun to attract the interest of a broad community of researchers in the field of complex system sciences, ranging from biology to the social sciences, economics and computer science. More generally, a growing number of graduate students and researchers feel the need to learn some basic concepts and questions originating in other disciplines without necessarily having to master all of the corresponding technicalities and jargon. Generally speaking, the goals of statistical physics may be summarized as follows: on the one hand to study systems composed of a large number of interacting ‘entities’, and on the other to predict the macroscopic (or collective) behavior of the system considered from the microscopic laws ruling the dynamics of the individual ‘entities’.

**Contents**


**Fields of interests**

Statistical Physics, Dynamical Systems and Complexity; Complexity; Game Theory, Economics, Social and Behav. Sciences

**Target groups**

Graduate

**Product Category**

Monograph
**Flags of the Night Sky**

A. G. Bordeleau, Pointe-Claire University, QC, Canada

**Why Some National Symbols Carry Heavenly Signs**

Many national flags display astronomical features – Sun, Moon, stars – but are they really based on existing astronomical objects? The United States flag sports 50 stars, one for each state, however none of them are linked to real stars. Further, the lunar crescent is often shaped like the Sun being eclipsed by the Moon. At times, stars are seen right next to the crescent, where the darkened disc of the moon should be! This book will present true astronomical objects and patterns highlighted on national flags and link informative capsules about these objects to the political reasons why they were chosen to adorn such an important symbol.

**Features**

- Explains stars and constellations found on national flags from numerous countries throughout the world
- Presents a complete coverage of symbols in the sky displayed on national banners – from lunar crescents to the southern cross
- Offers an original approach to basic astronomy while also teaching the history of why these astronomical symbols were used

**Contents**


**Fields of interests**

Astronomy, Astrophysics and Cosmology; Popular Science in Astronomy; Human Geography

**Target groups**

Popular/general

**Product Category**

Popular science
Macromolecular Crystallography
Deciphering the Structure, Function and Dynamics of Biological Molecules

Contents
Preface. List of contributors. - Spatial And Temporal Organisation Of Multiprotein Systems Of Cell Regulation And Signalling: What Can We Learn From Nhej System Of Double-Strand Break Repair?, Qian Wu. - Co-Translational Protein Processing, Folding, Targeting, And Membrane Insertion Of Newly Synthesized Proteins; D. Boehringer, N. Ban. - The Role Of Multiple Sequence Repeat Motifs In The Assembly Of Multi-Protein Complexes; D. Barford. - Cryoelectron Tomography Or Doing Structural Biology In Situ; W. Baumeister. - Ruvbl1 And Ruvbl2 And Their Complex Proteins Implicated In Many Cellular Pathways; S. Gorynia et al. [...] 

Fields of interests
Crystallography; Protein-Ligand Interactions; Protein Structure

Target groups
Graduate

Product Category
Proceedings

Due November 2011

Hardcover
2011. X, 224 p. 95 illus., 46 in color. (NATO Science for Peace and Security Series A: Chemistry and Biology)
$189.00
ISBN 978-94-007-2529-4

Due October 2011

Hardcover
2011. 450 p. 150 illus. (Springer Series in Optical Sciences, Volume 165)
$169.00
ISBN 978-3-642-23368-5

Due December 2011

Hardcover
$229.00
ISBN 978-94-007-2545-4
A. Fridman, Saint Petersburg State Polytechnic Institute, Russia

The Quality of Measurements
A Metrological Reference
: A. Sabak, Fairmont, WV, USA; P. Makinen, Houston, TX, USA

This monograph and translation from the Russian describes in detail and comments on the fundamentals of metrology.

Features
- The monograph provides an introduction to the modern fundamentals of metrology.
- The presented methodology of measurement accuracy assurance that is based on the ISO 5725 standards helps readers validate new measurement methods.
- Presented methods on the basis of the author theory of metrological reliability of measuring instruments help readers determine the calibration and verification intervals.

Contents

Fields of interests
Measurement Science and Instrumentation; Quality Control, Reliability, Safety and Risk; Probability Theory and Stochastic Processes

Target groups
Research

Product Category
Monograph

Due January 2012
2012. XIV, 216 p. 25 illus., 1 in color. Hardcover
► $129.00

S. V. Gupta, Delhi, India
Mass Metrology

This book presents the practical aspects of mass measurements. Concepts of gravitational, inertial and conventional mass and details of the variation of acceleration of gravity are described. The Metric Convention and International Prototype Kilogram and BIPM standards are described. The effect of change of gravity on the indication of electronic balances is derived with respect of latitude, altitude and earth topography. The classification of weights by OIML is discussed. Maximum permissible errors in different categories of weights prescribed by national and international organizations are presented. Starting with the necessity of redefining the unit kilogram in terms of physical constants, various methods of defining the kilogram in terms of physical constants are described. The kilogram can be defined by Avogadro’s constant, ion collection of some heavy elements, levitation, voltage and Watt Balance.

Features
- Gives guidance to practicing metrologists.
- Describes Metric Convention and International Prototype Kilogram and BIPM standards.
- Gives orientation to maximum permissible errors in different categories of weights.

Contents

Fields of interests
Measurement Science and Instrumentation; Characterization and Evaluation of Materials; Theoretical and Applied Mechanics

Target groups
Research

Product Category
Monograph

Due December 2011
2011. 7 114 p. 22 illus. (Springer Series in Materials Science, Volume 155) Hardcover
► $169.00
ISBN 978-3-642-23411-8

K. Guseva, Carl von Ossietzky University Oldenburg, Germany

Formation and Cooperative Behaviour of Protein Complexes on the Cell Membrane

With the aim of providing a deeper insight into possible mechanisms of biological self-organization, this thesis presents new approaches to describe the process of self-assembly and the impact of spatial organization on the function of membrane proteins, from a statistical physics point of view. It focuses on three important scenarios: the assembly of membrane proteins, the collective response of mechanosensitive channels and the function of the twin arginine translocation (Tat) system. Using methods from equilibrium and non-equilibrium statistical mechanics, general conclusions were drawn that demonstrate the importance of the protein–protein interactions.

Features
- Nominated as an outstanding contribution by the University of Aberdeen.
- Contains essential new results on the statistical mechanics and dynamics of macromolecular assembly.
- Yields important conclusions and predictions for biological membranes.
- Work done in close cooperations with biologists studying membrane proteins.

Contents
Introduction.- The Role of Fragmentation on the Formation of Homomeric Protein Complexes.- Collective Response of Self-organised Clusters of Mechanosensitive Channels.- Assembly and Fragmentation of Tat Pores.- Conclusion.

Fields of interests
Membranes; Membrane Biology; Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Product Category
Monograph

Due October 2011
2011. XI, 101 p. 46 illus., 20 in color. (Springer Theses) Hardcover
► $129.00
ISBN 978-3-642-23987-8
D-Brane
Superstrings and New Perspective of Our World

Superstring theory is a promising theory which can unify all the forces and the matters in particle physics. A new multi-dimensional object which is called „D-brane“ was found recently, which drastically changed our perspective on unified world. We may live on membrane-like hypersurface in higher dimensions („braneworld scenario“), or we can create blackholes at particle accelerators, or the dynamics of quarks is shown to be equivalent to higher dimensional gravity theory. All of these are explained in this book with plain words but with little use of equations, and with many figures.

Features
► Covers the latest special developments in string theory
► Displays a new approach to hypothetically formulate a theory of the world, a braneworld scenario
► Provides specialists, students and scientists who are not in the field with interesting insights

Contents

Fields of interests
Theoretical, Mathematical and Computational Physics; Quantum Field Theories, String Theory; Elementary Particles, Quantum Field Theory

Target groups
Research

Product Category
Monograph

Social Self-Organization
Agent-Based Simulations and Experiments to Study Emergent Social Behavior

What are the principles that keep our society together? This question is even more difficult to answer than the long-standing question, what are the forces that keep our world together. However, the social challenges of humanity in the 21st century ranging from the financial crises to the impacts of globalization, require us to make fast progress in our understanding of how society works, and how our future can be managed in a resilient and sustainable way.

Features
► Comprehensive research overview by the leading scientist
► Agent-based modelling for a broad range of applications
► From mobility in opinion space to mobility in geographical space
► New approaches to manage complexity in socio-economic systems

Contents

Fields of interests
Statistical Physics, Dynamical Systems and Complexity; Numerical and Computational Physics; Sociology

Target groups
Research

Product Category
Monograph

The Classical Theory of Fields
Electromagnetism

The study of classical electromagnetic fields is an adventure. The theory is complete mathematically and we are able to present it as an example of classical Newtonian experimental and mathematical philosophy. There is a set of foundational experiments on which most of the theory is constructed. And then there is the bold theoretical proposal of a field-field interaction from James Clerk Maxwell. This textbook presents the theory of classical fields as a mathematical structure based solidly on laboratory experiments. The student is introduced to the beauty of classical field theory as a gem of theoretical physics. To keep the discussion fluid, the history is placed in a beginning chapter and some of the mathematical proofs in the appendices.

Features
► Gives a thorough and logical exposition of the theory of electromagnetism, enriched with historical details
► High quality diagrams and end of chapter questions support fast learning progress
► Course tested and approved for many years
► Rich text book features include end-of-chapter questions, problems and solutions, separate complete solutions manual available

Contents

Fields of interests
Optics and Electrodynamics; Magnetism, Magnetic Materials; Classical and Quantum Gravitation, Relativity Theory

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook

The Classical Theory of Fields
The Classical Theory of Fields

K. Hashimoto, RIKEN, Nishina Center, Saitama, Japan
D-Brane
Superstrings and New Perspective of Our World

D. Helbing, ETH Zürich, Switzerland
Social Self-Organization
Agent-Based Simulations and Experiments to Study Emergent Social Behavior

C. S. Helrich, Goshen College, IN, USA
The Classical Theory of Fields
Electromagnetism

Due November 2011
Hardcover
► approx. $89.95
ISBN 978-3-642-23573-3

Due December 2011
2012. 305 p. 100 illus. (Understanding Complex Systems) Hardcover
► $169.00
ISBN 978-3-642-24003-4

Due November 2011
2011. X, 454 p. 131 illus. (Graduate Texts in Physics, 0) Hardcover
► $169.00
ISBN 978-3-642-23204-6
Bell’s Theorem and Quantum Realism
Reassessment in Light of the Schrödinger Paradox

Quantum theory presents a strange picture of the world, offering no real account of physical properties apart from observation. Niels Bohr felt that this reflected a core truth of nature: “There is no quantum world. There is only an abstract mathematical description.” Among the most significant developments since Bohr’s day has been the theorem of John S. Bell. It is important to consider whether Bell’s analysis supports such a denial of microrealism. In this book, we evaluate the situation in terms of an early work of Erwin Schrödinger. Doing so, we see how Bell’s theorem is conceptually related to the Conway and Kochen Free Will theorem and also to all the major anti-realism efforts. It is easy to show that none of these analyses imply the impossibility of objective realism. We find that Schrödinger’s work leads to the derivation of a new series of theoretical proofs and potential experiments, each involving “entanglement,” the link between particles in some quantum systems.

Fields of interests
Quantum Physics; Atomic, Molecular, Optical and Plasma Physics; History and Philosophical Foundations of Physics

Target groups
Research

Product Category
Research

A Field Guide to Deep-Sky Objects
This star guide enables amateur astronomers to focus on a class of object, and using an observation list that begins with the easiest object, find and move progressively over a period of months to more difficult targets. Includes detailed descriptive summaries of each class of object. Amateur astronomers of all levels will find this book invaluable for its broad-ranging background material, its lists of fascinating objects, and for its power to improve practical observing skills while viewing many different types of deep-sky objects. This new edition of A Field Guide to Deep-sky Objects brings in a correction of out-of-date science along with two new chapters; Transient objects, and Naked-Eye Deep Sky Objects. This edition adds up-to-date information and on the objects mentioned above.

Features
► This new edition contains new discoveries in the field of deep sky astronomy as well as two new chapters covering transient phenomena and naked-eye deep sky objects ► Provides lists, classified by object type, and readable, engaging descriptions of those objects ► Helps observers to locate objects at any time

Contents

Fields of interests
Astronomy, Observations and Techniques; Astrophysics and Astroparticles

Target groups
Popular/general

Product Category
Popular science

The Rudolf Mössbauer Story
His Scientific Work and Its Impact on Science and History

The “Rudolf Mössbauer Story” recounts the history of the discovery of the “Mössbauer Effect” in 1958 by Rudolf Mössbauer as a graduate student of Heinz Maier-Leibnitz for which he received the Nobel Prize in 1961 when he was 32 years old.

Features
► Displays a unique summary of the work of the Nobel laureate ► Rudolf Moessbauer Presents the basics, development and application of Moessbauer methods ► Gives an outlook to the development of related new techniques

Contents

Fields of interests
Solid State Physics; History and Philosophical Foundations of Physics; Physical Chemistry

Target groups
Research

Product Category
Monograph
Fundamentals of Shallow Water Acoustics

Contents


Fields of interests
Acoustics; Oceanography; Marine & Freshwater Sciences

Target groups
Research

Product Category
Monograph

Charm Production in Deep Inelastic Scattering
Mellin Moments of Heavy Flavor Contributions to $F_2(x,Q^2)$ at NNLO

The production of heavy quarks in high-energy experiments offers a rich field to study, both experimentally and theoretically. Due to the additional quark mass, the description of these processes in the framework of perturbative QCD is much more demanding than it is for those involving only massless partons.

Features
- Presents a new and more accurate description of quark production in particle experiments
- Selected by the German Physical Society for a Dissertation Award 2011
- Develops new mathematical tools

Contents
Deeply Inelastic Scattering. - Heavy Quark Production in DIS. - Renormalization of Composite Operator Matrix Elements.- Representation in Different Renormalization Schemes. - Calculation of the Massive Operator Matrix Elements up to O(as2 $\varepsilon$). - Calculation of Moments at O(a33). - Heavy Flavor Corrections to Polarized Deep-Inelastic Scattering. - Heavy Flavor Contributions to Transversity. - First Steps Towards a Calculation of $A_{ij}(3)$ for all Moments. - Conclusions. - Feynman Rules. - Special Functions. - Finite and Infinite Sums. - Moments of the Fermionic Contributions to the 3-Loop Anomalous Dimensions. - The O($x$ 0) Contributions to $A_{ij}(3)$. - 3-Loop Moments for Transversity.

Fields of interests
Elementary Particles, Quantum Field Theory; Particle and Nuclear Physics; Mathematical Methods in Physics

Target groups
Research

Product Category
Monograph

Theory of Nuclear Fission
A Textbook

This book brings together various aspects of the nuclear fission phenomenon discovered by Hahn, Strassmann and Meitner almost 70 years ago. Beginning with an historical introduction the authors present various models to describe the fission process of hot nuclei as well as the spontaneous fission of cold nuclei and their isomers. The role of transport coefficients, like inertia and friction in fission dynamics is discussed. The effect of the nuclear shell structure on the fission probability and the mass and kinetic energy distributions of the fission fragments is presented. The fusion-fission process leading to the synthesis of new isotopes including super-heavy elements is described. The book will thus be useful for theoretical and experimental physicists, as well as for graduate and PhD students.

Features
- Only contemporary textbook on nuclear fission on the market
- Summarizes the basic knowledge and the current state-of-the-art of the theory nuclear fission research
- Didactical presentation of the theory nuclear fission

Contents

Fields of interests
Nuclear Physics, Heavy Ions, Hadrons; Nuclear Engineering

Target groups
Research

Product Category
Monograph

Due January 2012
2012. 365 p. 201 illus., 37 in color. (The Underwater Acoustics Series) Hardcover
$169.00
ISBN 978-1-4419-9776-0

Due October 2011
2011. XI, 207 p. 22 illus. (Springer Theses) Hardcover
$129.00
ISBN 978-3-642-23285-5

Due October 2011
2011. IX, 319 p. 101 illus. (Lecture Notes in Physics, Volume 838) Hardcover
$99.00
ISBN 978-3-642-23514-6
Hyperbolic Chaos: A Physicist’s View

Hyperbolic Chaos: A Physicist’s View presents recent progress on uniformly hyperbolic attractors in dynamical systems from a physical rather than mathematical perspective (e.g. the Plykin attractor, the Smale – Williams solenoid).

Features

- Written by an experienced teacher of nonlinear dynamics and chaos theory.
- Accessible to readers with different levels of knowledge.
- Stress applications of the mathematical theory.

Contents


Fields of interest

- Physics, general

Target groups

- Research

Product Category

- Reference work


A. Kaul, Germany (Ed.)

Medical Radiological Physics I

A. Almén, Sweden; J. H. Bernhardt, Germany; B. M. Moores, United Kingdom; D. Noßke, Germany; J. Valentin, Sweden; S. Vatnitsky, Austria; A. Kaul, Germany; L. Johansson, Umea University Hospital, Umea, Sweden; H. Kramer, Germany; K. Kasch, Beuth-Hochschule, Berlin, Germany; F. Stieve, Germany; S. Mattsson, Skane Univ. Hosp., Malmö, Sweden; H. Selbach, Germany.

The volume ‘Medical Radiological Physics’ is intended to provide the scientific basis of diagnostics and therapy in medical radiology. The present Subvolume A reviews radiation (both ionising and non-ionising) and its biological effects, dosimetry in diagnostic radiology and radiotherapy, as well as in nuclear medical diagnostics and therapy, and, finally, medical radiological protection relevant for patients, personnel and the general public. Not only fundamentals but also basic data pertinent to the topics dealt with have been collected by numerous experts of great international renown.

Fields of interest

- Physics, general

Target groups

- Research

Product Category

- Reference work

Z = 1-29. Excited Nuclear States

H. Schopper, CERN, Geneva, Switzerland (Ed.)

Volume I/25A is the first one in a series of volumes on the properties of the excited states of all nuclei. The data presented are collected from all kinds of nuclear reactions, including measurements of reactions with neutrons and γ-rays not yet fully considered in previous compilations. The nuclei considered also comprise nuclei far from the stability line. The properties of excited nuclear states are of importance for scientific and practical applications. No systematic compilation of such data has been performed so far. The present compilation has been prepared by eminent experts in the field. One of the characteristics of Landolt-Börnstein is that data are evaluated before they are accepted for compilation. The idea is to present ‘best values’ which can be used with confidence by non-experts. The present Volume I/25A is providing new data (energy levels, branching ratios, cross-sections, spectroscopic factors, etc.) for nuclei with atomic numbers Z ranging from 1 (H) to 29 (Ca) published in 2005-2010, thus supplementing previous compilations. Additionally, sections of the Introduction are devoted to isomers and nuclear collective excitations, recent trends in the theory of nuclear structure and nucleon interactions (tensor force effects, nonstatistical effects), and γ-ray cascade measurements after neutron capture. In view of the large amount of data available some of the information is given online only at www.springermaterials.com.

Fields of interests

- Physics, general; Astronomy, Astrophysics and Cosmology; Particle and Nuclear Physics

Target groups

- Research

Product Category

- Reference work

Due October 2011

2011. XVI, 320 p. 80 illus. Hardcover  ► $169.00  
ISBN 978-3-642-23665-5

Due January 2012

2012. 300 p. (Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series / Advanced Materials and Technologies, Subvolume 7A) Hardcover  ► $3099.00  
ISBN 978-3-642-23683-9

Due January 2012

ISBN 978-3-642-22797-4
Z. N. Sorko, S. I. Sukhoruchkin, St. Petersburg Nuclear Physics Inst., Russia; U. Kneissl, Universität Stuttgart, Germany; P. Descouvemont, Université Libre de Bruxelles, Belgium
H. Schopper, CERN, Geneva, Switzerland (Ed.)

**Z = 30-47. Excited Nuclear States**

Volume I/25B is the second one in a series of volumes on the properties of the excited states of all nuclei. The data presented are collected from all kinds of nuclear reactions, including measurements of reactions with neutrons and γ-rays not yet fully considered in previous compilations. The nuclei considered also comprise nuclei far from the stability line. The properties of excited nuclear states are of importance for scientific and practical applications. No systematic compilation of such data has been performed so far. The present compilation has been prepared by eminent experts in the field. One of the characteristics of Landolt-Börnstein is that data are evaluated before they are accepted for compilation. The idea is to present 'best values' which can be used with confidence by non-experts. The present Volume I/25B is providing new data (energy levels, branching ratios, cross-sections, spectroscopic factors, etc.) for nuclei with atomic numbers Z ranging from 30 (Zn) to 47 (Ag) published in 2005-2010, thus supplementing previous compilations. Additionally, sections of the Introduction are devoted to nuclear resonance fluorescence and cluster models in nuclear astrophysics. In view of the large amount of data available some of the information is given online only at www.springermaterials.com.

**Fields of interests**
Physics, general; Astronomy, Astrophysics and Cosmology; Medical and Radiation Physics

**Target groups**
Research

**Product Category**
Reference work

---

**G. Peters, LCI Publisher GmbH, Hamburg, Germany**

**N. Picqué, Orsay, France**

**G. Guelachvili, Orsay, France (Ed.)**

**Index Compounds reg. in Volumes A-I; Comprehensive CAS-Index for all Subvolumes A-L**

**Supplement to Subvolumes A, D, G and I**

This index is a guide to organic compounds which have material constants of general interest described in the Landolt-Börnstein / New Series. In total in the subvolumes J, K, L and M, 23865 compounds with 83941 references to numerical data are recorded. Compiled are volumes containing nuclear magnetic resonance (NMR) and nuclear quadrupole resonance (NQR) data, acoustical and optical properties, structure and molecular constants, mechanical and thermodynamic constants as well as physical properties of liquid crystals. All new compounds are given with the drawing of the chemical structure, the molecular formula, chemical names, the Chemical Abstracts registration numbers (CAS-RN) where known and references to Landolt-Börnstein citations.

**Features**
- Standard reference book with selected and easily retrievable data from the fields of physics and chemistry collected by acknowledged international scientists
- Also available online on www.springerLink.com

**Fields of interests**
Physics, general; Organic Chemistry

**Target groups**
Research

**Product Category**
Reference work

---

**News 9/2011**

Due January 2012

[approx. $6069.00]
ISBN 978-3-642-22929-9

Due January 2012

[approx. $4039.00]
ISBN 978-3-642-23078-3

Due January 2012

[approx. $5119.00]
ISBN 978-3-540-56060-9

---

**H2O (HOH), Part alpha**

**Subvolume C: Nonlinear Triatomic Molecules**

With the development of modern instruments and theories, a considerable amount of spectroscopic information is being permanently collected on molecules. The infrared, in particular, is seeing extraordinary activities. Using Fourier transform interferometers and infrared lasers, accurate data are measured often with extreme sensitivity. These data are also analyzed and precise molecular parameters determined. Volume II/20, “Molecular Constants Mostly from Infrared Spectroscopy”, is a recent Landolt-Börnstein publication series bringing together these results. It is made up of several volumes (A, B, C, D) with comprehensive compilation of critically evaluated molecular constants of diatomic (A), linear triatomic (B), nonlinear triatomic (C), and other polyatomic (D) molecules. Subvolume II/20C1 is devoted to H2O.

**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 interests**
Physics, general; Atomic/Molecular Structure and Spectra

**Target groups**
Research

**Product Category**
Reference work
M. Leitner, University of Vienna, Austria

**Studying Atomic Dynamics with Coherent X-rays**

Diffusion in solids at moderate temperatures is a well-known phenomenon. However, direct experimental evidence about the responsible atomic-scale mechanisms has been scarce, due to difficulties in probing the relevant length- and time-scales. The present thesis deals with the application of X-ray Photon Correlation Spectroscopy (XPCS) for answering such questions. This is an established method for the study of slow dynamics on length-scales of a few nanometres. The scattered intensity in the diffuse regime, i.e. corresponding to atomic distances, is very low, however, and so it has so far been considered impossible to use XPCS for this problem. Threefold progress is reported in this work: It proposes a number of systems selected for high diffuse intensity, it optimizes the photon detection and data evaluation procedures, and it establishes theoretical models for interpreting the results.

**Features**

- Selected as an outstanding contribution by the University of Vienna
- Proposes and optimizes a novel method for studying diffusion in solids
- Develops theoretical model for data interpretation

**Contents**


**Fields of interests**

Solid State Physics; Spectroscopy and Microscopy; Crystallography

**Target groups**

Research

**Product Category**

Monograph
H. Lewerenz, Helmholtz-Zentrum Berlin für Materialien und Energie, Germany

**Photons in Natural and Life Sciences**

*An Interdisciplinary Approach*

The book describes first the principle photon generation processes from nuclear reactions, electron motion and from discrete quantum transitions. It then focuses on the use of photons in various selected fields of modern natural and life sciences. It bridges disciplines such as physics, chemistry, earth- and materials science, proteomics, information technology, photoelectrochemistry, photosynthesis and spintronics. Advanced light sources and their use in natural and life sciences are emphasized and the effects related to the quantum nature of photons (quantum computing, teleportation) are described.

**Features**

- Represents the only book on this topic available on the market
- Provides unprecedented interdisciplinarity in covering the scientific fields/areas
- The tutorial style allows for easy understanding of readers from various disciplines

**Contents**


**Fields of interests**

Optics, Optoelectronics, Plasmonics and Optical Devices; Nanotechnology; Biophysics and Biological Physics

**Target groups**

Research

**Product Category**

Monograph

---

A. Ludu, Embry-Riddle Aeronautical University, Daytona Beach, FL, USA

**Nonlinear Waves and Solitons on Contours and Closed Surfaces**

This volume is an introduction to nonlinear waves and soliton theory in the special environment of compact spaces such as closed curves and surfaces and other domain contours.

**Features**

- Fully revised and updated 2nd edition transparently introduces the theory of nonlinear waves and solitons in the special environment of compact spaces
- Provides the necessary mathematical framework for treating the manifolds considered with relevant notions from topology and differential geometry
- Applies the theory to many concrete examples appearing in the physical and related sciences

**Contents**


**Fields of interests**

Nonlinear Dynamics; Differential Geometry; Mathematical Methods in Physics

**Target groups**

Research

**Product Category**

Monograph

---

K. Mainzer, Technische Universität München, Germany; L. O. Chua, University of California, Berkeley, CA, USA

**The Universe as Automaton**

*From Simplicity and Symmetry to Complexity*

This Brief is an essay at the interface of philosophy and complexity research, trying to inspire the reader with new ideas and new conceptual developments of cellular automata. Going beyond the numerical experiments of Steven Wolfram, it is argued that cellular automata must be considered complex dynamical systems in their own right, requiring appropriate analytical models in order to find accurate answers and predictions in the universe of cellular automata. Indeed, eventually we have to ask whether cellular automata can be considered models of the real world and, conversely, whether there are limits to our modern approach of attributing the world, and the universe for that matter, essentially a digital reality.

**Feature**

- 

**Contents**


**Fields of interests**

Statistical Physics, Dynamical Systems and Complexity; Artificial Intelligence (incl. Robotics); Complexity

**Target groups**

Research

**Product Category**

Monograph

---

Due November 2011

- $169.00
  ISBN 978-3-642-23748-5

- $129.00
  ISBN 978-3-642-22894-0

Due October 2011

2011. VIII, 104 p. 43 illus., 39 in color. (SpringerBriefs in Complexity, 1) Softcover
- $49.95
  ISBN 978-3-642-23476-7
M. A. Marques, Université Lyon, Villeurbanne, France; N. T. Maitra, The City University of New York, NY, USA; F. M. Nogueira, Universidade de Coimbra, Portugal; E. Gross, MPI für Mikrostrukturphysik, Halle, Germany; A. Rubio, Universidad del País Vasco, San Sebastián, Spain (Eds)

**Fundamentals of Time-Dependent Density Functional Theory**

There have been many significant advances in time-dependent density functional theory over recent years, both in enlightening the fundamental theoretical basis of the theory, as well as in computational algorithms and applications. This book, as successor to the highly successful volume Time-Dependent Density Functional Theory (Lect. Notes Phys. 706, 2006) brings together for the first time all recent developments in a systematic and coherent way.

**Features**

- Authored and edited by leading researchers in the field
- Tutorial approach, suitable for both taught courses and self-study
- Comprehensive treatment, suitable as source of reference

**Contents**


**Fields of interests**

Numerical and Computational Physics; Theoretical and Computational Chemistry; Condensed Matter Physics

**Target groups**

Graduate

**Product Category**

Monograph

---

F. Matteucci, University of Trieste, Italy

**Chemical Evolution of Galaxies**

The term "chemical evolution of galaxies" refers to the evolution of abundances of chemical species in galaxies, which is due to nuclear processes occurring in stars and to gas flows into and out of galaxies. This book deals with the chemical evolution of galaxies of all morphological types (ellipticals, spirals and irregulars) and stresses the importance of the star formation histories in determining the properties of stellar populations in different galaxies. The topic is approached in a didactical and logical manner via galaxy evolution models which are compared with observational results obtained in the last two decades: The reader is given an introduction to the concept of chemical abundances and learns about the main stellar populations in our Galaxy as well as about the classification of galaxy types and their main observables.

**Features**

- Educates graduate students and young researchers to start their own research in the field
- Outlines theoretical models of chemical evolution of galaxies and compares them with observational results
- Treats all main aspects of chemical evolution of galaxies in a didactical and logical order
- Author with great expertise and strong reputation

**Contents**


**Fields of interest**

Astronomy, Astrophysics and Cosmology

**Target groups**

Research

**Product Category**

Monograph

---

L. Mersini-Houghton, University of North Carolina, Chapel Hill, NC, USA; R. Vaas, Justus Liebig University Giessen, Germany (Eds)

**The Arrows of Time**

A Debate in Cosmology

The concept of time has fascinated humanity throughout recorded history, and it remains one of the biggest mysteries in science and philosophy. Time is clearly one of the fundamental building blocks of the universe and thus a deeper understanding of nature at a fundamental level also demands a comprehension of time.

**Features**

- Contributions by leading experts on the physics of time
- Addresses the most fundamental questions about time: what it is and how it arises
- Each chapter offers a different perspective on the role of time in the cosmos
- Provides a comparison between philosophical and physical questions relating to time

**Contents**


**Fields of interests**

Classical and Quantum Gravitation, Relativity Theory; Philosophy of Science; Quantum Field Theories, String Theory

**Target groups**

Research

**Product Category**

Monograph

---

Due October 2011

2011. XXVIII, 540 p. 72 illus. (Lecture Notes in Physics, Volume 837) Softcover
- $119.00
ISBN 978-3-642-23517-7

Due November 2011

- $124.00
ISBN 978-3-642-22490-4

Due November 2011

2011. CLXXX, 10 p. 16 illus., 3 in color. (Fundamental Theories of Physics, Volume 164) Hardcover
- approx. $129.00
ISBN 978-3-642-23258-9
H. Radi, October University for Modern Sciences and Arts, October City, Egypt; J. O. Rasmussen, University of California, Berkeley, CA, USA

**Principles of Physics**

For Scientists and Engineers

This textbook presents a basic course in physics to teach mechanics, mechanical properties of matter, thermal properties of matter, elementary thermodynamics, electrodynamics, electricity, magnetism, light and optics and sound. It includes simple mathematical approaches to each physical principle, and all examples and exercises are selected carefully to reinforce each chapter.

**Features**

- Very didactical textbook
- Presents the mathematical basics for each topic
- Contains many exercises and solutions for teaching and learning

**Contents**


**Fields of interests**

Classical Continuum Physics; Mechanics; Optics and Electrodynamics

**Target groups**

Lower undergraduate

**Product Category**

Monograph

---

K. F. Renk, Universität Regensburg, Germany

**Basics of Laser Physics**

For Students of Science and Engineering

**Contents**


**Fields of interests**

Laser Technology; Photonics; Optics and Electrodynamics; Operating Procedures, Materials and Devices; Mathematical Methods in Physics

**Target groups**

Graduate

**Product Category**

Graduate/Advanced undergraduate textbook

---

Rivas, University of Madrid, Spain; S. F. Huelga, University of Ulm, Germany

**Open Quantum Systems**

An Introduction

In this volume the fundamental theory of open quantum systems is revised in the light of modern developments in the field. A unified approach to the quantum evolutions of open systems is presented by merging concepts and methods traditionally employed by different communities, such as quantum optics, condensed matter, chemical physics and mathematical physics. The mathematical structure and the general properties of the dynamical maps underlying open system dynamics are explained in detail. The microscopic derivation of dynamical equations, including both Markovian and non-Markovian evolutions, is also discussed. Because of the step-by-step explanations, this work is a useful reference to novices in this field. However, experienced researchers can also benefit from the presentation of recent results.

**Features**

- Represents a self-contained introduction to the theory of open quantum systems
- Gives guidance to novices in the field by tutorial-like presentation of mathematical results
- Gives a unique detailed microscopic derivation of Markovian and non-Markovian models

**Contents**


**Fields of interests**

Quantum Physics; Numerical and Computational Physics; Mathematical Methods in Physics

**Target groups**

Research

**Product Category**

Monograph
S. G. Rodrigo, CSIC-Universidad de Zaragoza, Spain
Optical Properties of Nanostructured Metallic Systems
Studied with the Finite-Difference Time-Domain Method

The common belief is that light is completely reflected by metals. In reality they also exhibit an amazing property that is not so widely known: under some conditions light flows along a metallic surface as if it were glued to it. Physical phenomena related to these light waves, which are called Surface Plasmon Polaritons (SPP), have given rise to the research field of plasmonics. This thesis explores four interesting topics within plasmonics: extraordinary optical transmission, negative refractive index metamaterials, plasmonic devices for controlling SPPs, and field enhancement phenomena near metal nanoparticles.

Features
- Addresses fascinating and novel aspects of the phenomenon of surface plasmon polaritons
- Includes much information of interest in the exciting field of metamaterials
- Reports both experimental data and simulations, with necessary theory explained
- Nominated as an outstanding contribution by the University of Zaragoza

Contents

Fields of interests
Optics, Optoelectronics, Plasmonics and Optical Devices; Optical and Electronic Materials; Surface and Interface Science, Thin Films

Target groups
Research

Product Category
Monograph

K. Sakmann, Heidelberg University, Germany
Many-Body Schrödinger Dynamics of Bose-Einstein Condensates

At extremely low temperatures, clouds of bosonic atoms form what is known as a Bose-Einstein condensate. Recently, it has become clear that many different types of condensates -- so called fragmented condensates -- exist. In order to tell whether fragmentation occurs or not, it is necessary to solve the full many-body Schrödinger equation, a task that remained elusive for experimentally relevant conditions for many years.

Features
- A new theoretical approach to understanding the dynamics of Bose-Einstein condensates
- Develops optimized models that are shown to perform better than conventional models
- Nominated as an outstanding contribution by the University of Heidelberg

Contents

Fields of interests
Quantum Gases and Condensates; Theoretical, Mathematical and Computational Physics; Strongly Correlated Systems, Superconductivity

Target groups
Research

Product Category
Monograph

H. Satz, Universität Bielefeld, Germany (Ed.)
Extreme States of Matter in Strong Interaction Physics
An Introduction

The thermodynamics of strongly interacting matter remains a profound and challenging area of modern physics, both in theory and in experiment. Statistical quantum chromodynamics, through analytical as well as numerical studies, provides the main theoretical tool, while in experiment, high-energy nuclear collisions are the key for extensive laboratory investigations. The field therefore straddles statistical, particle and nuclear physics, both conceptually and in the methods of investigation used. This course-tested primer addresses above all the many young scientists starting their scientific research in this field, providing them with a general, self-contained introduction that emphasizes in particular the basic concepts and ideas, with the aim of explaining why we do what we do.

Features
- Conceived as self-contained primer for newcomers to this field of research
- Authored by a leading scientist
- Pedagogical approach, based on numerous courses and lectures given over two decades

Contents

Fields of interests
Nuclear Physics, Heavy Ions, Hadrons; Elementary Particles, Quantum Field Theory; Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Product Category
Monograph
The Formation and Early Evolution of Stars
From Dust to Stars and Planets

Starburst regions in nearby and distant galaxies have a profound impact on our understanding of the early universe.

Features
- 2nd edition of successful book
- Outlines recent advances and contemporary research on the theory of star formation
- Includes new chapters on massive star formation, proto-planetary disks and observations of young exoplanets
- Describes new observations, specifically from the current array of space observatories
- Provides updates in star formation theory, cloud fragmentation, dust, and circumstellar disks
- This 2nd edition now hosts some sets of problems and their solutions suitable for graduate course work

Contents
1 About the Book
2 Historical Background
3 Studies of Interstellar Matter
4 Molecular Clouds and Cores
5 Concepts of Stellar Collapse
6 Evolution of Young Stellar Objects
7 Multiplicity in Star Formation
8 Accretion Phenomena and Magnetic Activity in YSOs
9 Massive Star Formation
10 High-energy Signatures in YSOs
11 Star-Forming Regions
12 Proto-solar Systems and the Sun
13 Proto- and Exoplanets
14 Gas Dynamics
15 Magnetic Fields and Plasmas
16 Radiative Interactions with Matter
17 Spectroscopy
18 Abbreviations
19 Institutes, Observatories, and Instruments
20 Variables, Constants, and Units
References
Index

Fields of interest
Astrophysics and Astroparticles

Target groups
Research

Product Category
Monograph

UV Astronomy 2011

This book is a reprint of the the Special Issue of Astrophysics and Space Science "UV Astronomy 2011". It covers four main topics: stellar physics and evolution, planets, MilkyWay and other galaxies and finally, UV Instrumentation with an update on the current status of the main missions and technologies. This builds on the remarkable progress made in the field since the earlier Special issue: "Space Astronomy: the UV window to the Universe" which appeared in 2008.

Features
- Latest research in UV Astronomy
- Carefully peer-reviewed papers

Contents
Editorial
Chapter 1 Planets
Chapter 2 Stellar Physics and Evolution
Chapter 3 Milky Way and Galaxies
Chapter 4 UV Instrumentation

Fields of interests
Astronomy, Observations and Techniques;
Astrophysics and Astroparticles;
Extraterrestrial Physics, Space Sciences

Target groups
Research

Product Category
Monograph

Magnetism
Basics and Applications

This textbook is aimed at engineering students who are likely to come across magnetics applications in their professional practice. Whether designing lithography equipment containing ferromagnetic brushes, or detecting defects in aeronautics, some basic knowledge of 21st century magnetism is needed. From the magnetic tape on the pocket credit card to the read head in a personal computer, people run into magnetism in many products. Furthermore, in a variety of disciplines tools of the trade exploit magnetic principles, and many interdisciplinary laboratory research areas cross paths with magnetic phenomena that may seem mysterious to the untrained mind.

Features
- Complete and up-to-date textbook on magnetism for students of engineering and physics
- Includes all the latest developments like nanomagnetism, giant and colossal magnetoresistance, spintronics
- Also deals strongly with applications to magnetic storage
- Uniquely integrates physics, materials sciences and technological basics
- Provides exercises and solutions as learning and teaching material

Contents
Traditional Magnetism
The Magnetization Process
Micromagnetism
Magnetic Nondestructive Testing Techniques
Uses of the Magneto-Optical Effect
Magnetoelctic Materials
Giant Magnetoresistance, Spin Valves
Introduction to Spintronics
Some Magnetic Recording Media Developments
Concluding Remarks

Fields of interests
Magnetism, Magnetic Materials, Nanotechnology; Engineering, general

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook
Adiabatic Logic
Future Trend and System Level Perspective

Adiabatic Logic is a potential successor for static CMOS circuit design when it comes to ultra-low-power energy consumption. Future development like the evolutionary shrinking of the minimum feature size as well as revolutionary novel transistor concepts will change the gate level savings gained by Adiabatic Logic. In addition, the impact of worsening degradation effects has to be considered in the design of adiabatic circuits. The impact of the technology trends on the figures of merit of Adiabatic Logic, energy saving potential and optimum operating frequency, are investigated, as well as degradation related issues.

Features
► This is the first comprehensive book on Adiabatic Logic systems ► It presents how Adiabatic Logic will perform with future scaling, future devices and degrading effects ► It presents measurement results of a manufactured adiabatic system and compares it to static CMOS ► Design methodology is presented to generate more energy efficient and less area consuming adiabatic digital signal processing units

Contents
1 Introduction. 2 Fundamentals of Adiabatic Logic. 3 Future trend in Adiabatic Logic. 4 Generation of the power-clock. 5 Power-Clock Gating. 6 Arithmetic structures in Adiabatic Logic. 7 Measurement results of an adiabatic FIR filter. 8 Conclusions.

Fields of interests
Electronic Circuits and Devices; Circuits and Systems; Logic Design

Target groups
Research

Product Category
Monograph

Due December 2011

The Schrödinger-Virasoro Algebra
Mathematical structure and dynamical Schrödinger symmetries

This monograph provides the first up-to-date and self-contained presentation of a recently discovered mathematical structure—the Schrödinger-Virasoro algebra.

Features
► First monographical account on newly discovered structures in mathematical physics ► Provides an up-to-date and self-contained presentation ► Connects various fields of applications in mathematical physics research

Contents

Fields of interests
Mathematical Methods in Physics; Topological Groups, Lie Groups; Mathematical Physics

Target groups
Research

Product Category
Monograph

Due November 2011

Spacesuits

Spacesuits are far more than garments. They are a personalized spacecraft that allows direct contact and interaction with everything beyond our world, and a last refuge for survival in a disaster.

Features
► Remains the most comprehensive text on U.S. spacesuits and their development available ► Contains many new insights and photographs on space suits used for different manned missions that were not in the first edition ► Explains the function, historical development, and use of spacesuits from a worldwide perspective ► Provides details on NASA’s new Constellation Spacesuit System

Contents

Fields of interests
Extraterrestrial Physics, Space Sciences; Popular Science in Astronomy; Aerospace Technology and Astronautics

Target groups
Popular/science

Product Category
Popular science

Due September 2011
2011. VIII, 250 p. 6 illus. (Theoretical and Mathematical Physics, 0) Hardcover ► $99.00 ISBN 978-3-642-22716-5
Contents

Features
Helps readers interpret and understand solar images taken by space probes, and to compare them with their own observations.
Focuses on the most recent discoveries about the Sun including its effect on the Earth.
Includes an important aspect of how amateurs can observe the Sun safely using the latest solar telescopes.
All technical terms are explained in a glossary at the end of the book.
Presents some of the fascinating solar phenomena in their full splendor to readers through a variety of illustrations, colour photographs and easy to understand text.

Features
Comprehensive book on all aspects of solid state lasers.
Provides deep insights into theoretical analysis and calculations of lasers.
Covers the important topics of laser technology of optics mixing theory, second harmonic generation, optical parametric oscillators, frequency doubling and quasi-phase matching technology.
Presents extensively technological applications of laser principles to optical devices.

Contents
Warming to the Sun.- Probing the Sun.- Activity in the photosphere.- Activity in the chromosphere and corona.- Eclipses and Transits.- Observing the Sun.- Satellite images of the Sun.- Space weather.- The Sun and Earth’s climate.- The Sun and stars.- About the author.- Glossary.- Index.

Fields of interests
Extraterrestrial Physics, Space Sciences; Popular Science in Astronomy; Planetology

Target groups
Popular/general

Product Category
Popular science

Due November 2011

Hardcover
$229.00
ISBN 978-94-007-2487-7

Due October 2011

Softcover
$119.00
ISBN 978-94-007-2490-7

J. Wilkinson, Castlemaine, VIC, Australia

New Eyes on the Sun
A Guide to Satellite Images and Amateur Observation

Information collected by satellites recently sent by the USA, the European Space Agency, Japan, Germany, the United Kingdom, and Russia to monitor the Sun has changed our knowledge and understanding of the Sun, particularly its effect on Earth. This book presents these findings in a way that will be welcomed by amateur astronomers, students, educators and anyone interested in the Sun. Enhanced by many colour photographs, the book combines newly acquired scientific understanding with detailed descriptions of features visible on the Sun’s surface and in its atmosphere.

Fields of interests
Nanoscale Science and Technology; Condensed Matter Physics; Data Mining and Knowledge Discovery

Target groups
Graduate

Product Category
Proceedings

Due November 2011

Hardcover
$229.00
ISBN 978-94-007-2487-7

J. Yao, Y. Wang, Institute of Laser & Optoelectronics, Tianjin, PR China

Nonlinear Optics and Solid-State Lasers
Advanced Concepts, Tuning-Fundamentals and Applications

This book covers the complete spectrum of nonlinear optics and all solid state lasers. The book integrates theory, calculations and practical design, technology, experimental schemes and applications. With the expansion and further development of Laser technology, the wavelength spectrum of Lasers had to be enlarged, even to be tunable which requires the use of nonlinear optical and Laser tunable technology.

Features
Comprehensive book on all aspects of solid state lasers.
Provides deep insights into theoretical analysis and calculations of lasers.
Covers the important topics of laser technology of optics mixing theory, second harmonic generation, optical parametric oscillators, frequency doubling and quasi-phase matching technology.
Presents extensively technological applications of laser principles to optical devices.

Contents

Fields of interests
Laser Technology, Photonics; Quantum Optics; Microwaves, RF and Optical Engineering

Target groups
Research

Product Category
Monograph
Shock Waves Science and Technology Library, Vol. 6
Detonation Dynamics

This book, as a volume of the Shock Wave Science and Technology Reference Library, is primarily concerned with the fundamental theory of detonation physics in gaseous and condensed phase reactive media. The detonation process involves complex chemical reaction and fluid dynamics, accompanied by intricate effects of heat, light, electricity and magnetism - a contemporary research field that has found wide applications in propulsion and power, hazard prevention as well as military engineering.

Features
- The "Shock Wave Science and Technology Reference Library" is a numbered and bounded collection of specifically commissioned volumes on basic fundamental and applied aspects of shock wave science and technology.
- A unique collection, the library as a whole sets out to comprehensively and authoritatively cover and review at research level the subject matter with all its ramifications.
- Every volume is edited and authored by leading researchers in the field.

Contents

Fields of interests
Classical Continuum Physics; Industrial Chemistry/Chemical Engineering; Mechanical Engineering

Target groups
Research

Product Category
Monograph

Due November 2011
2012. XII, 646 p. 264 illus., 59 in color. (Shock Wave Science and Technology Reference Library, Volume 6) Hardcover
$199.00
ISBN 978-3-642-22966-4
Gaither’s Dictionary of Scientific Quotations


This unprecedented collection of 27,000 quotations is the most comprehensive and carefully researched of its kind, covering all fields of science and mathematics.

Features
► Expands and improves upon the groundbreaking first edition ► Features an unparalleled collection of 27,000 carefully selected quotations ranging over a vast array of topics from Atomic Theory to the Zeta Function ► Provides a one-stop reference for scientific quotations in all fields ► Includes comprehensive bibliographic information for each quotation ► Can be searched thematically and by author

Contents

Fields of interests
Popular Science, general; History of Science; Physics, general

Target groups
Research

Product Category
Reference work

Due December 2011

► approx. $249.00
ISBN 978-1-4614-1113-0
Pediatric and Adolescent Concussion
Diagnosis, Management, and Outcomes

Between the growing numbers of children and adolescents playing sports and the increased attention to head injuries by the larger sports community and the general public, pediatric concussions are emerging as a major concern. And as practitioners are seeing more young clients with head injuries, questions arise about age-appropriate assessment, diagnosis, treatment, and return to activity. Pediatric and Adolescent Concussion: Diagnosis, Management, and Outcomes offers evidence-based guidelines where few previously existed. This comprehensive volume clearly explains the effects of traumatic injury on the developing brain in sports- and non-sports-related contexts, and establishes a framework for immediate and long-term management, especially the crucial first 24 hours. Chapters provide a basic grounding in its subject with a history of concussion as a medical entity and a review of definitional and ethical issues, and survivor credibility into question. More recently, findings from cognitive psychology and neuroimaging as well as new theoretical constructs are bringing balance, if not reconciliation, to this polarizing debate. Based on presentations at the 2010 Nebraska Symposium on Motivation, True and False Recovered Memories: Toward a Reconciliation of the Debate assembles an expert panel of scholars, professors, and clinicians to update and expand research and knowledge about the complex interaction of cognitive, emotional, and motivational factors involved in remembering—and forgetting—severe childhood trauma.

Features
> Covers relevant research acquired from cognitive and clinical psychological perspectives
> Global group of contributors
> Explore interaction between motivation, emotion, and memory

Contents

Fields of interest
Personality and Social Psychology

Target groups
Research

Product Category
Monograph

Due November 2011
2011. XII, 240 p. 4 illus., 1 in color. Hardcover
➤ approx. $69.95
ISBN 978-0-387-89544-4

True and False Recovered Memories
Toward a Reconciliation of the Debate

Beginning in the 1990s, the contentious “memory wars” divided psychologists into two schools of thought: that adults’ recovered memories of childhood abuse were generally true, or that they were generally not, calling theories, therapies, professional ethics, and survivor credibility into question. Now, findings from cognitive psychology and neuroimaging as well as new theoretical constructs are bringing balance, if not reconciliation, to this polarizing debate. Based on presentations at the 2010 Nebraska Symposium on Motivation, True and False Recovered Memories: Toward a Reconciliation of the Debate assembles an expert panel of scholars, professors, and clinicians to update and expand research and knowledge about the complex interaction of cognitive, emotional, and motivational factors involved in remembering—and forgetting—severe childhood trauma.

Features
> Covers relevant research acquired from cognitive and clinical psychological perspectives
> Global group of contributors
> Explore interaction between motivation, emotion, and memory

Contents

Fields of interest
Personality and Social Psychology

Target groups
Research

Product Category
Monograph

Due January 2012
2012. XIV, 278 p. 22 illus. (Nebraska Symposium on Motivation) Hardcover
➤ $169.00

Psychology of Religion
Autobiographical Accounts

Features
➤ The only collection available of ego-documents by psychologists of religion
➤ The collection still includes almost everyone involved in the field during the last 40 years International in its outlook
➤ Appealing to a much broader audience than just psychologists, and not only to academics but also to professional practitioners and to a more general readership interested in religious issues

Contents
The comeback of the psychology of religion: The aims of the present volume.- My concern with psychology of religion: Defending psychology, respecting religion.- The path of least resistance.- Pastoral psychology as a point of transfer from systematic theology to the psychology of religion.- Toward a mainstream psychology of religion beyond poor relation status.- “Writing heavenly language”: My research on Pentecostalism and Glossoalalia.- Psychology of religion: A personal narrative.- Changing ways of doing things: An autobiographical account of some of my experiences in the psychology of religion.- Evolution of a career: Psychologist of religion incognito.- The story of a late rider.- An accidental psychologist of religion.- The psychology of religion: Defending psychology, respecting religion.- Anthropology as a voyage of discovery: Or, everything that finds expression in man merits consideration.- Why the psychology of religion? A rocky path to self-understanding.- From the History of Religion to the Psychology of Religion.- How and when I became interested in the psychology of religion.- The evolution of a psychologist of religion.

Fields of interest
Psychology, general; Psychoanalysis; Religious Studies

Target groups
Professional/practitioner

Product Category
Contributed volume

Due January 2012
2011. 200 p. 15 illus. (Path in Psychology) Hardcover
➤ $129.00
**Electrodermal Activity**

Electrodermal activity is one of the most frequently used psychophysiological evaluations in psychology research. Based on the 1992 edition of this work Electrodermal Activity covers advances in the field since the first publication in 1992. The current volume includes updated information on brain imaging techniques such as PET and fMRI, which provide further insight into the brain mechanisms underlying EDA. In addition, this volume is able to describe more reliably hypotheses that have been successfully tested since the first publication.

**Features**
- Presents new models and new empirical findings
- Provides the latest recording and scoring techniques
- Discusses the use of brain imaging techniques
- Reviews new applications in clinical psychology and biofeedback

**Fields of interests**
Clinical Psychology; Law and Psychology; Personality and Social Psychology

**Target groups**
Professional/practitioner

**Product Category**
Monograph

---

**Charismatic Leadership in Singapore**

**Three Extraordinary People**

This volume explores the nature of charisma as it accounts for the success of leaders. Charisma is deconstructed and illustrated through the „case studies“ of three influential leaders in Singapore. Cultural issues are discussed and leadership qualities in general are explored.

**Features**
- Focuses on charisma as a key leadership success factor
- Provides extensive examples
- Principles are applicable across leadership settings

**Contents**

**Fields of interests**
Industrial and Organisational Psychology; Cross Cultural Psychology; Sociology

**Target groups**
Research

**Product Category**
Monograph

---

**Foundations of Chinese Psychology**

**Confucian Social Relations**

Mainstream psychology emanated from European-American and Judeo-Christian philosophical and scientific traditions. The application of this viewpoint, which embeds colonial and imperialist concepts is less relevant to Asian and other indigenous cultures. Although it has been accepted by non-Western scholars in an attempt to emulate Western scientific practice, the mainstream viewpoint is in a process of transformation to accommodate geographically relevant perspectives.

**Features**
- Presents new theories of indigenous psychology
- Uniquely integrates Confucianism and Western Psychology
- Offers overview of traditional Chinese moral philosophy

**Contents**

**Fields of interests**
Cross Cultural Psychology; Philosophy of Religion

**Target groups**
Research

**Product Category**
Monograph

---

Due December 2011

- $179.00

Due January 2012

- $129.00
ISBN 978-1-4614-1450-6

Due December 2011

2012. XX, 400 p. 40 Illus., 8 in color. (International and Cultural Psychology, 1) Hardcover
- $129.00
ISBN 978-1-4614-1438-4
Paradigms in Theory Construction

Within the field of psychology there is a proliferation of paradigms, theories, models, and dimensions without an underlying conceptual framework or theory. This conclusion has been reached by representatives of many different psychological specialties. In response to this inconsistency this book presents a hierarchical framework about important theoretical issues that are present in psychological thinking.

Features

- Presents a hierarchical framework for constructing psychological theories
- Reviews the history of psychological theory building
- Compares and contrasts often confused conceptual terms

Contents

- Paradigms in Science and Theory Construction.
- Paradigms in Science: A Historical Perspective.
- Evolving Paradigms: Retrospective and Prospection.
- Anthropology.
- Parallel Paradigms of Artists and Authors.
- Economics.
- Education.
- Sociology.
- The Biopsychosocial Paradigm.
- Interbehaviorism.
- Reflections on Personality Systematics and an Unified Clinical Science.
- The Intersubjective-narrative Approach versus the Relational-generational one.
- Constructivism.
- Materialism.
- Explaining and Exemplifying Empicist and Cognitivist Paradigms in the study of Human Learning.
- Humanism and Behaviorism.
- Existentialism.
- Information Processing.
- Reductionism.
- Produced and Spontaneous Emergent Interactionism.
- The Emergence of Reason, Intelligence, and Language in Humans and Animals.
- Essentialism.
- Criteria and Processes in Paradigm Selection.

Fields of interests

- General Psychology
- Philosophy of Science

Target groups

- Research

Product Category

- Contributed volume

Due November 2011

2011. VI, 487 p. 27 illus., 26 in color. Hardcover
$169.00

Detection of Malingering during Head Injury Litigation

Increased public awareness of traumatic brain injuries has fueled a number of significant developments: on the one hand, more funding and more research related to these injuries and their resulting deficits; on the other, the possibility of higher stakes in personal injury suits—and more reasons for individuals to feign injury. Expanding both the conceptual and clinical knowledge base on the subject, the Second Edition of Detection of Malingering during Head Injury Litigation offers the latest detection tools and techniques for veteran and novice alike. As in its initial incarnation, this practical revision demonstrates how to combine clinical expertise, carefully-gathered data, and the use of actuarial models as well as common sense in making sound evaluations and reducing ambiguous results. And, the book navigates the reader through the many caveats that come with the job, beginning with the scenario that an individual may be malingering despite having an actual brain injury. Among the updated features:

- Specific chapters on malingering on the Halstead-Reitan, Luria-Nebraska, and MMPI-2.
- A framework for distinguishing genuine from factitious PTSD in head injury cases.

Features

- Updated and revised edition of a systemic, scientific resource for assessing head injury cases in court
- Contains new chapter devoted to devices that solely target malingering in head injury
- Reviews pure tests of malingering such as the Validity Indicator Profile and related measures

Fields of interests

- Neuropsychology
- Psychiatry
- Law and Psychology

Target groups

- Professional/practitioner

Product Category

- Professional book

Due December 2011

$99.00
Adult Attachment in Clinical Social Work: Practice, Research, and Policy

Contents

Fields of interests
Social Work; Psychotherapy; Psychotherapy and Counseling

Target groups
Professional/practitioner

Product Category
Monograph

Early Adulthood in a Family Context

Contents
I. The contemporary context of young adulthood. The contemporary context of young adulthood in the United States: From demography to development, from private troubles to public issues—Transition to adulthood, parental support, and early adult well-being: Recent findings from the Youth Development Study—First principles—Components, holism, and context of the transition to adulthood—Young adults in a wireless world—II. Parent-child relationships that facilitate successful transitions—Relationships between young adults and their parents—The implications of family context for the transition to adulthood—Child well-being and the long reach of family relationships—Young adults’ need: In the eye of the beholder—III. Romantic and sexual relationships—Developmental shifts in the character of romantic and sexual relationships from adolescence to young adulthood—Challenges in charting the course of romantic relationships in adolescence and emerging adulthood—I just want your kiss? Sexual relationships in young adulthood—IV. Family contexts and timing of fertility—Becoming a Parent: The Social Contexts of Fertility During Young Adulthood—Childbearing among cohabiting women: Race, pregnancy, and union transitions—Understanding young fertility in the context of economic disadvantage—V. The study of young adulthood—New horizons in research on emerging and young adulthood.

Fields of interests
Family; Clinical Psychology; Sociology

Target groups
Research

Product Category
Contributed volume

The Ethics of Anthropology and Amerindian Research: Reporting on Environmental Degradation and Warfare

Contents

Fields of interests
Anthropology; Ethics; Regional and Cultural Studies

Target groups
Research

Product Category
Contributed volume
**Agent-Based Models of Geographical Systems**

Contents


**Fields of interests**

Human Geography; Simulation and Modelling; Quantitative Geography

**Target groups**

Research

**Product Category**

Contributed volume

**Variations of the Welfare State**

Great Britain, Sweden, France and Germany Between Capitalism and Socialism

In the burgeoning literature on welfare regimes and typologies, this comparative study offers a stimulating new perspective. Kaufmann, the author of the sociology of social policy in Germany, emphasizes norms, culture and history, in contrast to political economy approaches. Comparing Britain, Sweden, France and Germany, Kaufmann highlights the “idiosyncrasy” of each welfare state: countries are compared with regard to their state traditions and the relationship between state and civil society; their national “social questions”; their economic systems, including the unions and labour law; social security and redistribution; and their personal social services and education. The socio-cultural approach enables Kaufmann to show that not all modern states are welfare states. Some are just „capitalism” (the USA), others are „socialism” (the former Soviet Union).

**Features**

► A theory-led study of social policy in six major countries ► Combines sociology and history of the welfare state ► An innovative (socio-cultural) approach to comparative welfare state research

**Contents**


**Fields of interests**

Sociology; Social Policy; History

**Target groups**

Research

**Product Category**

Monograph

**Handbook of Social Indicators and Quality of Life Research**

K. C. Land, Duke University, Durham, NC, USA; M. J. Sirgy, Virginia Polytechnic Institute, Blacksburg, VA, USA; A. C. Michalos, Brandon University, MB, Canada (Eds)

**Due November 2011**

2011. VI, 679 p. 62 illus., 22 in color. Hardcover ► $239.00
ISBN 978-94-007-2420-4

**Due November 2011**

2012. X, 260 p. (German Social Policy, Volume 5) Hardcover ► $139.00
ISBN 978-3-642-22548-2

**Due November 2011**

2012. VIII, 831 p. 180 illus., 126 in color. Hardcover ► $279.00
**Handbook of Politics**

**State and Society in Global Perspective**

**Features**
- Focuses on the methodological developments in political sociology.
- Emphasizes the interdisciplinarity connections in political sociology.
- Covers the theoretical and historical developments in the field.
- Contributions focus on current debates and are written by leaders in the field.

**Contents**

- Institutional Theory.
- Reviving State Theory.
- Public Opinion, Elections, and Democratic Politics.
- Neo-Functionalism and Civil Society.
- Politics and the Civil Sphere.
- Globalization and Transnationalism.
- Elite Theory and Elites.
- Conflict Theory.
- Social Movements and Contentious Politics.
- Guerilla Warfare and Terrorism.
- Elites, PACS, and Political Influence.
- The State and Economic Development.
- Gender and Politics.
- Globalization and Protest.
- Culture and Political Protest.
- Religion and Politics.
- War and Democracy.
- Space and Politics.
- Politics and the Environment.
- Ethnic Conflict and Nationalism.
- NGOs and Transnational Organizations.
- Democracy and Democratization.
- Revolutions and Authoritarian Regimes.
- Mass Media and Politics.
- Elections and Voting.
- The Politics of Inequality.
- The Political Sociology of Criminal Justice.
- Events Data and Conflict Analysis.
- Ethnography and Politics.
- Comparative Historical Methodology in Political Sociology.
- Hierarchical Linear Modeling.
- New Methods of Text Analysis and Politics.
- Event-History Methods and Politics.
- Social Networks and Politics.
- Time-Series Analysis and the Study of Politics.
- Varieties of Political Analysis.

**Fields of interests**

Sociology; Political Science

**Target groups**

Research

**Product Category**

Contributed volume

---

**Evidence-Based Counterterrorism Policy**

In the past eight years, there has been a massive increase in government spending on counterterrorism intervention development and implementation.

**Features**
- Gives an analysis of the cost-effectiveness of counterterrorism policies currently in place in the US.
- A SWOT analysis of counterterrorism efforts made in the last eight years.
- Combines theoretical and experimental approaches to counterterrorism policies.

**Contents**

- Preface: Evidence-based policy movement.
  - A. Introduction.
  - 1. Evidence Based Counter Terrorism Policy: Issues and Prospects.
  - 2. Obtaining Data for Counterterrorism Evaluations.
  - 3. Data Archives for Terrorism Research.
  - 4. The Role of Fusion Centers as Sources of Information.
  - 5. Data from courts and prisons.
  - 6. Dynamic Data Analysis and Data Mining.
  - 7. Methodological Concerns in Evaluating Counterterrorism Policy.

**Fields of interests**

Criminology & Criminal Justice; Political Science

**Target groups**

Research

**Product Category**

Contributed volume

---

**Neighbourhood Effects Research: New Perspectives**

**Contents**

1: Introduction: Maarten van Ham, David Manley, Nick Bailey, Ludi Simpson and Duncan MacIver.
4: Understanding neighbourhood effects: selection bias and residential mobility: Lina Hedman and Maarten van Ham.
5: Social Mix, Reputation and Stigma: Exploring Residents’ Perspectives of Neighbourhood Effects: Kathy Arthurson.
7: Neighbourhood effects, housing tenure and individual employment outcomes: David Manley and Maarten van Ham.
8: Neighbourhood social capital and individual mental health: Gindo Tampubolon.
10: School outcomes and neighbourhood effects: a new ap-proach using data from Finland: Venla Bernelius and Timo M. Kauppinen.
11: Recasting research on ‘neighbourhood effects’: a collabora-tive, participatory, trans-national approach: Michael Darcy and Gabrielle Gwyther.

**Fields of interests**

Human Geography; Housing; Sociology

**Target groups**

Research

**Product Category**

Contributed volume
K. K. Mehta, L. L. Thang, University of Singapore, Singapore (Eds)

**Experiencing Grandparenthood**
An Asian Perspective

Within the context of an ageing Asia, the growing numbers of grandparents and the important roles they play within the family propel the need for a book devoted to their experiences.

**Features**
- First book to focus on grandparenting issues across different Asian societies which are facing rapid demographic and social and cultural transformations
- Rich documentation of the current state of grandparenthood in Asia from three generations in families
- Offers multi-disciplinary and cross-cultural views of intergenerational relationships within the Asian family

**Contents**

**Fields of interests**
Quality of Life Research; Social Work

**Target groups**
Research

**Product Category**
Contributed volume

---

F. Meslé, Institut National d’Études Démographiques, Paris, France; J. Vallin, Institut Nationales d’Etudes Démographiques, Paris, France

**Mortality and Causes of Death in 20th-Century Ukraine**
: V. Shkolnikov, Max Planck Institute for Demographic Research, Rostock, Germany; S. Pyrozhkov, Chisinau, Moldova; S. Adamets, Nogent s/Marne, France

**Contents**
Social Sciences

A. Schanhorst, Royal Netherlands Academy of Arts and Sciences, Amsterdam, The Netherlands; K. Börner, Indiana University, Bloomington, IN, USA; P. v. Besselaar, The Rathenau Instituut, The Hague, Netherlands (Eds)

Models of Science Dynamics: Encounters Between Complexity Theory and Information Sciences

Contents


T. Tasan-Kok, Delft University of Technology, The Netherlands; G. Baeten, Lund University, Sweden (Eds)

Contradictions of Neoliberal Planning: Cities, Policies, and Politics

Features

► Edited and Authored by leading researchers in the field ► First interdisciplinary treatment of this topic and the interface of information and systems sciences, scientometrics and social complex networks ► Addresses a wider academic and professional audience

Details

ISBN 978-3-642-23067-7

Due September 2011

2011. X, 340 p. 82 illus., 39 in color. (Understanding Complex Systems) Hardcover ► $169.00
ISBN 978-3-642-23067-7

M. Uysal, R. Perdue, M. J. Sirgy, State University, Blacksburg, VA, USA (Eds)

Handbook of Tourism and Quality-of-Life Research

Enhancing the Lives of Tourists and Residents of Host Communities

Quality of life (QOL) research in tourism has gained much momentum over the last two decades. Academics working in this area research issues related to tourists and host communities. Practitioners are becoming increasingly interested in understanding the science that allows them to develop better marketing and managerial programs designed to enhance the quality of life of tourists. Tourism bureaus and government agencies are increasingly interested in issues of sustainable tourism, specifically in understanding and measuring the impact of tourism on the quality of life of the residents of the host communities. This handbook covers all relevant topics and is divided into two parts: research relating to travelers/tourists, and research relating to the residents of host communities. It is the only state-of-the-art reference book in its field and will prove invaluable to academics interested in QOL research, as well as to tourism practitioners interested in applying the science of QOL in the tourism industry.

Features

► This handbook is the first state of the art reference book in the field ► This handbook brings together much of the current research on the topic to help academic researchers further develop their future research programs and practitioners to use well-being performance measures to aid in their decision making ► Covers much of the Quality of Life Research in relation to travellers and tourists and host communities

Details

ISBN 978-94-007-2287-3

Due November 2011

ISBN 978-94-007-2287-3

Due October 2011

2012. X, 190 p. 1 illus. (GeoJournal Library, Volume 102) Hardcover ► $139.00

Due September 2011

2011. X, 340 p. 82 illus., 39 in color. (Understanding Complex Systems) Hardcover ► $169.00
ISBN 978-3-642-23067-7

Product Category

Monograph

Target groups

Research

Fields of interests

Human Geography; Landscape/Regional and Urban Planning; Social Sciences, general

Handbook of Tourism and Quality-of-Life Research: Enhancing the Lives of Tourists and Residents of Host Communities

This handbook brings together much of the current research on the topic to help academic researchers further develop their future research programs and practitioners to use well-being performance measures to aid in their decision making. It covers much of the Quality of Life Research in relation to travellers and tourists and host communities.

Details

ISBN 978-94-007-2287-3

Due November 2011

ISBN 978-94-007-2287-3

Due October 2011

2012. X, 190 p. 1 illus. (GeoJournal Library, Volume 102) Hardcover ► $139.00

Due September 2011

2011. X, 340 p. 82 illus., 39 in color. (Understanding Complex Systems) Hardcover ► $169.00
ISBN 978-3-642-23067-7

Product Category

Monograph

Target groups

Research

Fields of interests

Human Geography; Landscape/Regional and Urban Planning; Social Sciences, general

Handbook of Tourism and Quality-of-Life Research: Enhancing the Lives of Tourists and Residents of Host Communities

This handbook brings together much of the current research on the topic to help academic researchers further develop their future research programs and practitioners to use well-being performance measures to aid in their decision making. It covers much of the Quality of Life Research in relation to travellers and tourists and host communities.
M. Wade, Max Planck Institute for Foreign and International Criminal Law, Freiburg, Germany; A. Maljevic, University of Sarajevo, Bosnia and Herzegovina (Eds)

**A War on Terror?**
The European Stance on a New Threat, Changing Laws and Human Rights Implications

The events of September 11, 2001, have galvanized anti-terrorist efforts far beyond Ground Zero—particularly in Europe, where state responses to terror threats vary widely. In *A War on Terror? The European Stance on a New Threat, Changing Laws and Human Rights Implications*, an international panel of experts analyzes current trends and new developments in law enforcement and legal systems throughout the continent, including material from non-English-speaking countries that is seldom available to the broader academic community.

**Features**
- Provides information on countries for which it is not readily available in English
- Offers the reader the ability to compare different reactions and responses to terrorism, thereby enriching the dialogue of researchers in their national contexts
- The comparative approach gives a European feel, i.e. a feeling for the situation across Europe founded on expert opinions and not just of those countries with the most obviously radical changes
- Inclusion of both (several) national and supra-national developments
- Focuses upon the terrorism debate without the USA as a benchmark
- Includes a stance on some of the developments associated with anti-terrorist policies in very different countries, with very different legal traditions and social and cultural contexts

**Fields of interests**
Criminology & Criminal Justice; Criminal Law

**Target groups**
Graduate

**Product Category**
Graduate/Advanced undergraduate textbook

---

D. Webb, University of Western Australia, Crawley, WA, Australia; E. Wills-Herrera, Universidad de Los Andes, Bogotá, Colombia (Eds)

**Subjective Well-Being and Security**

**Contents**
- Introduction.
- 1. Safety and Subjective Wellbeing: A Perspective from the Australian Unity Wellbeing Index.
- 2. Terror, Fear and Individual and Community Wellbeing.
- 8. The Linkages between Insecurity, Health, and Well-being in Latin America: An Initial Exploration Based on Happiness Surveys.

**Fields of interest**
Quality of Life Research

**Target groups**
Research

**Product Category**
Contributed volume
R by Example
Concepts to Code

R by Example is an example-based introduction to the statistical computing environment that does not assume any previous familiarity with R or other software packages. R functions are presented in the context of interesting applications with real data. The purpose of this book is to illustrate a range of statistical and probability computations using R for people who are learning, teaching, or using statistics. Specifically, this book is written for users who have covered at least the equivalent of (or are currently studying) undergraduate level calculus-based courses in statistics. These users are learning or applying exploratory and inferential methods for analyzing data and this book is intended to be a useful resource for learning how to implement these procedures in R.

Features
► Illustrate a range of statistical and probability computations using R for people who are learning, teaching, or using statistics ► Provide a general introduction to the R system and provides an overview of the capabilities of R to perform basic numerical and graphical summaries of data ► R functions are presented in the context of interesting applications with real data

Contents

Fields of interest
Statistical Theory and Methods

Target groups
Research

Product Category
Monograph

Analysis of Randomly Incomplete Data Without Imputation

In this work, the theoretical results of Desai and Sen (2006, 2008) are used to describe several types of analyses of randomly incomplete data without imputation of any sort.

Features
► This book describes how to characterize Fisher information when data are randomly incomplete ► This book includes several examples of analyses of randomly incomplete data without imputation and using some of the most commonly encountered types of models such as repeated-measures MANOVA, tests of independence in an R × C contingency table, the general linear model, and logistic regression ► This book uses simulation results wherever possible to compare analyses of data with and without imputation

Contents

Fields of interest
Statistical Theory and Methods

Target groups
Graduate

Product Category
Monograph

Business Statistics for Competitive Advantage with Excel 2010
Basics, Model Building, and Cases

Features
► Focuses on statistical model building and Analysis not Theory ► Covers the full gamut of Excel properties and utilities for Business Stats, including all shortcuts. All communicate very clearly with concise tables and screen shots ► Statistical Analyses are translated into concise Business English Applications. Applications are taken from actual Business problems

Contents

Fields of interest
Statistics for Business/Economics/Mathematical Finance/Insurance; Statistics and Computing/Statistics Programs; Statistics, general

Target groups
Graduate

Product Category
Graduate/Advanced undergraduate textbook
Selected Works of David Brillinger

This volume contains 30 of David Brillinger’s most influential papers. He is an eminent statistical scientist, having published broadly in time series and point process analysis, seismology, neurophysiology, and population biology. Each of these areas are well represented in the book. The volume has been divided into four parts, each with comments by one of Dr. Brillinger’s former PhD students. His more theoretical papers have comments by Victor Panaretos from Switzerland. The area of time series has commentary by Pedro Morettin from Brazil. The biologically oriented papers are commented by Tore Schweder from Norway and Haigouneh Preisler from USA, while the point process papers have comments by Peter Guttorp from USA. In addition, the volume contains a Statistical Science interview with Dr. Brillinger, and his bibliography.

Features
- Provides convient access to significant papers from a highly regarded author working at a time when many of the foundational building blocks of probability and statistics were being put in place
- Includes “author’s pick” of his favorite papers
- Includes a complete bibliography

Contents

Fields of interest
Statistical Theory and Methods

Target groups
Research

Product Category
Reference work

A Concise Guide to Statistics

H. Kaltenbach, ETH Zurich, Switzerland

The text gives a concise introduction into fundamental concepts in statistics. Chapter 1: Short exposition of probability theory, using generic examples. Chapter 2: Estimation in theory and practice, using biologically motivated examples. Maximum-likelihood estimation in covered, including Fisher information and power computations. Methods for calculating confidence intervals and robust alternatives to standard estimators are given. Chapter 3: Hypothesis testing with emphasis on concepts, particularly type-I, type-II errors, and interpreting test results. Several examples are provided. T-tests are used throughout, followed important other tests and robust/nonparametric alternatives. Multiple testing is discussed in more depth, and combination of independent tests is explained. Chapter 4: Linear regression, with computations solely based on R. Multiple group comparisons with ANOVA are covered together with linear contrasts, again using R for computations.

Features
- Focus on concepts rather than long calculations
- Several topics relevant to modern biology (multiple testing, minimax estimation) usually not found in similar texts
- Concise first introduction or repetition of fundamental concepts in statistics - Pointers to relevant R functions and datatypes
- Robust and nonparametric counterparts of classical estimators and tests given throughout the text

Contents

Fields of interests
Statistics, general; Statistics for Life Sciences, Medicine, Health Sciences

Target groups
Upper undergraduate

Product Category
Undergraduate textbook

Behavioral Research Data Analysis with R

Y. Li, Memorial Sloan-Kettering Cancer Center, NY, USA; J. Baron, University of Pennsylvania, Berwyn, PA, USA

This book is written for behavioral scientists who want to consider adding R to their existing set of statistical tools, or want to switch to R as their main computation tool. The authors aim primarily to help practitioners of behavioral research make the transition to R. The focus is to provide practical advice on some of the widely-used statistical methods in behavioral research, using a set of notes and annotated examples. The book will also help beginners learn more about statistics and behavioral research. These are statistical techniques used by psychologists who do research on human subjects, but of course they are also relevant to researchers in other fields that do similar kinds of research.

Features
- For behavioral research practitioners who are interested in learning R
- Provides practical advice on some of the widely-used statistical methods in behavioral research, using a set of notes and annotated examples
- Emphasizes practical data analytic skills

Contents

Fields of interest
Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law

Target groups
Professional/practitioner

Product Category
Monograph
Order Restricted Analysis of Microarray Data

**Features**
- This book focuses on the analysis of microarray data in the dose-response setting in early drug development experiments in the pharmaceutical industry.
- Part I discusses the dose-response setting and the problem of estimation of normal means under order restrictions.
- Part II demonstrates the use of the IsoGene R library and in particular its graphical capacity.

**Contents**
- Introduction
- Part I: Dose-response Modeling: An Introduction
- Estimation Under Order Restrictions
- The Likelihood Ratio Test
- Part II: Dose-response Microarray Experiments
- Functional Genomic Dose-response Experiments
- Adjustment for Multiplicity
- Test for Trend
- Order Restricted Disclusters
- Classification of Trends in Dose-response Microarray Experiments Using Information Theory Selection Methods
- Multiple Contrast Test
- Confidence Intervals for the Selected Parameters
- Case Study Using GUI in R: Gene Expression Analysis After Acute Treatment With Antipsychotics

**Fields of interest**
- Statistics, general
- Statistics and Computing/Statistics Programs
- Pharmaceutical Sciences/Technology

**Target groups**
- Graduate

**Product Category**
- Contributed volume

---

**Matrix Tricks for Linear Statistical Models**

**Our Personal Top Twenty**

In teaching linear statistical models to first-year graduate students or to final-year undergraduate students, there is no way to proceed smoothly without matrices and related concepts of linear algebra; their use is really essential.

**Features**
- A valuable source of information for graduate studies whenever the matrix analysis and/or linear statistics is involved
- Useful to the researchers utilizing matrices to deal with problems originating in various sciences, not only statistics
- Collected ‘Top Twenty’ favorite matrix tricks for linear statistical models

**Contents**
- Introduction
- Easy Column Space Tricks
- Easy Projector Tricks
- Easy Correlation Tricks
- Generalized Inverses in a Nutshell
- Rank of the Partitioned Matrix and the Matrix Product
- Rank Cancellation Rule
- Sum of Orthogonal Projectors
- Minimizing cov(y - Fx)
- BLUE
- General Solution to AYB = C
- Invariance with Respect to the Choice of Generalized Inverse
- Block-Diagonalization and the Schur Complement
- Nonnegative Definiteness of a Partitioned Matrix
- The Matrix M
- Disjointness of Column Spaces
- Full Rank Decomposition
- Eigenvalue Decomposition
- Singular Value Decomposition
- The Cauchy-Schwarz Inequality
- Notation
- References
- Author Index
- Subject Index

**Fields of interest**
- Statistical Theory and Methods

**Target groups**
- Research

**Product Category**
- Monograph

---

**Selected Works of E. L. Lehmann**

These volumes present a selection of Erich L. Lehmann’s monumental contributions to Statistics. These works are multifaceted. His early work included fundamental contributions to hypothesis testing, theory of point estimation, and more generally to decision theory. His work in Nonparametric Statistics was groundbreaking. His fundamental contributions in this area include results that came to assuage the anxiety of statisticians that were skeptical of nonparametric methodologies, and his work on concepts of dependence has created a large literature. The two volumes are divided into chapters of related works. Invited contributors have critiqued the papers in each chapter, and the reprinted group of papers follows each commentary. A complete bibliography that contains links to recorded talks by Erich Lehmann – and which are freely accessible to the public – and a list of Ph.D. students are also included. These volumes belong in every statistician’s personal collection and are a required holding for any institutional library.

**Features**
- Collects Lehmann’s important papers in two convenient volumes
- Includes complete bibliography
- Includes commentaries by important statisticians working today

**Contents**
- Decision Theory
- Hypothesis Testing
- Estimation
- Nonparametrics I
- Nonparametrics II
- Asymptotics
- Multiple Decisions
- Orderings of Probability Distributions
- Probability Theory
- Biographical Work
- Historical Work
- Philosophical Work
- Books
- PhD Students

**Fields of interest**
- Statistical Theory and Methods

**Target groups**
- Research

**Product Category**
- Monograph
**Biostatistics with R**

An Introduction to Statistics Through Biological Data

B. Shahbaba, University of California, Irvine, CA, USA

Biostatistics with R is designed to mimic the interaction between theory and application in statistics. Most topics are motivated by real examples first, and after discussing a topic, the author shows how it can be applied to the problem that motivated it. Topics include data exploration, estimation, and clustering with two appendices on installing and running R and R-commander. This author discusses basic statistical analysis through a series of biological examples using R and R-Commander as computational tools. The book is intended for a wide range of readers from people with relatively strong analytical background, who want to learn about statistics and its application in biology, to non-statistician scientists, who use statistical methods in their research.

**Features**

- Discusses basic statistical analysis through a series of biological examples using R and R-Commander as computational tools
- Topics are motivated by real examples
- Intended for a wide range of readers

**Contents**


**Fields of interest**

Statistics for Life Sciences, Medicine, Health Sciences

**Target groups**

Research

**Product Category**

Monograph

---

**Biostatistics with R**

An Introduction to Statistics Through Biological Data

B. Shahbaba, University of California, Irvine, CA, USA

Biostatistics with R is designed to mimic the interaction between theory and application in statistics. Most topics are motivated by real examples first, and after discussing a topic, the author shows how it can be applied to the problem that motivated it. Topics include data exploration, estimation, and clustering with two appendices on installing and running R and R-commander. This author discusses basic statistical analysis through a series of biological examples using R and R-Commander as computational tools. The book is intended for a wide range of readers from people with relatively strong analytical background, who want to learn about statistics and its application in biology, to non-statistician scientists, who use statistical methods in their research.

**Features**

- Discusses basic statistical analysis through a series of biological examples using R and R-Commander as computational tools
- Topics are motivated by real examples
- Intended for a wide range of readers

**Contents**


**Fields of interest**

Statistics for Life Sciences, Medicine, Health Sciences

**Target groups**

Research

**Product Category**

Monograph
I. Van Keilegom, Université catholique de Louvain, Belgium; P. W. Wilson, Clemson University, SC, USA (Eds)

Exploring Research Frontiers in Contemporary Statistics and Econometrics
A Festschrift for Léopold Simar

This book collects contributions written by well-known statisticians and econometricians to acknowledge Léopold Simar’s far-reaching scientific impact on Statistics and Econometrics throughout his career. The papers contained herein were presented at a conference in Louvain-la-Neuve in May 2009 in honor of his retirement. The contributions cover a broad variety of issues surrounding frontier estimation, which Léopold Simar has contributed much to over the past two decades, as well as related issues such as semiparametric regression and models for censored data. This book collects contributions written by well-known statisticians and econometricians to acknowledge Léopold Simar’s far-reaching scientific impact on Statistics and Econometrics throughout his career. The papers contained herein were presented at a conference in Louvain-la-Neuve in May 2009 in honor of his retirement. The contributions cover a broad variety of issues surrounding frontier estimation, which Léopold Simar has contributed much to over the past two decades, as well as related issues such as semiparametric regression and models for censored data.

Features
► Exploring ► Research ► Frontiers

Fields of interests
Statistical Theory and Methods; Statistics for Business/Economics/Mathematical Finance/Insurance; Statistics and Computing/Statistics Programs

Target groups
Research

Product Category
Contributed volume

Available
2011. 350 p. Hardcover
► $89.00
ISBN 978-3-7908-2348-6
**Conference Proceedings**

► approx. $159.00
ELMaraghy (Ed), Enabling Manufacturing Competitiveness and Economic Sustainability ISBN 978-3-642-23859-8
► $349.00
Gengnagel (Eds), Computational Design Modeling ISBN 978-3-642-23434-7
► $259.00
Jabłoński (Eds), Mechatronics ISBN 978-3-642-23243-5
► $349.00
Jokinen (Eds), TCP 2011 ISBN 978-94-007-2587-4
► approx. $209.00
► $124.00
Schlaefer (Eds), Robotic Sailing ISBN 978-3-642-22835-3
► $189.00
► $124.00

**Advances in Experimental Medicine and Biology**

► $209.00
LaVail (Eds), Retinal Degenerative Diseases (Advances in Experimental Medicine and Biology 723) ISBN 978-1-4614-0630-3
► $279.00
Mylonakis (Eds), Recent Advances on Model Hosts (Advances in Experimental Medicine and Biology 710) ISBN 978-1-4419-5637-8
► $189.00
Popper (Eds), The Effects of Noise on Aquatic Life (Advances in Experimental Medicine and Biology 730) ISBN 978-1-4419-7310-8
► $279.00
► $189.00

**Advances in Intelligent and Soft Computing**

Choras (Ed), Image Processing & Communications Challenges 3 (Advances in Intelligent and Soft Computing 102) ISBN 978-3-642-23153-7
► $349.00
Czachorski (Eds), Man-Machine Interactions 2 (Advances in Intelligent and Soft Computing 103) ISBN 978-3-642-23168-1
► $259.00
► $259.00
► $199.00
► approx. $409.00
Jin (Eds), Advances in Computer Science, Intelligent Systems and Environment (Advances in Intelligent and Soft Computing) ISBN 978-3-642-23776-8
► approx. $409.00
► $399.00
Li (Eds), Nonlinear Mathematics for Uncertainty and its Applications (Advances in Intelligent and Soft Computing 100) ISBN 978-3-642-22832-2
► $349.00

**AIP Conference Proceedings**

► approx. $157.00
► approx. $316.00

► approx. $137.00
► $138.00
► approx. $386.00
► $139.00
► $127.00
► approx. $139.00
► $152.00
► $147.00
► approx. $178.00
► $446.00
► $153.00
Communications in Computer and Information Science

Abraham (Eds), Advances in Computing and Communications, Part I. ACC 2011 (Communications in Computer and Information Science 190) ISBN 978-3-642-22708-0
► $143.00
Abraham (Eds), Advances in Computing and Communications, Part II. ACC 2011 (Communications in Computer and Information Science 191) ISBN 978-3-642-22713-4
► $143.00
Abraham (Eds), Advances in Computing and Communications, Part III. ACC 2011 (Communications in Computer and Information Science 192) ISBN 978-3-642-22719-6
► $143.00
Abraham (Eds), Advances in Computing and Communications, Part IV. ACC 2011 (Communications in Computer and Information Science 193) ISBN 978-3-642-22725-7
► $131.00
Aluru (Eds), Contemporary Computing. IC3 2011 (Communications in Computer and Information Science 168) ISBN 978-3-642-22605-2
► $139.00
Fleischmann (Eds), Subject-Oriented Business Process Management (Communications in Computer and Information Science 138) ISBN 978-3-642-21334-6
► $84.00
Kim (Eds), Advanced Communication and Networking (Communications in Computer and Information Science 199) ISBN 978-3-642-23311-1
► $107.00
Kim (Eds), Information Security and Assurance. ISA 2011 (Communications in Computer and Information Science 200) ISBN 978-3-642-23140-7
► $107.00
Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education (Communications in Computer and Information Science 214) ISBN 978-3-642-23320-3
► $131.00
Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education, Part III. CSEE 2011 (Communications in Computer and Information Science 216) ISBN 978-3-642-23344-9
► $131.00
Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education, Part V (Communications in Computer and Information Science 218) ISBN 978-3-642-23356-2
► $131.00
Lin (Eds), Advances in Computer Science, Environment, Ecoinformatics, and Education. CSEE 2011, Part II (Communications in Computer and Information Science 215) ISBN 978-3-642-23323-4
► $131.00
Mahlow (Eds), Systems and Frameworks for Computational Morphology. SFCM 2011 (Communications in Computer and Information Science 100) ISBN 978-3-642-21373-7
► $84.00
Nagamalai (Eds), Advances in Parallel, Distributed Computing. PDCTA 2011 (Communications in Computer and Information Science 205) ISBN 978-3-642-24054-6
► approx. $99.00
Nagamalai (Eds), Advances in Parallel, Distributed Computing and Networks (Communications in Computer and Information Science 204) ISBN 978-3-642-24042-3
► approx. $139.00
Qi (Ed), Parallel and Distributed Computing and Networks (Communications in Computer and Information Science 137) ISBN 978-3-642-22705-9
► $84.00
Schmidt (Ed), S-BPM ONE - Learning by Doing - Doing by Learning (Communications in Computer and Information Science 213) ISBN 978-3-642-23470-5
► approx. $89.95
Venugopal (Ed), Computer Networks and Intelligent Computing. ICIP 2011 (Communications in Computer and Information Science 157) ISBN 978-3-642-22785-1
► $143.00
Contributions in Mathematical and Computational Sciences

Stix (Ed), The Arithmetic of Fundamental Groups. PIA 2010 (Contributions in Mathematical and Computational Sciences 2) ISBN 978-3-642-23904-5
$149.00

ERCOFTAC Series

$259.00

IFIP Advances in Information and Communication Technology

Becker (Eds), VLSI-SoC: Technologies for Systems Integration (IFIP Advances in Information and Communication Technology 360) ISBN 978-3-642-23119-3
$109.00
Impagliazzo (Eds), Perspectives on Soviet and Russian Computing. SoRuCom 2006 (IFIP Advances in Information and Communication Technology 357) ISBN 978-3-642-22815-5
approx. $109.00

IFMBE Proceedings

$539.00
Vlad (Eds), International Conference on Advancements of Medicine and Health Care through Technology; 29th August – 2nd September 2011, Cluj-Napoca, Romania (IFMBE Proceedings 36) ISBN 978-3-642-22585-7
$259.00

Lecture Notes in Business Information Processing

$72.00

Filipe (Eds), Web Information Systems and Technologies. WEBIST 2010 (Lecture Notes in Business Information Processing 75) ISBN 978-3-642-22809-4
$83.00
Harmsen (Eds), Practice-Driven Research on Enterprise Transformation. PRET 2011 (Lecture Notes in Business Information Processing 89) ISBN 978-3-642-23387-6
$72.00
$83.00
Salmela (Eds), Nordic Contributions in IS Research. SCIS 2011 (Lecture Notes in Business Information Processing 86) ISBN 978-3-642-22765-3
$72.00

Lecture Notes in Computational Science and Engineering

$149.00

Lecture Notes in Computer Science

Aceto (Eds), Automata, Languages and Programming. ICALP 2011 (Lecture Notes in Computer Science, LNCS 7466) ISBN 978-3-642-22005-0
$143.00
Aceto (Eds), Automata, Languages and Programming. ICALP 2011 (Lecture Notes in Computer Science, LNCS 6750) ISBN 978-3-642-22011-1
$119.00
Agon (Eds), Mathematics and Computation in Music. MCM 2011 (Lecture Notes in Computer Science, LNCS 6726) ISBN 978-3-642-21589-6
$83.00
Alcaraz Calero (Eds), Autonomic and Trusted Computing. ATM 2011 (Lecture Notes in Computer Science, LNCIS 6750) ISBN 978-3-642-23495-8
$72.00
$95.00
<table>
<thead>
<tr>
<th>ISBN</th>
<th>Title</th>
<th>Editors</th>
<th>Publisher</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>978-3-642-22302-0</td>
<td>Proceedings: Proceedings of \textit{ICCS 2011: Lecture Notes in Computer Science, LNAI 6828}</td>
<td>Andrews (Eds)</td>
<td>Springer</td>
<td>$95.00</td>
</tr>
<tr>
<td>978-3-642-22398-4</td>
<td>Proceedings: Proceedings of \textit{NEW2AN 2011/RuSMART 2011: Lecture Notes in Computer Science, LNAI 6725}</td>
<td>Balandin (Eds)</td>
<td>Springer</td>
<td>$72.00</td>
</tr>
<tr>
<td>978-3-642-23040-0</td>
<td>Proceedings: Proceedings of \textit{LADS 2011: Lecture Notes in Computer Science, LNAI 6824}</td>
<td>Bayard Cushing (Eds)</td>
<td>Springer</td>
<td>$119.00</td>
</tr>
<tr>
<td>978-3-642-23195-7</td>
<td>Proceedings: Proceedings of \textit{CAS 2011: Lecture Notes in Computer Science, LNAI 6725}</td>
<td>Bezhanishvili (Eds)</td>
<td>Springer</td>
<td>$72.00</td>
</tr>
<tr>
<td>978-3-642-23282-4</td>
<td>Proceedings: Proceedings of \textit{APPI 2011: Lecture Notes in Computer Science, LNAI 6824}</td>
<td>Boykov (Eds)</td>
<td>Springer</td>
<td>$72.00</td>
</tr>
<tr>
<td>978-3-642-23455-2</td>
<td>Proceedings: Proceedings of \textit{MICCAI 2011: Lecture Notes in Computer Science, LNAI 6824}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$171.00</td>
</tr>
<tr>
<td>978-3-642-23489-7</td>
<td>Proceedings: Proceedings of \textit{AAAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$171.00</td>
</tr>
<tr>
<td>978-3-642-23598-6</td>
<td>Proceedings: Proceedings of \textit{WASAP 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$72.00</td>
</tr>
<tr>
<td>978-3-642-23637-2</td>
<td>Proceedings: Proceedings of \textit{IAP 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Cardelli (Eds)</td>
<td>Springer</td>
<td>$72.00</td>
</tr>
<tr>
<td>978-3-642-23856-7</td>
<td>Proceedings: Proceedings of \textit{ML 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Cerone (Eds)</td>
<td>Springer</td>
<td>$83.00</td>
</tr>
<tr>
<td>978-3-642-23903-6</td>
<td>Proceedings: Proceedings of \textit{MM 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Böhm (Eds)</td>
<td>Springer</td>
<td>$83.00</td>
</tr>
<tr>
<td>978-3-642-23984-7</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Bouchachia (Ed)</td>
<td>Springer</td>
<td>$107.00</td>
</tr>
<tr>
<td>978-3-642-24038-8</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$107.00</td>
</tr>
<tr>
<td>978-3-642-24195-7</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$107.00</td>
</tr>
<tr>
<td>978-3-642-24262-8</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24262-8</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24362-5</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24238-5</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24362-5</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24362-5</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24362-5</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>978-3-642-24362-5</td>
<td>Proceedings: Proceedings of \textit{ECAI 2011: Lecture Notes in Computer Science, LNAI 6825}</td>
<td>Campos (Eds)</td>
<td>Springer</td>
<td>$131.00</td>
</tr>
<tr>
<td>Title</td>
<td>ISBN</td>
<td>Price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fu (Eds), Computing and Combinatorics. COCOON 2011</td>
<td>978-3-642-22684-7</td>
<td>$119.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furnell (Eds), Trust, Privacy and Security in Digital Business. TrustBus 2011</td>
<td>978-3-642-22889-6</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geva (Eds), Comparative Evaluation of Focused Retrieval. INEX 2010</td>
<td>978-3-642-23576-4</td>
<td>$89.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goldberg (Eds), Approximation, Randomization, and Combinatorial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimization. Algorithms and Techniques. APPROX 2011/RANDOM 2011</td>
<td>978-3-642-22934-3</td>
<td>$131.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groß (Eds), Towards Autonomous Robotic Systems. TAROS 2011</td>
<td>978-3-642-23231-2</td>
<td>$95.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GUNOPULOS (Eds), Machine Learning and Knowledge Discovery in Databases, Part II</td>
<td>978-3-642-23782-9</td>
<td>$119.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hsu (Eds), Ubiquitous Intelligence and Computing. UIC 2011</td>
<td>978-3-642-23640-2</td>
<td>$119.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hu (Eds), Brain Informatics. BI 2011</td>
<td>978-3-642-23604-4</td>
<td>$79.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Janssen (Eds), Electronic Government. EGOV 2011</td>
<td>978-3-642-22877-3</td>
<td>$124.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeannot (Eds), Euro-Par 2011 Parallel Processing</td>
<td>978-3-642-23396-8</td>
<td>$95.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jeannot (Eds), Euro-Par 2011 Parallel Processing</td>
<td>978-3-642-23399-9</td>
<td>$119.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kamel (Eds), Image Analysis and Recognition. ICIAR 2011</td>
<td>978-3-642-23210-7</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kanazawa (Eds), The Mathematics of Language. MOL 12</td>
<td>978-3-642-23216-9</td>
<td>$107.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Katoen (Eds), CONCUR 2011 -- Concurrency Theory</td>
<td>978-3-642-23500-5</td>
<td>$119.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>König (Eds), Knowledge-Based and Intelligent Information and</td>
<td>978-3-642-23662-8</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Systems, Part II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>König (Eds), Knowledge-Based and Intelligent Information and</td>
<td>978-3-642-23853-6</td>
<td>$119.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Systems, Part IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>König (Eds), Knowledge-Based and Intelligent Information and</td>
<td>978-3-642-23865-9</td>
<td>$95.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Systems, Part III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kuchen (Ed), Functional and Constraint Logic Programming. WLP 2011</td>
<td>978-3-642-22530-7</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwan (Eds), Hybrid Learning. ICHL 2011</td>
<td>978-3-642-22762-2</td>
<td>$83.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lehnert (Ed), Energy-Aware Communications. EUNICE 2011</td>
<td>978-3-642-23540-5</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lio (Eds), Artificial Immune Systems. ICARIS 2011</td>
<td>978-3-642-22370-9</td>
<td>$95.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luo (Ed), Cooperative Design, Visualization, and Engineering. CDVE 2011</td>
<td>978-3-642-23733-1</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ma (Eds), Serious Games Development and Applications. SGDA 2011</td>
<td>978-3-642-23833-8</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malyshkin (Ed), Parallel Computing Technologies. PaCT 2011</td>
<td>978-3-642-23177-3</td>
<td>$107.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marík (Eds), Holonic and Multi-Agent Systems for Manufacturing. HoloMAS 2011</td>
<td>978-3-642-23180-3</td>
<td>$72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martínez-Trinidad (Eds), Pattern Recognition. MCPR 2011</td>
<td>978-3-642-21586-5</td>
<td>$83.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mauri (Eds), Development in Language Theory. DLT 2011</td>
<td>978-3-642-22320-4</td>
<td>$95.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mester (Eds), Pattern Recognition. 33rd DAGM Symposium (Lecture Notes in Computer Science, LNIIP 6835)
ISBN 978-3-642-23122-3
$95.00

Murgante (Eds), Computational Science and Its Applications - ICCSA 2011 (Lecture Notes in Computer Science, LNTCS 6782)
ISBN 978-3-642-21927-6
$131.00

Murgante (Eds), Computational Science and Its Applications - ICCSA 2011 (Lecture Notes in Computer Science, LNTCS 6784)
ISBN 978-3-642-21930-6
$131.00

Murgante (Eds), Computational Science and Its Applications - ICCSA 2011, Part V (Lecture Notes in Computer Science, LNTCS 6786)
ISBN 978-3-642-21933-7
$131.00

Murgante (Eds), Computational Science and Its Applications - ICCSA 2011, Part II (Lecture Notes in Computer Science, LNTCS 6783)
ISBN 978-3-642-21986-6
$131.00

Murlak (Eds), Mathematical Foundations of Computer Science 2011. MFCS 2011 (Lecture Notes in Computer Science, LNTCS 6907)
ISBN 978-3-642-22992-3
$119.00

Norberto de Souza (Eds), Advances in Bioinformatics and Computational Biology. BSBI 2011 (Lecture Notes in Computer Science, LNBI 6832)
ISBN 978-3-642-22824-7
$72.00

Owe (Eds), Fundamentals of Computation Theory. FCT 2011 (Lecture Notes in Computer Science, LNTCS)
ISBN 978-3-642-22952-7
$83.00

Ozok (Eds), Online Communities and Social Computing. OCSC 2011 (Lecture Notes in Computer Science, LNISA 6778)
ISBN 978-3-642-21795-1
$95.00

Parampalli (Eds), Information Security and Privacy. ACISP 2011 (Lecture Notes in Computer Science, LNSC 6812)
ISBN 978-3-642-22496-6
$95.00

Perner (Ed), Advances on Data Mining: Applications and Theoretical Aspects. ICDM 2011 (Lecture Notes in Computer Science, LNAI 6870)
ISBN 978-3-642-23183-4
$83.00

Przytycka (Eds), Algorithms in Bioinformatics. WABI 2011 (Lecture Notes in Computer Science, LNBI 6833)
ISBN 978-3-642-23037-0
$83.00

Rinderle-Ma (Eds), Business Process Management. BPM 2011 (Lecture Notes in Computer Science, LNISA 6896)
ISBN 978-3-642-23058-5
$95.00

Rogaway (Ed), Advances in Cryptology -- CRYPTO 2011 (Lecture Notes in Computer Science, LNSC 6841)
ISBN 978-3-642-22791-2
$131.00

Schewe (Eds), Semantics in Data and Knowledge Bases. SDBK 2010 (Lecture Notes in Computer Science, LNISA 6834)
ISBN 978-3-642-23440-8
$approx. 69.95

Schmidhuber (Eds), Artificial General Intelligence. AGI 2011 (Lecture Notes in Computer Science, LNAI 6830)
ISBN 978-3-642-22886-5
$95.00

Sommer (Eds), Recent Advances in Intrusion Detection. RAID 2011 (Lecture Notes in Computer Science, LNSC)
ISBN 978-3-642-23643-3
$83.00

Tjoa (Eds), Availability, Reliability and Security for Business, Enterprise and Health Information Systems. IFIP WG 8.4/8.9 (Lecture Notes in Computer Science, LNISA 6908)
ISBN 978-3-642-23299-2
$108.00

Van Eekelen (Eds), Interactive Theorem Proving. ITP 2011 (Lecture Notes in Computer Science, LNTCS 6898)
ISBN 978-3-642-22862-9
$83.00

Vihjälmsson (Eds), Intelligent Virtual Agents. IVA 2011 (Lecture Notes in Computer Science, LNAI 6895)
ISBN 978-3-642-23973-1
$approx. 89.95

Vivacqua (Eds), Collaboration and Technology. CRIWG 2011 (Lecture Notes in Computer Science, LNISA 6699)
ISBN 978-3-642-23800-0
$72.00

Wang (Eds), Web-Age Information Management. WAIM 2011 (Lecture Notes in Computer Science, LNISA 6897)
ISBN 978-3-642-23534-4
$approx. 109.00

Wolff (Eds), Knowledge Processing and Data Analysis. KONT 2007 (Lecture Notes in Computer Science, LNAI 6581)
ISBN 978-3-642-22139-2
$83.00

Yahav (Ed), Static Analysis. SAS 2011 (Lecture Notes in Computer Science, LNPS 6887)
ISBN 978-3-642-23701-0
$83.00

Yin (Eds), Intelligent Data Engineering and Automated Learning -- IDEAL 2011 (Lecture Notes in Computer Science, LNISA 6936)
ISBN 978-3-642-23877-2
$approx. 99.00

Zhou (Eds), Active Media Technology (Lecture Notes in Computer Science, LNISA 6890)
ISBN 978-3-642-23619-8
$approx. 79.95

### Lecture Notes in Economics and Mathematical Systems

Ermoliev (Eds), Managing Safety of Heterogeneous Systems (Lecture Notes in Economics and Mathematical Systems 658)
ISBN 978-3-642-22883-4
$129.00

### Lecture Notes in Electrical Engineering

Voros (Eds), VLSI 2010 Annual Symposium (Lecture Notes in Electrical Engineering 105)
ISBN 978-94-007-1487-8
$179.00

### Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering

Gabrielli (Eds), Ambient Media and Systems. AMBI-SYS 2011 (Lecture Notes of the Institute for Computer Sciences, Social 70)
ISBN 978-3-642-23901-4
$approx. 69.95

Giambene (Eds), Personal Satellite Services. PSATS 2011 (Lecture Notes of the Institute for Computer Sciences 71)
ISBN 978-3-642-23824-6
$approx. 95.00

Lai (Eds), Forensics in Telecommunications, Information and Multimedia. e-Forensics 2010 (Lecture Notes of the Institute for Computer Sciences 56)
ISBN 978-3-642-23601-3
$approx. 83.00

### Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering

Ermoliev (Eds), Managing Safety of Heterogeneous Systems (Lecture Notes in Economics and Mathematical Systems 658)
ISBN 978-3-642-22883-4
$129.00

### Lecture Notes in Electrical Engineering

Voros (Eds), VLSI 2010 Annual Symposium (Lecture Notes in Electrical Engineering 105)
ISBN 978-94-007-1487-8
$179.00

### Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering

Gabrielli (Eds), Ambient Media and Systems. AMBI-SYS 2011 (Lecture Notes of the Institute for Computer Sciences, Social 70)
ISBN 978-3-642-23901-4
$approx. 69.95

Giambene (Eds), Personal Satellite Services. PSATS 2011 (Lecture Notes of the Institute for Computer Sciences 71)
ISBN 978-3-642-23824-6
$approx. 95.00

Lai (Eds), Forensics in Telecommunications, Information and Multimedia. e-Forensics 2010 (Lecture Notes of the Institute for Computer Sciences 56)
ISBN 978-3-642-23601-3
$approx. 83.00
Parr (Eds), Sensor Systems and Software.  
S-Cube 2010 (Lecture Notes of the Institute for Computer Sciences 57)  
ISBN 978-3-642-23582-5  
► approx. $69.95  
Popescu-Zeletin (Eds), E-Infrastructure and E-Services for Developing Countries. AFRICOM 2010 (Lecture Notes of the Institute for Computer Sciences 64)  
ISBN 978-3-642-23827-7  
► $72.00  
Szomszor (Eds), Electronic Healthcare (Lecture Notes of the Institute for Computer Sciences 69)  
ISBN 978-3-642-23634-1  
► $83.00  

**Mathematics and Visualization**

Linsen (Eds), Visualization in Medicine and Life Sciences II (Mathematics and Visualization)  
ISBN 978-3-642-21607-7  
► $124.00
Discount Key

P = Professional
MC = Medicine/Clinical
MR = Medicine/Reference
T = Trade
C = Computer Trade
L = Landolt-Börnstein Handbook
S = Special Software

Sales and Service

Bookstore and Library Sales:
Matt Conmy, Vice President, Trade Sales
tel: 800-777-4643 ext. 578
e-mail: matt.conmy@springer.com

Trade Marketing Support:
Phillip Scott, Channel Marketing Specialist
tel: 800-777-4643 ext. 621
e-mail: philip.scott@springer.com

Agency Account Information
► Library Approval Plan
► Bookseller Agency Plan
► Annual Prepayment Plan
► Standing Orders

Attn: Joe Kozakiewicz
P.O. Box 2485
Secaucus, NJ 07096-2485
tel: 800-777-4643 ext. 303
fax: 201-348-4505
e-mail: joseph.kozakiewicz@springer.com

To Order:
Springer
P.O. Box 2485
Secaucus, NJ 07096-2485
or call
800-SPRINGER, 8:30 AM to 5:30 PM ET
or fax
201-348-4505
or e-mail
orders-ny@springer.com

World Wide Web:
Springer: springer.com
Apress: www.apress.com
Birkhäuser: www.birkhauser.com
Copernicus: www.copernicusbooks.com
Key Curriculum: www.keypress.com

Returns:
Returns must be in resellable condition. Please include a copy of the original invoice or packing slip along with your shipment. For your protection, we recommend all returns be sent via a traceable method. Damaged books must be reported within two months of billing date. Springer reserves the right to reject any return that does not follow the procedures detailed above.

Returns in the Americas (excluding Canada):
Springer
c/o Mercedes/ABC Distribution Center
Brooklyn Navy Yard; Bldg. 3
Brooklyn, NY 11205

Returns in Canada:
Springer
c/o Georgetown Terminal Warehouse
34 Armstrong Avenue
Georgetown, Ontario L7G 4R9

Prices:
Please note that all prices are in US $, and are subject to change without notice.

Continuation Orders

Library Approval Plan:
All books are automatically supplied directly to your library on the date of publication. A minimum of one major discipline on all publications must be selected to receive the Library Approval Plan discount of 15%.

Bookseller Agency Plan:
The bookseller automatically receives all new titles upon publication. To receive the special agency discount, a minimum of one major discipline must be selected. Modifications in the plan may be made at any time.

Annual Prepayment Plan:
Prepayments will be accepted only for subscriptions to Landolt-Börnstein. To enroll in this plan, the library must agree to make one prepayment based on our estimate of the number of volumes and the subscription cost. A prepaid invoice will reflect a 5% discount on the major handbooks.

Standing Orders:
Approval, and standing order customers receive a 15% discount on orders for all series except Landolt-Börnstein. Prepayment is not required for standing orders.

Change of Address for Continuation Orders:
Publisher must be notified at least eight weeks in advance. Please indicate:
► journal or standing order title
► date on which the change is to take effect
► old address
► new address

For more information, contact: Joe Kozakiewicz (above).