Just Released New Books
July 2010
All Titles

Sorted by author and title within the main subject.
Hebräisches und Aramäisches Handwörterbuch über das Alte Testament

6. Lieferung Schin - Tau - Biblisch-Aramäisch


Features
Rodent Models of Stroke

In view of the numerous failures of clinical trials aimed at improving stroke therapy, the role and potential benefit of experimentally modeling focal cerebral ischemia in rodents has been debated. When methods of systematic review and metaanalysis are applied, however, it turns out that experimental models actually faithfully predicted the negative outcomes of clinical trials. In addition, thrombosis and neuroprotection by hypothermia, first described in animal models, are key examples of treatment modalities that have made it successfully into clinical practice. In Rodent Models of Stroke, an international consortium of authors aims at critically addressing the issues on a very practical level, from choosing the model and outcome measures, designing the experiment, conducting and analyzing it, to reporting it in a scientific publication. The structure and content of the book reflect both the authors’ longstanding expertise in experimental and clinical stroke research and their roles in training.[…]

Features

In view of the numerous failures of clinical trials aimed at improving stroke therapy, the role and potential benefit of experimentally modeling focal cerebral ischemia in rodents has been debated. When methods of systematic review and metaanalysis are applied, however, it turns out that experimental models actually faithfully predicted the negative outcomes of clinical trials. In addition, thrombolysis and […]

Contents

From Bedside to Bench: How Clinical Reality Should Instruct Stroke Modeling. - How to Avoid Bumping into the Translational Roadblock. - Modeling Focal Cerebral Ischemia in Rodents: Introduction and Overview. - Focal Cerebral Ischemia in the Mouse and Rat Using the Intraluminal Suture Filament Model. - Focal Ischemia Models: Middle Cerebral Artery Occlusion Induced by Electrocoagulation, Occluding Devices, and Endothelin-1. - Rodent Models of Thromboembolic Stroke. - Photochemical and Endothelin Models of Focal Brain Ischemia. - Housing in an Enriched Environment: A Tool to Study Functional[…]

Fields of interest

Neurosciences; Animal Models

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available


94,95 €


Protein Kinase C in Cancer Signaling and Therapy

Protein kinase C (PKC), a family of serine-threonine kinases, rocketed to the forefront of the cancer research field in the early 1980’s with its identification as an effector of phorbol esters, natural products with tumor promoting activity. Phorbol esters had long been of interest to the cancer research field due to early studies in the mouse skin carcinogenesis model, which showed that prolonged topical application of phorbol esters promoted the formation of skin tumors on mice previously treated with mutagenic agents. Research in the last years has established key roles for PKC isoforms in the control of cell proliferation, migration, adhesion, and malignant transformation. In addition, there is a large body of evidence linking PKC to invasion and cancer cell metastasis. Moreover, it is now well established that the expression of PKC isoforms is altered in various types of cancers. More importantly, small molecule inhibitors have been developed with significant anti-cancer activity. The[…] Features

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Contents

Protein Kinase C in Cancer Signaling and Therapy. - Introduction and Historical Perspective. - Regulation of conventional and novel protein kinase C isoforms by phosphorylation and lipids. - Phorbol esters and diacylglycerol: the PKC activators. - Diacylglycerol signaling: the Cl domain, generation of DAG and termination of signals. - Regulation of PKC by protein-protein interactions in cancer. - Introduction: PKC isoforms in the control of cell function. - Regulation and function of protein kinase D signaling. - PKC and control of the cell cycle. - PKC and the control of apoptosis. - Atypical. […]

Fields of interest

Cancer Research; Pharmacology / Toxicology

Target groups

Research

Type of publication

Contributed volume

Available

2010. XV, 494 p. 52 illus., 26 in color. (Current Cancer Research) Hardcover

149,95 €


Proteins

Membrane Binding and Pore Formation

There are currently only two structures of pores available, of β-toxin from Staphylococcus aureus and hemolysin E from Escherichia coli. So what we know about these proteins was obtained over many years of intense experimentation. We have nevertheless, in the last couple of years, witnessed a significant rise in structural information on the soluble forms of pore-forming proteins. Surprisingly, many unexpected similarities with other proteins were noted, despite extremely low or insignificant sequence similarity. It appears that lipid membrane binding and formation of transmembrane channels is achieved in many cases by a limited repertoire of structures. This book describes how several of the important pore forming toxin families achieve membrane binding and which structural elements are used for formation of transmembrane pores. Our contributors have thus provided the means for a comparative analysis of several unrelated families.

Features

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Contents

Introduction. - Energetics of Peptide and Protein Binding to Lipid Membranes. - Membrane Association and Pore Formation by Alphahelical Peptides. - Role of Membrane Lipids for the Activity of Pore Forming Peptides and Proteins. - Cholesterol-Dependent Cytolysis. - Lastipor sulphureus Lectin and Aerolysin Protein Family. - Interfa cial Interactions of Pore-Forming Colicins. - Permeabilization of the Outer Mitochondrial Membrane by Bc12 Proteins. - Molecular Mechanism of Sphingomyelin-Specific Membrane Binding and Pore Formation by Actinoporins. - Hemolysin E (HlyE, ClyA, ShcA) and Related[…]

Fields of interest

Biomedicine (general); Molecular Medicine

Target groups

Research

Type of publication

Contributed volume

Available


99,95 €

ISBN 978-1-4419-6326-0
Today we witness an eventful time in which the powerful new forces of genomics, information technology and economics are rapidly changing the science and art of medicine. This will require more specialization than ever before. However, there is also an increasing demand for an integrated approach, which is provided by the discipline of Clinical Pharmacology (CP). CP pursues a scientific goal by studying drug action in patients and volunteers, a clinical goal by administering appropriate drug therapy and a regulatory goal by assessing the risk/benefit ratio of drug candidates in drug development and reimbursement. This introduction to current topics of CP covers traditional topics of clinical drug research and trial methodology but also provides insight in current topics like genomics, imaging technology and issues in drug reimbursement. A number of concrete case studies in clinical drug research and development help to give a better understanding of the general principles of CP.

Features
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**Chemo Fog**

*Cancer Chemotherapy-Related Cognitive Impairment*

The editors of this book are professors who are engaged in research on areas that compromise the total healing of body and mind in this patient population. One particular component of the need for survivor care is the memory problems and cognitive deficits experienced by some. The condition has been given a name—actually many names, such as chemo fog, chemo brain, and others. These names reflect the belief that the cause of the problem is the chemotherapy that they received as part of their treatment. In some cases the chemo fog/chemo brain is transient while in others it is of longer duration. Little is known about this problem and that fact peaked our interest and motivated this book. Therefore this book is devoted to one aspect of survivor care: chemo fog/chemo brain.

**Features**
The editors of this book are professors who are engaged in research on areas that compromise the total healing of body and mind in this patient population. One particular component of the need for survivor care is the memory problems and cognitive deficits experienced by some. The condition has been given a name—actually many names, such as chemo fog, chemo brain, and others. These names reflect the belief [...]

**Contents**
- Short Introduction and History
- Patient’s Perspective
- Oncology Nurse’s Perspective
- Oncology Pharmacist’s Perspective
- The Impact of Chemo Brain on the Patient with a High Grade Glioma
- Neurocognitive Effects of Childhood Cancer Treatment
- The Economic Burden
- Designing Conceptual Model-Based Research in Chemotherapy-Related Changes in Cognitive Function
- Neuropsychologic Testing for Chemotherapy-Related Cognitive Impairment
- Imaging as a Means of Studying Chemotherapy-Related Cognitive Impairment
- Chemotherapy Associated Central Nervous System Damage
- Is Systemic Anti-Cancer [...]

**Fields of interest**
- Biomedicine (general)
- Cancer Research

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**Memory T Cells**

Immunological memory has fascinated microbiologists and immunologists for decades as one of the new frontiers to conquer to better understand the response to pathogens, cancer and vaccination. Over the past decade, attention has turned to the intrinsic properties of the memory T cells themselves, as it has become clear that the eradication of both infected cells and tumors requires T cells. This book is an attempt to capture the wave of discoveries associated with these recent studies. Its chapters represent a wide collection of topics related to memory T cells by laboratories that have invested their skills and knowledge to understand the biology and the principles upon which memory T cells are generated, maintained and expanded upon re-encounter with antigen. Ultimately, these studies are all aimed at a better understanding of the function of memory T cells in protection against disease.

**Features**
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**Contents**
- Memory Th1/Th2 Cell Generation Controlled by Schnurri-2
- Transcriptional Regulator ion during CD8 T Cell Immune Response
- The Role of Interleukin-1β in Memory CD8 Cell Differentiation
- The Role of Inflammation in the Generation and Maintenance of Memory T Cells
- The Role of OX40 (CD134) in T Cell Memory Generation
- The Role of Precursor Frequency in the Differentiation of Memory T Cells: Memory by Numbers
- CD8 T Cell Memory Differentiation during Acute and Chronic Viral Infections
- Longevity of T Cell Memory following Acute Viral Infection
- Principles of Memory CDB T Cells [...]

**Fields of interest**
- Molecular Medicine
- Neurochemistry

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**Encyclopedia of Psychopharmacology**

Psychopharmacology is the study of the effects of psychoactive drugs on the functioning of the central nervous system at all levels of analysis, thus embracing cognition, behaviour, psychological states, neurophysiology, neurochemistry, gene expression and molecular biology. It includes, as an integral part of its domain, the interaction of environmental and genetic factors with psychoactive drug action, their medicinal and social uses, and their abuse. The Encyclopedia of Psychopharmacology provides detailed information on psychopharmacology and its subdisciplines, such as clinical psychopharmacology, molecular neuropsychopharmacology, behavioural pharmacology in laboratory animals, preclinical psychopharmacology, human experimental psychopharmacology. The wide-ranging entries in the Encyclopedia of Psychopharmacology are written by leading experts. They will provide basic and clinical scientists in academia as well as industry with valuable information about the field of psychopharmacology. Also [...]

**Features**
- Psychopharmacology is the study of the effects of psychoactive drugs on the functioning of the central nervous system at all levels of analysis, thus embracing cognition, behaviour, psychological states, neurophysiology, neurochemistry, gene expression and molecular biology. It includes, as an integral part of its domain, the interaction of environmental and genetic factors with psychoactive drug action. [...]
New Drug Development: Second Edition provides an overview of the design concepts and statistical practices involved in therapeutic drug development. This wide spectrum of activities begins with identifying a potentially useful drug candidate that can perhaps be used in the treatment or prevention of a condition of clinical concern, and ends with marketing approval being granted by one or more regulatory agencies. In between, it includes drug molecule optimization, nonclinical and clinical evaluations of the drug's safety and efficacy profiles, and manufacturing considerations. The more inclusive term lifecycle drug development can be used to encompass the postmarketing surveillance that is conducted all the time that a drug is on the market and being prescribed to patients with the relevant clinical condition. Information gathered during this time can be used to modify the drug (for example, dose prescribed, formulation, and mode of administration) in terms of its safety and its effectiveness. The [...] Features New Drug Development, 2nd Edition, is a reader-friendly introduction to clinical trials that is written specifically for entry-level professionals in the pharmaceutical, biopharmaceutical, and contract research organization (CRO) industries. It is also excellent reading for seasoned clinical research professionals who wish to refresh their knowledge in areas outside their immediate fields of expertise, and [...] Contents Preface. - Foreword. - New Drug Development. - The Regulatory Environment. - Drug Discovery. - Nonclinical Research. - Designing Clinical Trials. - Conducting Clinical Trials I: Experimental Methodology. - Conducting Clinical Trials II: Operational Execution. - Statistical Analysis. - Statistical Significance. - Clinical Significance. - Sample-Size Estimation. - General Safety Assessments. - Efficacy Assessment. - Cardiac And Cardiovascular Safety Assessments. - Manufacturing Small-Molecule Drugs And Biologicals. - Postmarketing Surveillance. - Main Themes And Concluding Comments. - Reference List. - Index Fields of interest Pharmaceutical Sciences / Technology Target groups Research Type of publication Monograph Available 2010 IX, 190 p. Hardcover 139,95 € ISBN 978-1-4419-6417-5 Detection of Bacteria, Viruses, Parasites and Fungi Bioterrorism Prevention When somebody mentions terrorism attack the attention is immediately concentrated on military type attacks such as bombs, kamikazes or similar kinds and nobody thinks about the possible existence of more sophisticated means such as the use of toxic gas or agents which may be transmitted by contaminated food, water and air and may interest a large number of people. This book intends to put the attention on this problem and to demonstrate how easy it is in particular to contaminate food. Four different sectors were analysed: bacteria, virus, parasites and pollutants and for each the possible agents and the facilities for creating diseases in many people through contaminated food are described. Also some species of common bacteria like Escherichia coli or Enterococci, present in many foods, may produce toxins, causing diarrhoea in a large number of persons as happened in China in 1991 when 224,000 persons were affected by contaminated ice cream. On the other hand parasites can also be transmitted by [...] Features When somebody mentions terrorism attack the attention is immediately concentrated on military type attacks such as bombs, kamikazes or similar kinds and nobody thinks about the possible existence of more sophisticated means such as the use of toxic gas or agents which may be transmitted by contaminated food, water and air and may interest a large number of people. This book intends to put the attention on [...] Contents Bioterrorism Prevention. - Bioterrorism: a Potential Weapon for Terrorist Attacks through Food and Water Contamination. - Evolution of our Understanding of the Use of Chemical and Bacteriological Weapons. - Detection and Quantification of Bacteria and Fungi Using Solid-Phase Cytometry. - Vulnerability Assessment and Mapping of Aksouq Groundwater Body, Armenia. - Bacteria Diagnostic Tests. - Methods for Detection of Shiga-Toxin Producing Escherichia Coli (Stec). - Genetic Diversity of Enterococci in Bryndza Cheese. - Salmonella Infections. - Molecular Diagnostics of Staphylococcus Aureus. - Molecular [...] Fields of interest Medical Microbiology; Virology; Parasitology; Laboratory Medicine; Cancer Research Target groups Research Type of publication Proceedings Available 2010. VII, 510 p. (NATO Science for Peace and Security Series A: Chemistry and Biology) Hardcover 199,95 € ISBN 978-90-481-8542-9 Endotoxins: Structure, Function and Recognition Endotoxins are potentially toxic compounds produced by Gram-negative bacteria including some pathogens. Unlike exotoxins, which are secreted in soluble form by live bacteria, endotoxins are comprised of structural components of bacteria. Endotoxins can cause a whole-body inflammatory state, sepsis, leading to low blood pressure, multiple organ dysfunction syndrome and death. This book brings together contributions from researchers in the forefront of these subjects. It is divided into two sections. The first deals with how endotoxins are synthesized and end up on the bacterial surface. The second discusses how endotoxins activate TLR4 and, in turn, how TLR4 generates the molecular signals leading to infectious and inflammatory diseases. The way endotoxins interact with the host cells is fundamental to understanding the mechanism of sepsis, and recent research on these aspects of endotoxins has served to illuminate previously undescribed functions of the innate immune system. This volume presents [...] Features Endotoxins are potentially toxic compounds produced by Gram-negative bacteria including some pathogens. Unlike exotoxins, which are secreted in soluble form by live bacteria, endotoxins are comprised of structural components of bacteria. Endotoxins can cause a whole-body inflammatory state, sepsis, leading to low blood pressure, multiple organ dysfunction syndrome and death. This book brings together [...] Contents Contributors. - Part I Structure and Properties of Endotoxins. - 1 Endotoxins: Lipopolysaccharides of Gram-negative Bacteria. - 2 Purification and Characterization of Lipopolysaccharides. - 3 Endotoxins: Relationship between structure, function, and activity. - 4 The Diversity of the core oligosaccharide in lipopolysaccharides. - 5 Salmonella-Regulated Lipopolysaccharide Modifications. - 6 The Variation of O antigens in Gram-negative bacteria. - 7 Regulators of TLR4 signaling by endotoxins. - 8 Membrane partitioning: is location everything when it comes to endotoxin recognition?. - Part II [...] Fields of interest Medical Microbiology; Infectious Diseases; Pharmacology / Toxicology; Immunology Target groups Research Type of publication Contributed volume Available 2010. XVI, 415 p. (Subcellular Biochemistry, Vol. 53) Hardcover 169,95 € ISBN 978-90-481-9077-5
Recent Progress in Coupled Cluster Methods
Theory and Applications

The coupled cluster method represents one of the most successful and often used approaches to a quantum-theoretical determination of atomic, molecular, and solid state electronic structure and properties. These methods are relevant to a broad spectrum of disciplines ranging from astrophysics to pharmacology. "Recent Progress in Coupled Cluster Methods" provides an excellent overview of status quo and future trends in coupled cluster methodology which will enable both researchers and students to become acquainted with recent progress in this area of continuing intense activity. Each of the 22 chapters has been prepared by eminent practitioners in this field of endeavor and emphasizes the fundamental aspects as well as related methodology. This book provides a useful source of reference for both researchers in chemistry, molecular physics and molecular biology and practitioners working in these fields. It is also recommendable to people using related software packages.

Features
The coupled cluster method represents one of the most successful and often used approaches to a quantum-theoretical determination of atomic, molecular, and solid state electronic structure and properties. These methods are relevant to a broad spectrum of disciplines ranging from astrophysics to pharmacology. The knowledge of various chemical and physical properties (such as dipole or quadrupole) is essential for the applications of these methods. The book provides an overview of the status quo and future trends in coupled cluster methodology, which will enable both researchers and students to become acquainted with recent progress in this area of continuing intense activity. Each of the 22 chapters has been prepared by eminent practitioners in this field of endeavor and emphasizes the fundamental aspects as well as related methodology. This book provides a useful source of reference for both researchers in chemistry, molecular physics and molecular biology and practitioners working in these fields. It is also recommendable to people using related software packages.

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Molecular Catalysis of Rare-Earth Elements

Alexander L. Reznichenko and Kai C. Hultzsch: Catalytic Bond Metathesis: Zhihao Zhang, Dongmei Cui, Baoli Wang, Bo Liu, Yi Yang: Polymerization of L,3-Conjugated Diienes with Lanthanide Precursors Frank T. Edelmann: Homogeneous Catalysis using Lanthanide Amidinates and Guanidinates Tianshu Li, Jelena Jenter, Peter W. Roeksy: Rare Earth Metal Post-metallocene Catalysts with Chelating Amido Ligands

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Fields of interest
Inorganic Chemistry; Catalysis; Organometallic Chemistry

Target groups
Research

Type of publication
Reviews

Available
2010. XII, 250 p. (Structure and Bonding, Vol. 137) Hardcover
189,95 €
ISBN 978-3-642-12810-3

Environment-Friendly Antiviral Agents for Plants

Plant virus disease is a worldwide threat to agriculture. Environment-Friendly Antiviral Agents for Plants systematically describes the basic theory, new ideas, and new methods to discover novel antiviral agents through research on plant immune activation. The cutting-edge research methodology, technology and progress on novel antiviral agent innovation are systematically described. With abundant illustrations and figures, the book is intended for researchers and practitioners in the fields of pesticide science, plant protection, organic chemistry, fine chemicals, applied chemistry, environment chemistry and agriculture science. Dr. Baolan Song and Dr. Song Yang are professors at the Center for R&D of Fine Chemicals, Guizhou University, China; Mr. Linhong Jin and Dr. Pinaki S. Bhadury are associate professors there.

Features
Plant virus disease is a worldwide threat to agriculture. Environment-Friendly Antiviral Agents for Plants systematically describes the basic theory, new ideas, and new methods to discover novel antiviral agents through research on plant immune activation. The cutting-edge research methodology, technology and progress on novel antiviral agent innovation are systematically described. With abundant [...]
**C-X Bond Formation**

Contents: Kilian Muñiz: Transition Metal Catalyzed Electrophilic Halogenation of C-H bonds in alpha-Position to Carbonyl Groups; Arkadi Vigalok * and Ariela W Kaspi: Late Transition Metal-Mediated Formation of Carbon-Halogen Bonds; Paul Bichler and Jennifer A. Love*: Organometallic Approaches to Carbon-Sulfur Bond Formation; David S. Glueck: Recent Advances in Metal-Catalyzed C-P Bond Formation; Andrei N. Vedernikov: C-O Reductive Elimination from High Valent Pt and Pd Centers; Lukas Hintermann: Recent Developments in Metal-Catalyzed Additions of Oxygen Nucleophiles to Alkenes and Alkynes; Moris S. Eisen: Catalytic C-N, C-O and C-S bond formation promoted by organoactinide complexes.

Features
Kilian Muñiz: Transition Metal Catalyzed Electrophilic Halogenation of C-H bonds in alpha-Position to Carbonyl Groups; Arkadi Vigalok and Ariela W Kaspi: Late Transition Metal-Mediated Formation of Carbon-Halogen Bonds; Paul Bichler and Jennifer A. Love: Organometallic Approaches to Carbon-Sulfur Bond Formation; David S. Glueck: Recent Advances in Metal-Catalyzed C-P Bond Formation; Andrei N. Vedernikov: C-O [-].

Contents
Kilian Muñiz: Transition Metal Catalyzed Electrophilic Halogenation of C-H bonds in alpha-Position to Carbonyl Groups; Arkadi Vigalok and Ariela W Kaspi: Late Transition Metal-Mediated Formation of Carbon-Halogen Bonds; Paul Bichler and Jennifer A. Love: Organometallic Approaches to Carbon-Sulfur Bond Formation; David S. Glueck: Recent Advances in Metal-Catalyzed C-P Bond Formation; Andrei N. Vedernikov: C-O [-].

Fields of interest
Organometallic Chemistry

Target groups
Research

Type of publication
Reviews

Available
189,95 €
ISBN 978-3-642-12072-5

**Quality Assurance in Analytical Chemistry**

Training and Teaching

This new edition of a successful textbook has been completely revised and enlarged. In particular the chapters on measurement uncertainty, calibration and validation are practically all new. The authors provide an in-depth but easy to understand coverage of quality assurance for chemical measurements. This includes both internal as well as external quality assurance, necessary statistics as well as total quality management. All this is presented with more than 800 commented slides, which are also provided as downloadable Extra Material. The book will serve as an advanced textbook for analytical chemistry students and professionals in industry and service labs and as a reference text and source of course materials for lecturers.

Features
This new edition of a successful textbook has been completely revised and enlarged. In particular the chapters on measurement uncertainty, calibration and validation are practically all new. The authors provide an in-depth but easy to understand coverage of quality assurance for chemical measurements. This includes both internal as well as external quality assurance, necessary statistics as well as total quality assurance for chemical measurements. This includes both internal as well as external quality assurance, necessary statistics as well as total.

Contents

Fields of interest
Analytical Chemistry; Monitoring / Environmental Analysis; Pharmaceutical Sciences / Technology; Laboratory Medicine; Food Science

Target groups
Professional/practitioner

Type of publication
Graduate/advanced undergraduate textbook

Available
2010, XVIII, 331 p. Hardcover
69,95 €
ISBN 978-3-642-13608-5

**Computer Science**

M. Abdalla, École Normale Supérieure, Paris, France; P.S.L.M. Barreto, University of Sao Paulo, Brazil (Eds.)

**Progress in Cryptology - LATINCRYPT 2010**

First International Conference on Cryptology and Information Security in Latin America, Puebla, Mexico, August 8-11, 2010, Proceedings

This book constitutes the proceedings of the First International Conference on Cryptology and Information Security in Latin America, LATINCRYPT 2010, held in Puebla, Mexico, on August 8-11, 2010. The 19 papers presented together with four invited talks were carefully reviewed and selected from 62 submissions. The topics covered are encryption, elliptic curves, implementation of pairings, implementation of cryptographic algorithms, cryptographic protocols and foundations, cryptanalysis of symmetric primitives, post-quantum cryptography, and side-channel attacks.

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Fields of interest
Data Encryption

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
2010, XII, 323 p. (Security and Cryptology, Vol. 6212) Softcover
54,00 €
ISBN 978-3-642-14711-1
Game of Life Cellular Automata

In the late 1960s British mathematician John Conway invented a virtual mathematical machine that operates on a two-dimensional array of square cell. Each cell takes two states, live and dead. The cells’ states are updated simultaneously and in discrete time. A dead cell comes to life if it has exactly three live neighbours. A live cell remains alive if two or three of its neighbours are alive, otherwise the cell dies. Conway’s Game of Life became the most programmed solitary game and the most known cellular automaton. The book brings together results of forty years of study into computational, mathematical, physical and engineering aspects of The Game of Life cellular automata. Selected topics include phenomena and statistical behaviour; space-time dynamics on Penrose tiling and hyperbolic spaces; generation of music; algebraic properties; modelling of financial markets; semi-quantum extensions; predicting emergence; dual-graph based analysis; fuzzy, limit behaviour and threshold scaling; [...] Features


Privacy Enhancing Technologies

This book constitutes the refereed proceedings of the 10th International Symposium, PETs 2010, held in Berlin, Germany in July 2010. The 16 revised full papers were carefully reviewed and selected from 57 submissions for inclusion in the book. The papers handle topics such as access control, privacy of web based search, anonymous webs of trust, security attacks, active timing attacks in lo-latency anonymous communication, network topology and web search with malicious adversaries.

Features

1. Police, public and private security.- 2. Governmental and other organisations.- 3. Businesses, banks, ...
This book is devoted to one of the essential functions of modern telecommunications systems: channel coding or error correction coding. Its main topic is iteratively decoded algebraic codes, convolutional codes and concatenated codes. It also presents digital modulation with which channel coding is closely associated to make up the heart of the physical layer of telecommunications systems. The most important theoretical aspects are given, and the building of codes is detailed and justified. Decoding algorithms are developed and, whenever possible, accompanied by simulation results characteristic of their correcting power. The authors are researchers and lecturers recognised for their expertise in the field of encoding and decoding algorithms and associated circuits. Codes and Turbo Codes is intended both as a means for discovering the domain, a valuable source of information about the many techniques imagined since the mid XXth century, and as a step towards addressing problems not yet entirely solved.

**Features**

This book is devoted to one of the essential functions of modern telecommunications systems: channel coding or error correction coding. At the crossroads of information theory, mathematics and electronics, channel coding has undergone many developments since Claude Shannon’s founding work. From the simple Hamming code (1950) and LDPC codes (1962) to the more recent turbo codes (1993), channel coding has [...]

**Contents**


**Fields of interest**

Coding and Information Theory; Signal, Image and Speech Processing; Information and Communication Circuits; Communications Engineering; Networks

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. Approx. 400 p. (Collection IRIS) Softcover

64.95 €

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This book constitutes the proceedings of the 18th International Conference on Case-Based Reasoning, held in Alessandria, Italy, in July 2010.

**Features**

This book constitutes the proceedings of the 18th International Conference on Case-Based Reasoning, held in Alessandria, Italy, in July 2010.

**Fields of interest**

Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet); Information Storage and Retrieval; Database Management; Computer Communication Networks; Data Mining and Knowledge Discovery

**Target groups**

Research

**Type of publication**

Proceedings

**Available**


70.00 €
ISBN 978-3-642-14273-4

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Coding and Information Theory; Signal, Image and Speech Processing; Information and Communication Circuits; Communications Engineering; Networks

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. Approx. 400 p. (Collection IRIS) Softcover

64.95 €
C. Blum, Universitat Politècnica de Catalunya, Spain; R. Battiti, University of Trento, Italy (Eds.)

Learning and Intelligent Optimization
4th International Conference, LION 4, Venice, Italy, January 2010. Selected Papers

This book constitutes the thoroughly refereed proceedings of the 4th International Conference on Learning and Intelligent Optimization, LION 4, held in Venice, Italy, in January 2010. The 23 regular and 12 short papers were carefully reviewed and selected from 87 submissions. Topics covered include metaheuristics (tabu search, iterated local search, evolutionary algorithms, memetic algorithms, ant colony optimization, particle swarm optimization); hybridizations of metaheuristics with other techniques for optimization; supervised, unsupervised and reinforcement learning applied to heuristic search, reactive search optimization; self-adaptive algorithms; hyperheuristics; algorithms for dynamic, stochastic and multi-objective problems; interfaces between discrete and continuous optimization; experimental analysis and modeling of algorithms; parallelization of optimization algorithms; memory-based optimization; and software engineering of learning and intelligent optimization methods.

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Fields of interest
Algorithm Analysis and Problem Complexity; Computation by Abstract Devices; Artificial Intelligence (incl. Robotics); Computer Communication Networks; Pattern Recognition; Discrete Mathematics in Computer Science

Target groups
Research

Type of publication
Proceedings

Available

54,00 €
ISBN 978-3-642-13799-0

C. Care, University of Warwick, Coventry, UK

Technology for Modelling
Electrical Analogies, Engineering Practice, and the Development of Analogue Computing

Historians have different views on the core identity of analogue computing. Some portray the technology solely as a precursor to digital computing, whereas others stress that analogue applications existed well after 1940. Even within contemporary sources, there is a spectrum of understanding around what constitutes analogue computing. To understand the relationship between analogue and digital computing, and what this means for users today, the history must consider how the technology is used. Technology for Modelling investigates the technologies, the concepts, and the applications of analogue computing. The text asserts that analogue computing must be thought of as not just a computing technology, but also as a modelling technology, demonstrating how the history of analogue computing can be understood in terms of the parallel themes of calculation and modelling. The book also includes a number of detailed case studies of the technology’s use and application. Topics and features: discusses the [...] Features
Historians have different views on the core identity of analogue computing. Some portray the technology solely as a precursor to digital computing, whereas others stress that analogue applications existed well after 1940. Even within contemporary sources, there is a spectrum of understanding around what constitutes analogue computing. To understand the relationship between analogue and digital computing, [...] Contents
History of Computing: Simulation and Modeling

Target groups
Research

Type of publication
Monograph

Available
2010. XVII, 203 p. 64 illus., 32 in color (History of Computing) Hardcover

79,95 €
ISBN 978-1-84882-947-3

M. Castellanos, Hewlett-Packard, Palo Alto, CA, USA; U. Dayal, Hewlett-Packard, Palo Alto, CA, USA; R. Miller, University of Toronto, ON, Canada (Eds.)

Enabling Real-Time Business Intelligence
Third International Workshop, BIRTE 2009, Held at the 35th International Conference on Very Large Databases, VLDB 2009, Lyon, France, August 24, 2009. Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the Third International Workshop on Business Intelligence for the Real-Time Enterprise, BIRTE 2009, held in Lyon, France, in August 2009, in conjunction with VLDB 2009, the International Conference on Very Large Data Bases. The volume contains the carefully reviewed selected papers from the workshop, including one of the two keynotes, the six research, two industrial, and one experimental paper, and also the basic statements from the panel discussion on “Merging OLTP and OLAP”. The topical focus is on models and concepts, architectures, case-studies, and applications of technologies for real-time enterprise business intelligence.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the Third International Workshop on Business Intelligence for the Real-Time Enterprise, BIRTE 2009, held in Lyon, France, in August 2009, in conjunction with VLDB 2009, the International Conference on Very Large Data Bases. The volume contains the carefully reviewed selected papers from the workshop, including one of the two keynotes, the six research, two industrial, and one experimental paper, and also the basic statements from the panel discussion on “Merging OLTP and OLAP”. The topical focus is on models and concepts, architectures, case-studies, and applications of technologies for real-time enterprise business intelligence.

Fields of interest
Information Storage and Retrieval; Business Information Systems; Computer Appl. in Administrative Data Processing; Database Management

Target groups
Research

Type of publication
Proceedings

Available

46,00 €
ISBN 978-3-642-14558-2
Algorithmic Aspects in Information and Management

This volume constitutes the proceedings of the International Conference on Algorithmic Aspects in Information and Management, AAIM 2010, held in Weihai, China, in July 2010.

Features
This volume constitutes the proceedings of the International Conference on Algorithmic Aspects in Information and Management, AAIM 2010, held in Weihai, China, in July 2010.

Fields of interest
Algorithm Analysis and Problem Complexity; Discrete Mathematics in Computer Science; Management of Computing and Information Systems; Data Structures; Artificial Intelligence (incl. Robotics); Mathematics of Computing

Target groups
Research

Type of publication
Proceedings

Available
54.00 € ISBN 978-3-642-14354-0

Trusted Systems

This book constitutes the proceedings of the International Conference on Trusted Systems, held in Beijing, China, in December 2009.

Features
This book constitutes the proceedings of the International Conference on Trusted Systems, held in Beijing, China, in December 2009.

Fields of interest
Computer Communication Networks; Data Encryption; Management of Computing and Information Systems; Algorithm Analysis and Problem Complexity; Computers and Society; Systems and Data Security

Target groups
Research

Type of publication
Proceedings

Available
46.00 € ISBN 978-3-642-14596-4

Artificial Evolution

This book constitutes the proceedings of the 9th International Conference on Artificial Evolution, held in Strasbourg, France, in October 2009.

Features
This book constitutes the proceedings of the 9th International Conference on Artificial Evolution, held in Strasbourg, France, in October 2009.

Fields of interest
Artificial Intelligence (incl. Robotics); Computation by Abstract Devices; Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet); Computer Appl. in Administrative Data Processing; Computer Communication Networks

Target groups
Research

Type of publication
Proceedings

Available
46.00 € ISBN 978-3-642-14155-3
Conceptual Structures: From Information to Intelligence

This book constitutes the proceedings of the 18th International Conference on Conceptual Structures, ICCS 2010, held in Kuching, Sarawak, Malaysia, in July 2010. The 12 full papers and 6 posters presented were carefully reviewed and selected from 36 submissions. The volume also contains 5 invited talks. Originally centered around research on knowledge representation and reasoning with conceptual graphs, over the years ICCS has broadened its scope to include innovations from a wider range of theories and related practices, among them other formalisms like RDF or existential graphs, formal concept analysis, semantic Web technologies, ontologies, concept mapping and more.

Features
This book constitutes the proceedings of the 18th International Conference on Conceptual Structures, ICCS 2010, held in Kuching, Sarawak, Malaysia, in July 2010. The 12 full papers and 6 posters presented were carefully reviewed and selected from 36 submissions. The volume also contains 5 invited talks. Originally centered around research on knowledge representation and reasoning with conceptual graphs, over [...] 

Fields of interest
Artificial Intelligence (incl. Robotics); Database Management; Data Mining and Knowledge Discovery; Mathematical Logic and Formal Languages; Pattern Recognition; Data Storage Representation

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
46.00 €
ISBN 978-3-642-13839-3

Inductive Logic Programming
19th International Conference, ILP 2009, Leuven, Belgium, July 2-4, 2010, Revised Papers

This book constitutes the proceedings of the 19th International Conference on Inductive Logic Programming, held in Leuven, Belgium, in July 2009.

Features
This book constitutes the proceedings of the 19th International Conference on Inductive Logic Programming, held in Leuven, Belgium, in July 2009.

Fields of interest
Mathematical Logic and Formal Languages; Database Management; Information Storage and Retrieval; Algorithm Analysis and Problem Complexity; Data Mining and Knowledge Discovery; Logics and Meanings of Programs

Target groups
Research

Type of publication
Proceedings

Available
46.00 €
ISBN 978-3-642-14196-6

Grids, P2P and Services Computing

Grids, P2P and Services Computing, the 12th volume of the CoreGRID series, is based on the CoreGrid ERCIM Working Group Workshop on Grids, P2P and Service Computing in Conjunction with EuroPar 2009. The workshop will take place August 24th, 2009 in Delft, The Netherlands. Grids, P2P and Services Computing, an edited volume contributed by well-established researchers worldwide, will focus on solving research challenges for Grid and P2P technologies. Topics of interest include: Service Level Agreement, Data & Knowledge Management, Scheduling, Trust and Security, Network Monitoring and more. Grids are a crucial enabling technology for scientific and industrial development. This book also includes new challenges related to service-oriented infrastructures. Grids, P2P and Services Computing is designed for a professional audience composed of researchers and practitioners within the Grid community industry. This volume is also suitable for advanced-level students in computer science.

Features
Grids, P2P and Services Computing, the 12th volume of the CoreGRID series, is based on the CoreGrid ERCIM Working Group Workshop on Grids, P2P and Service Computing in Conjunction with EuroPar 2009. The workshop took place August 24th, 2009 in Delft, The Netherlands. Grids, P2P and Services Computing, an edited volume contributed by well-established researchers [...] 

Contents

Fields of interest
Computer Communication Networks; Database Management; Information Systems and Communication Service; Data Structures; Processor Architectures

Target groups
Research

Type of publication
Proceedings

Available
2010. XIV, 202 p. Hardcover
119.95 €
ISBN 978-1-4419-6793-0
Multi-Modal User Interactions in Controlled Environments

Multi-Modal User Interactions in Controlled Environments investigates the capture and analysis of user’s multimodal behavior (mainly eye gaze, eye fixation, eye blink and body movements) within a real controlled environment (controlled-supermarket, personal environment) in order to adapt the response of the computer/environment to the user. Such data is captured using non-intrusive sensors (for example, cameras in the stands of a supermarket) installed in the environment. This multimodal video based behavioral data will be analyzed to infer user intentions while assisting users in their day-to-day tasks by adapting the system’s response to their requirements seamlessly. This book also focuses on the presentation of information to the user. Multi-Modal User Interactions in Controlled Environments is designed for professionals in industry, including professionals in the domains of security and interactive web television. This book is also suitable for graduate-level students in computer science and [...]
Controlled Natural Language

Workshop on Controlled Natural Language, CNL 2009, Maretimo Island, Italy, June 8-10, 2009, Revised Papers

This book constitutes the thoroughly refereed post-workshop proceedings of the Workshop on Controlled Natural Language, CNL 2009, held in Maretimo Island, Italy, in June 2009. The 16 revised full papers presented together with 1 invited lecture were carefully reviewed and selected during two rounds of reviewing and improvement from 31 initial submissions. The papers are roughly divided into the two groups language aspects and tools and applications. Note that some papers fall actually into both groups: using a controlled natural language in an application domain often requires domain-specific language features.

Features
This book constitutes the thoroughly refereed post-workshop proceedings of the Workshop on Controlled Natural Language, CNL 2009, held in Maretimo Island, Italy, in June 2009. The 16 revised full papers presented together with 1 invited lecture were carefully reviewed and selected during two rounds of reviewing and improvement from 31 initial submissions. The papers are roughly divided into the two groups language aspects and tools and applications. Note that some papers fall actually into both groups: using a controlled natural language in an application domain often requires domain-specific language features.

Fields of interest
Artificial Intelligence (incl. Robotics); Information Storage and Retrieval; Information Systems Applications (incl.Internet); Mathematical Logic and Formal Languages; Database Management; Data Mining and Knowledge Discovery

Target groups
Research

Type of publication
Proceedings

Available

54,00 €
ISBN 978-3-642-14417-2

Developments in Language Theory

14th International Conference, DLT 2010, London, ON, Canada, August 17-20, 2010, Proceedings

This book constitutes the proceedings of the 14th International Conference on Developments in Language Theory, DLT 2010, held in London, Ontario, Canada, in August 2010. The 32 regular papers presented were carefully reviewed and selected from numerous submissions. The volume also contains the papers or abstracts of 6 invited speakers, as well as a 2-page abstract for each of the 6 poster papers. The topics addressed are formal languages, automata theory, computability, complexity, logic, petri nets and related areas.

Features
This book constitutes the proceedings of the 14th International Conference on Developments in Language Theory, DLT 2010, held in London, Ontario, Canada, in August 2010. The 32 regular papers presented were carefully reviewed and selected from numerous submissions. The volume also contains the papers or abstracts of 6 invited speakers, as well as a 2-page abstract for each of the 6 poster papers. The topics addressed are formal languages, automata theory, computability, complexity, logic, petri nets and related areas.

Fields of interest
Algorithm Analysis and Problem Complexity; Computation by Abstract Devices; Mathematical Logic and Formal Languages; Discrete Mathematics in Computer Science; Logics and Meanings of Programs; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Proceedings

Available

62,00 €
ISBN 978-3-642-14454-7

Web Dynpro ABAP for Practitioners

Web Dynpro ABAP, a NetWeaver web application user interface tool of SAP enables web programming connected to SAP Systems. The main focus of the authors was to create a book based on practical experience. Each chapter includes examples which lead through the content step-by-step and enable the reader to gradually emerge in the topic of the Web Dynpro ABAP process. The authors explain in particular how to design a Web Dynpro component, the data binding and interface methods, and the view controller methods. They also describe the other SAP NetWeaver Elements (ABAP Dictionary, Authorization) and the integration of the Web Dynpro Application into the SAP NetWeaver Portal.

Features
Web Dynpro ABAP, a NetWeaver web application user interface tool of SAP enables web programming connected to SAP Systems. The main focus of the authors was to create a book based on practical experience. Each chapter includes examples which lead through the content step-by-step and enable the reader to gradually emerge in the topic of the Web Dynpro ABAP process. The authors explain in particular how to design a Web Dynpro component, the data binding and interface methods, and the view controller methods. They also describe the other SAP NetWeaver Elements (ABAP Dictionary, Authorization) and the integration of the Web Dynpro Application into the SAP NetWeaver Portal.

Contents

Fields of interest
Software Engineering / Programming and Operating Systems; Information Systems and Communication Service; Operating Systems

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XII, 370 p. Hardcover

54,95 €
ISBN 978-3-642-11384-0
Algorithmic Number Theory

This book constitutes the refereed proceedings of the 9th International Algorithmic Number Theory Symposium, ANTS 2010, held in Nancy, France, in July 2010. The 25 revised full papers presented together with 5 invited papers were carefully reviewed and selected for inclusion in the book. The papers are devoted to algorithmic aspects of number theory, including elementary number theory, algebraic number theory, analytic number theory, geometry of numbers, algebraic geometry, finite fields, and cryptography.

Features
This book constitutes the refereed proceedings of the 9th International Algorithmic Number Theory Symposium, ANTS 2010, held in Nancy, France, in July 2010. The 25 revised full papers presented together with 5 invited papers were carefully reviewed and selected for inclusion in the book. The papers are devoted to algorithmic aspects of number theory, including elementary number theory, algebraic number theory, [...]
**802.11 Wireless Networks**

Security and Analysis

Wireless communication has the advantage of mobility and obviates the need for cabling, but is inherently less secure and is subject to the heavy regulation of the radio frequency spectrum. Nevertheless, the allocation of unlicensed parts of the spectrum has facilitated the growth in wireless local area networks (WLANs). WLAN technology is progressing at a rapid pace, but the most widely accepted WLAN standard is the IEEE 802.11. This unique and highly practical text introduces the principles of WLANs based on the IEEE 802.11 standards, demonstrating how to configure equipment in order to implement various network solutions. Readers will gain understanding of the security implications of wireless networks and learn how vulnerabilities can be mitigated. Additionally, the book examines the underlying 802.11 protocols and explains how to build mathematical models in order to analyze performance in a WLAN environment. Topics and Features: presents a practical approach supported by the extensive...

**Features**

Wireless communication has the advantage of mobility and obviates the need for cabling, but is inherently less secure and is subject to the heavy regulation of the radio frequency spectrum. Nevertheless, the allocation of unlicensed parts of the spectrum has facilitated the growth in wireless local area networks (WLANs). WLAN technology is progressing at a rapid pace, but the most widely accepted WLAN standard is the IEEE 802.11. This unique and highly practical text introduces the principles of WLANs based on the IEEE 802.11 standards, demonstrating how to configure equipment in order to implement various network solutions. Readers will gain understanding of the security implications of wireless networks and learn how vulnerabilities can be mitigated. Additionally, the book examines the underlying 802.11 protocols and explains how to build mathematical models in order to analyze performance in a WLAN environment.

**Contents**


**Fields of interest**

Computer Communication Networks

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2010. XXI, 212 p. (Computer Communications and Networks) Hardcover

79,95 €

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**Methods and Tools of Parallel Programming Multicomputers**

Second Russia-Taiwan Symposium, MTTP 2010, Vladivostok, Russia, May 16-19, 2010, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the Second Russia-Taiwan Symposium on Methods and Tools of Parallel Programming, MTTP 2010, held in Vladivostok, Russia in May 2010. The 33 revised full papers were carefully selected from a large number of submissions and cover the many dimensions of methods and tools of parallel programming, algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental approaches as well as commercial components and systems.

**Features**

This book constitutes the thoroughly refereed post-conference proceedings of the Second Russia-Taiwan Symposium on Methods and Tools of Parallel Programming, MTTP 2010, held in Vladivostok, Russia in May 2010. The 33 revised full papers were carefully selected from a large number of submissions and cover the many dimensions of methods and tools of parallel programming, algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental approaches as well as commercial components and systems.

**Available**


54,00 €
ISBN 978-3-642-14921-4

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**Advanced Intelligent Computing Theories and Applications**


This book constitutes the refereed proceedings of the 6th International Conference on Intelligent Computing, ICIC 2010, held in Changsha, China, in August 2010. The 85 revised full papers presented were carefully reviewed and selected from a numerous submissions. The papers are organized in topical sections on neural networks, evolutionary learning & genetic algorithms, fuzzy theory and models, fuzzy systems and soft computing, particle swarm optimization and niche technology, supervised & semi-supervised learning, unsupervised & reinforcement learning, combinatorial & numerical optimization, systems biology and computational biology, neural computing and optimization, nature inspired computing and optimization, knowledge discovery and data mining, artificial life and artificial immune systems, intelligent computing in image processing, special session on new hand based biometric methods, special session on recent advances in image segmentation, special session on theories and applications in...

**Features**

This book constitutes the refereed proceedings of the 6th International Conference on Intelligent Computing, ICIC 2010, held in Changsha, China, in August 2010. The 85 revised full papers presented were carefully reviewed and selected from a numerous submissions. The papers are organized in topical sections on neural networks, evolutionary learning & genetic algorithms, fuzzy theory and models, fuzzy systems and soft computing, particle swarm optimization and niche technology, supervised & semi-supervised learning, unsupervised & reinforcement learning, combinatorial & numerical optimization, systems biology and computational biology, neural computing and optimization, nature inspired computing and optimization, knowledge discovery and data mining, artificial life and artificial immune systems, intelligent computing in image processing, special session on new hand based biometric methods, special session on recent advances in image segmentation, special session on theories and applications in...

**Available**


87,00 €
ISBN 978-3-642-14821-7
Advanced Intelligent Computing Theories and Applications: With Aspects of Artificial Intelligence


International Handbook of Internet Research

This handbook, the first of its kind, is a detailed introduction to the numerous academic perspectives we can apply to the study of the internet as a political, social and communicative phenomenon. Covering both practical and theoretical angles, established researchers from around the world discuss every thing: the foundations of internet research appear alongside chapters on understanding and analyzing current examples of online activities and artifacts. The material covers all continents and explores in depth subjects such as networked gaming, economics and the law. The sheer scope and breadth of topics examined in this volume, which ranges from on-line communities to e-science via digital aesthetics, are evidence that in today's world, internet research is a vibrant and mature field in which practitioners have long since stopped considering the internet as either an utopian or dystopian "new" space, but instead approach it as a medium that has become an integral part of our everyday culture and [...] Features This handbook, the first of its kind, is a detailed introduction to the numerous academic perspectives we can apply to the study of the internet as a political, social and communicative phenomenon. Covering both practical and theoretical angles, established researchers from around the world discuss every thing: the foundations of internet research appear alongside chapters on understanding and analyzing [...] Contents Acknowledgements. Forward: The New Media, the New Meanwhile and the Same Old Stories. Introduction. 1: Are Instant Messages Speech? 2: From MUDs to MMORPGs: The History of Virtual Worlds. 3: Visual Iconic Patterns of IM. 4: Research in e-Science and Open Access to Data and Information; Towards Information Infrastructure Studies: Ways of Knowing in a Networked Environment. 5: From Reader to Writer: Citizen Journalism as News Pro duce. 6: The Mereology of Digital Copyright. 7: Traversing urban social spaces: How online research helps unveil offline practice. 8: Internet aesthetics. 9: [...] Fields of interest Simulation and Modeling Target groups Professional/practitioner Type of publication Proceedings Available 2010. XI, 347 p. (Lecture Notes in Artificial Intelligence, Vol. 6222) 54,00 € ISBN 978-3-642-14748-7
**Interfaces: Explorations in Logic, Language and Computation**

ESSLLI 2008 and ESSLLI 2009 Student Sessions, Selected Papers

Under the auspices of the Association of Logic, Language and Information (FoLLI), the European Summer School in Logic, Language, and Information (ESSLLI) is organized every year in a different European country. It takes place during two weeks in the European summer and hosts approximately 50 different courses at both introductory and advanced level. With its focus on the large interdisciplinary area where linguistics, logic and computation converge, it has become very popular since it started in 1989, attracting large numbers of students. ESSLLI Student Sessions were first held in 1996; they are organized along the lines of a conference. Their intention is to provide a forum where promising work by Master or PhD students can be presented. This book constitutes 12 selected contributions from the Student Sessions held in 2008 and 2009. The papers are organized in four sections: semantics and pragmatics, mathematical linguistics, applied computational linguistics, and logic and computation.

**Features**

Under the auspices of the Association of Logic, Language and Information (FoLLI), the European Summer School in Logic, Language, and Information (ESSLLI) is organized every year in a different European country. It takes place during two weeks in the European summer and hosts approximately 50 different courses at both introductory and advanced level. With its focus on the large interdisciplinary area where linguistics, logic and computation converge, it has become very popular since it started in 1989, attracting large numbers of students. ESSLLI Student Sessions were first held in 1996; they are organized along the lines of a conference. Their intention is to provide a forum where promising work by Master or PhD students can be presented. This book constitutes 12 selected contributions from the Student Sessions held in 2008 and 2009. The papers are organized in four sections: semantics and pragmatics, mathematical linguistics, applied computational linguistics, and logic and computation.

**Fields of interest**

Artificial Intelligence (incl. Robotics)

**Target groups**

Research

**Type of publication**

Proceedings

**Available**


46.00 €

ISBN 978-3-642-14728-9

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**The Essential PIC18® Microcontroller**

Microprocessors are the key component of the infrastructure of our 21st-century electronic- and digital information-based society. More than four billion are sold each year for use in ‘intelligent’ electronic devices; ranging from smart egg-timer through to aircraft management systems. Most of these processor devices appear in the form of highly-integrated microcontrollers, which comprise a core microprocessor together with memory and analog/digital peripheral ports. By using simple cores, these single-chip computers are the cost- and size-effective means of adding the brains to previous dumb widgets; such as the credit card. Using the same winning format as the successful Springer guide, The Quintessential PIC® Microcontroller, this down-to-earth new textbook/guide has been completely rewritten based on the more powerful PIC18 enhanced range Microchip MCU family. Through-out the book, commercial hardware and software products are used to illustrate the material, as readers are provided real-world applications.

**Features**

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**Contents**


- Logic Circuity.
- Stored Program Processing.

Part II: The Architecture - The PIC18F1220 Microcontroller.

- The Instruction Set.
- Subroutines and Modules.
- Interrupt Handling.
- Assembly Language.
- High-Level Language.
- Part III: The Outside World - The Real World.
- One Byte at a Time.
- One Bit at a Time.
- Time Is of the Essence.
- Take the Rough with the Smooth.
- To Have and To Hold.

**Fields of interest**

Computer Communication Networks; Electronics and Microelectronics; Instrumentation; Communications Engineering; Networks

**Target groups**

Lower undergraduate

**Type of publication**

Professional book

**Available**

2010. XII, 646 p. (Computer Communications and Networks, Vol. 26)

46.00 €

ISBN 978-3-642-14214-7

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**Detection of Intrusions and Malware, and Vulnerability Assessment**

7th International Conference, DIMVA 2010, Bonn, Germany, July 8-9, 2010, Proceedings

This book constitutes the refereed proceedings of the 7th International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment, DIMVA 2010, held in Bonn, Germany, in July 2010. The 12 revised full papers presented together with two extended abstracts were carefully selected from 34 initial submissions. The papers are organized in topical sections on host security, trends, vulnerabilities, intrusion detection and web security.

**Features**

This book constitutes the refereed proceedings of the 7th International Conference on Detection of Intrusions and Malware, and Vulnerability Assessment, DIMVA 2010, held in Bonn, Germany, in July 2010. The 12 revised full papers presented together with two extended abstracts were carefully selected from 34 initial submissions. The papers are organized in topical sections on host security, trends, vulnerabilities, intrusion detection and web security.

**Fields of interest**

Computer Communication Networks; Management of Computing and Information Systems; Data Encryption; Computers and Society; Information Systems Applications (incl.Internet); Algorithm Analysis and Problem Complexity

**Target groups**

Research

**Type of publication**

Proceedings

**Available**


46.00 €

ISBN 978-3-642-14214-7
### Dependency Structures and Lexicalized Grammars

An Algebraic Approach

Since 2002, FoLLI has awarded an annual prize for outstanding dissertations in the fields of Logic, Language and Information. This book is based on the PhD thesis of Marco Kuhlmann, joint winner of the E.W. Beth dissertation award in 2008. Kuhlmann’s thesis lays new theoretical foundations for the study of non-projective dependency grammars. These grammars are becoming increasingly important for approaches to statistical parsing in computational linguistics that deal with free word order and long-distance dependencies. The author provides new formal tools to define and understand dependency grammars, presents two new dependency language hierarchies with polynomial parsing algorithms, establishes the practical significance of these hierarchies through corpus studies, and links his work to the phrase-structure grammar tradition through an equivalence result with tree-adjoining grammars. The work bridges the gaps between linguistics and theoretical computer science, between theoretical and empirical...[...]

### Resource Discovery

Second International Workshop, RED 2009, Lyon, France, August 28, 2009, Revised Papers

This book constitutes the proceedings of the Second International Workshop on Resource Discovery, held in Lyon, France, on August 28, 2009.

#### Features

- Information Systems Applications (incl. Internet); Computer Communication Networks; Information Storage and Retrieval; Software Engineering; Artificial Intelligence (incl. Robotics); Database Management

#### Target groups

Research

#### Type of publication

Proceedings

#### Available


46.00 €

ISBN 978-3-642-14414-1

### Frontiers in Algorithms

4th International Workshop, FAW 2010, Wuhan, China, August 11-13, 2010, Proceedings

This book constitutes the refereed proceedings of the 4th International Frontiers of Algorithmics Workshop, FAW 2010, held in Wuhan, China, in August 2010. The 28 revised full papers presented together with the abstracts of 3 invited talks were carefully reviewed and selected from 57 submissions. The Workshop will provide a focused forum on current trends of research on algorithms, discrete structures, and their applications, and will bring together international experts at the research frontiers in these areas to exchange ideas and to present significant new results. The mission of the Workshop is to stimulate the various fields for which algorithmics can become a crucial enabler, and to strengthen the ties between the Eastern and Western research communities of algorithmics and applications.

#### Features

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#### Fields of interest

- Algorithm Analysis and Problem Complexity; Software Engineering; Discrete Mathematics in Computer Science; Logics and Meanings of Programs; Mathematics of Computing; Theory of Computation

#### Target groups

Professional/practitioner

#### Type of publication

Proceedings

#### Available


54.00 €

ISBN 978-3-642-14552-0
This book constitutes the proceedings of the 12th International Conference on Information Security and Cryptology, held in Seoul, Korea, in December 2009.

**Features**

This book constitutes the proceedings of the 12th International Conference on Information Security and Cryptology, held in Seoul, Korea, in December 2009.

**Fields of interest**

Computer Communication Networks; Data Encryption; Management of Computing and Information Systems; Algorithm Analysis and Problem Complexity; Systems and Data Security; Discrete Mathematics in Computer Science

**Target groups**

Research

**Type of publication**

Proceedings

**Available**


54,00 €

ISBN 978-3-642-14422-6

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This book constitutes the proceedings of the Third International Conference on Network Security and Applications held in Chennai, India, in July 2010.

**Features**

This book constitutes the proceedings of the Third International Conference on Network Security and Applications held in Chennai, India, in July 2010.

**Fields of interest**

Computer Communication Networks; Information Systems Applications (incl. Internet); Management of Computing and Information Systems; Algorithm Analysis and Problem Complexity; Data Encryption; Software Engineering

**Target groups**

Research

**Type of publication**

Proceedings

**Available**

2010. Approx. 650 p. (Communications in Computer and Information Science, Vol. 89) Softcover

89,00 €

ISBN 978-3-642-14477-6

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**Features**


**Fields of interest**

Information Systems Applications (incl., Internet); Computer Communication Networks; Information Storage and Retrieval; Software Engineering; User Interfaces and Human Computer Interaction; Artificial Intelligence (incl., Robotics)

**Target groups**

Research

**Type of publication**

Proceedings

**Available**

2010. XIX, 725 p. (Communications in Computer and Information Science, Vol. 90) Softcover

97,00 €

ISBN 978-3-642-14492-9
Important aspects of social networking analysis are covered in this work by combining experimental and theoretical research. A specific focus is devoted to emerging trends and the industry needs associated with utilizing data mining techniques. Some of the techniques covered include data mining advances in the discovery and analysis of communities, in the personalization of solitary activities (like searches) and social activities (like discovering potential friends), in the analysis of user behavior in open fora (like conventional sites, blogs and fora) and in commercial platforms (like e-auctions), and in the associated security and privacy preservation challenges; as well as social network modeling, scalable, customizable social network infrastructure construction, and the identification and discovery of dynamic growth and evolution patterns using machine learning approaches or multi-agent based simulation. These topics will be of interest to practitioners and researchers alike in this dynamic [...]
Computers Helping People with Special Needs, Part II

This book constitutes the proceedings of the 12th International Conference on Computers Helping People with Special Needs, held in Vienna, Austria, in July 2010.

Features
This book constitutes the proceedings of the 12th International Conference on Computers Helping People with Special Needs, held in Vienna, Austria, in July 2010.

Fields of interest
User Interfaces and Human Computer Interaction; Information Systems Applications (incl.Internet); Computers and Society; Multimedia Information Systems; Computer Imaging, Vision, Pattern Recognition and Graphics; Computers and Education

Target groups
Research

Type of publication
Proceedings

Available

79,00 €
ISBN 978-3-642-14099-0

Economics of Information Security and Privacy

The Workshop on the Economics of Information Security (WEIS) is the leading forum for interdisciplinary research and scholarship on information security and privacy, combining ideas, techniques, and expertise from the fields of economics, social science, business, law, policy, and computer science. In 2009, WEIS was held in London, at UCL, a constituent college of the University of London. Economics of Information Security and Privacy includes chapters presented at WEIS 2009, having been carefully reviewed by a program committee composed of leading researchers. Topics covered include identity theft, modeling uncertainty's effects, future directions in the economics of information security, economics of privacy, options, misaligned incentives in systems, cyber-insurance, and modeling security dynamics. Economics of Information Security and Privacy is designed for managers, policy makers, and researchers working in the related fields of economics of information security. Advanced-level students[...]

Features
The Workshop on the Economics of Information Security (WEIS) is the leading forum for interdisciplinary research and scholarship on information security and privacy, combining ideas, techniques, and expertise from the fields of economics, social science, business, law, policy, and computer science. In 2009, WEIS was held in London, at UCL, a constituent college of the University of London. [..]

Contents

Fields of interest
Systems and Data Security; Business & Economics (general); Computer Communication Networks; Data Structures, Cryptology and Information Theory; Computer Systems Organization and Communication Networks

Target groups
Research

Type of publication
Monograph

Available
2010. XVI, 320 p. 100 illus., 50 in color. Hardcover

139,95 €
ISBN 978-1-4419-6966-8

Specification and Verification of Declarative Open Interaction Models
A Logic-Based Approach

Many novel application scenarios and architectures in business process management or service composition are characterized by a distribution of activities and resources, and by complex interaction and coordination dynamics. In this book, Montali answers fundamental questions on open and declarative modeling abstractions via the integration and extension of quite diverse approaches into a computational logic-based comprehensive framework. This framework allows non IT experts to graphically specify interaction models that are then automatically transformed into a corresponding formal representation and a set of fully automated sound and complete verification facilities. The book constitutes a revised and extended version of the author’s PhD thesis, which was honored with the 2009 “Marco Cadoli” prize, awarded by the Italian Association for Logic Programming for the most outstanding thesis focusing on computational logic, discussed between the years 2007 and 2009.

Features
Many novel application scenarios and architectures in business process management or service composition are characterized by a distribution of activities and resources, and by complex interaction and coordination dynamics. In this book, Montali answers fundamental questions on open and declarative modeling abstractions via the integration and extension of quite diverse approaches into a computational[...]

Contents

Fields of interest
Information Systems Applications (incl.Internet); Logics and Meanings of Programs; Software Engineering; Business Information Systems; Computer Applied in Administrative Data Processing

Target groups
Research

Type of publication
Monograph

Available

62,00 €
ISBN 978-3-642-14537-7
Ad-Hoc, Mobile and Wireless Networks
9th International Conference, ADHOC-NOW 2010, Edmonton, AB, Canada, August 20-22, 2010, Proceedings

This book constitutes the refereed proceedings of the 9th International Conference on Ad-Hoc, Mobile, and Wireless Networks, ADHOC-NOW 2010, held in Edmonton, Canada, in August 2010. The 16 revised full papers were carefully reviewed and selected from 43 submissions. The accepted papers cover topics in routing/broadcasting/multicasting protocols; energy efficiency; sensor coverage; scheduling algorithms; localization; mobility modeling; data collection and processing; and vehicular networks.

Features
This book constitutes the refereed proceedings of the 9th International Conference on Ad-Hoc, Mobile, and Wireless Networks, ADHOC-NOW 2010, held in Edmonton, Canada, in August 2010. The 16 revised full papers were carefully reviewed and selected from 43 submissions. The accepted papers cover topics in routing/broadcasting/multicasting protocols; energy efficiency; sensor coverage; scheduling algorithms; [...]
Advances in Data Mining: Applications and Theoretical Aspects


This book constitutes the refereed proceedings of the 10th Industrial Conference on Data Mining, ICDM 2010, held in Berlin, Germany in July 2010. The 48 revised full papers presented together with two invited papers were carefully reviewed and selected from 175 submissions. The papers are organized in topical sections on theoretical aspects of data mining, multimedia data mining, data mining in marketing, data mining in industrial processes, data mining in medicine, data mining in agriculture, Webmining, data mining in finance, aspects of data mining, and data mining for network performance monitoring.

Features
This book constitutes the refereed proceedings of the 10th Industrial Conference on Data Mining, ICDM 2010, held in Berlin, Germany in July 2010. The 48 revised full papers presented together with two invited papers were carefully reviewed and selected from 175 submissions. The papers are organized in topical sections on theoretical aspects of data mining, multimedia data mining, data mining in marketing, data mining in industrial processes, data mining in medicine, data mining in agriculture, Webmining, data mining in finance, aspects of data mining, and data mining for network performance monitoring.

Fields of interest
Data Mining and Knowledge Discovery; Multimedia Information Systems; Image Processing and Computer Vision; Information Systems Applications (incl.Internet); Database Management; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Proceedings

Available

2010. XII, 654 p. (Lecture Notes in Artificial Intelligence, Vol. 6171) Softcover
79,00 €
ISBN 978-3-642-14399-1

Transactions on Rough Sets XII

The LNCS journal Transactions on Rough Sets is devoted to the entire spectrum of rough sets related issues, from logical and mathematical foundations, through all aspects of rough set theory and its applications, such as data mining, knowledge discovery, and intelligent information processing, to relations between rough sets and other approaches to uncertainty, vagueness, and incompleteness, such as fuzzy sets and theory of evidence. This volume contains 8 revised selected papers from 11 submissions to the Rough Set and Knowledge Technology Conference (RSKT 2008), together with 5 papers introducing advances in rough set theory and its applications. The topics covered are: perceptually near Pawlak partitions, hypertext classification, topological space versus rough set theory in terms of lattice theory, feature extraction in interval-valued information systems, jumping emerging patterns (JEPI), and rough set theory.

Features
The LNCS journal Transactions on Rough Sets is devoted to the entire spectrum of rough sets related issues, from logical and mathematical foundations, through all aspects of rough set theory and its applications, such as data mining, knowledge discovery, and intelligent information processing, to relations between rough sets and other approaches to uncertainty, vagueness, and incompleteness, such as fuzzy sets.

Fields of interest
Mathematical Logic and Formal Languages; Computation by Abstract Devices; Theory of Computation; Image Processing and Computer Vision; Pattern Recognition; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Contributed volume

Available

2010. X, 339 p. 5 illus. in color. (Transactions on Rough Sets, Vol. 6190) Softcover
73,00 €
ISBN 978-3-642-14466-0
Requirements Engineering
Fundamentals, Principles, and Techniques

Requirements engineering is the process of eliciting individual stakeholder requirements and needs and developing them into detailed, agreed requirements documented and specified in such a way that they can serve as the basis for all other system development activities. In this textbook, Klaus Pohl provides a comprehensive and well-structured introduction to the fundamentals, principles, and techniques of requirements engineering. He presents approved techniques for eliciting, negotiating and documenting as well as validating, and managing requirements for software-intensive systems. The various aspects of the process and the techniques are illustrated using numerous examples based on his extensive teaching experience and his work in industrial collaborations. His presentation aims at professionals, students, and lecturers in systems and software engineering or business applications development. Professionals such as project managers, software architects, systems analysts, and software engineers.[...]

Contents

Fields of interest
Software Engineering; Management of Computing and Information Systems

Target groups
Professional/practitioner

Type of publication
Graduate/advanced undergraduate textbook

Available
2010. XVII, 813 p. Hardcover
64,95 €
ISBN 978-3-642-12577-5

Advances in Cryptology -- CRYPTO 2010
30th Annual Cryptology Conference, Santa Barbara, CA, USA, August 15-19, 2010, Proceedings

This book constitutes the refereed proceedings of the 30th Annual International Cryptology Conference, CRYPTO 2010, held in Santa Barbara, CA, USA in August 2010, co-located with CHES 2010, the workshop on Cryptographic Hardware and Embedded Systems. The 39 revised full papers presented were carefully reviewed and selected from 203 submissions. Addressing all current foundational, theoretical and research aspects of cryptology, cryptography, and cryptanalysis as well as advanced applications, the papers are organized in topical sections on leakage, lattice, homomorphic encryption, theory and applications, key exchange, OAEP/RSA, CCA, attacks, composition, computation delegation and obfuscation, multiparty computation, pseudorandomness, and quantum.

Features
This book constitutes the refereed proceedings of the 30th Annual International Cryptology Conference, CRYPTO 2010, held in Santa Barbara, CA, USA in August 2010, co-located with CHES 2010, the workshop on Cryptographic Hardware and Embedded Systems. The 39 revised full papers presented were carefully reviewed and selected from 203 submissions. Addressing all current foundational, theoretical and research [...]

Fields of interest
Data Encryption; Management of Computing and Information Systems; Computer Communication Networks; Systems and Data Security; Computers and Society; Discrete Mathematics in Computer Science

Target groups
Research

Type of publication
Proceedings

Available
2010. XV, 613 p. (Communications in Computer and Information Science, Vol. 94) Softcover
89,00 €
ISBN 978-3-642-14833-0

Contemporary Computing

This volume constitutes the refereed proceedings of the Third International Conference on Contemporary Computing, IC3 2010, held in Noida, India, in August 2010.

Features
This volume constitutes the refereed proceedings of the Third International Conference on Contemporary Computing, IC3 2010, held in Noida, India, in August 2010.

Fields of interest
Pattern Recognition; Algorithm Analysis and Problem Complexity; Artificial Intelligence (incl. Robotics); Computer Communication Networks; Information Systems Applications (incl. Internet); Computation by Abstract Devices

Target groups
Research

Type of publication
Proceedings

Available
87,00 €
ISBN 978-3-642-14622-0
Contemporary Computing

This volume constitutes the refereed proceedings of the Third International Conference on Contemporary Computing, IC3 2010, held in Noida, India, in August 2010.

Features
This volume constitutes the refereed proceedings of the Third International Conference on Contemporary Computing, IC3 2010, held in Noida, India, in August 2010.

Fields of interest
Pattern Recognition; Algorithm Analysis and Problem Complexity; Artificial Intelligence (incl. Robotics); Computer Communication Networks; Information Systems Applications (incl.Internet); Computation by Abstract Devices

Target groups
Research

Type of publication
Proceedings

Available
2010. XXIV, 275 p. (Communications in Computer and Information Science, Vol. 95) Softcover
56,00 €
ISBN 978-3-642-14824-8

Critical Information Infrastructures Security
4th International Workshop, CRITIS 2009, Bonn, Germany, September 30 - October 2, 2009, Revised Papers

This book constitutes the proceedings of the 4th International Workshop on Critical Information Infrastructures Security, CRITIS 2009, held in Bonn, Germany, during September 30 to October 2, 2009.

Features
This book constitutes the proceedings of the 4th International Workshop on Critical Information Infrastructures Security, CRITIS 2009, held in Bonn, Germany, during September 30 to October 2, 2009.

Fields of interest
Performance and Reliability; Computer Communication Networks; Management of Computing and Information Systems; Data Encryption; Special Purpose and Application-Based Systems; System Performance and Evaluation

Target groups
Research

Type of publication
Proceedings

Available
2010. XII, 213 p. (Security and Cryptology, Vol. 6027) Softcover
46,00 €
ISBN 978-3-642-14378-6

Human Behavior Understanding
First International Workshop, HBU 2010, Istanbul, Turkey, August 22, 2010, Proceedings

This book constitutes the refereed proceedings of the First International Workshop on Human Behavior Understanding, HBU 2010, a satellite workshop of the International Conference on Pattern Recognition in Istanbul, Turkey, on August 22, 2010. The 13 revised full papers presented were carefully reviewed and selected from 29 submissions. The papers are organized in topical sections on analysis of human activities; non-verbal action dynamics; visual action recognition; and social signals.

Features
This book constitutes the refereed proceedings of the First International Workshop on Human Behavior Understanding, HBU 2010, a satellite workshop of the International Conference on Pattern Recognition in Istanbul, Turkey, on August 22, 2010. The 13 revised full papers presented were carefully reviewed and selected from 29 submissions. The papers are organized in topical sections on analysis of human activities; non-verbal action dynamics; visual action recognition; and social signals.

Fields of interest
Pattern Recognition; User Interfaces and Human Computer Interaction; Biometrics; Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups
Research

Type of publication
Proceedings

Available
46,00 €
ISBN 978-3-642-14714-2
Transactions on Data Hiding and Multimedia Security V

Since the mid 1990s, data hiding has been proposed as an enabling technology for securing multimedia communication, and is now used in various applications including broadcast monitoring, movie fingerprinting, steganography, video indexing and retrieval, and image authentication. Data hiding and cryptographic techniques are often combined to complement each other, thus triggering the development of a new research field of multimedia security. Besides, two related disciplines, steganalysis and data forensics, are increasingly attracting researchers and becoming another new research field of multimedia security. This journal, LNCS Transactions on Data Hiding and Multimedia Security, aims to be a forum for all researchers in these emerging fields, publishing both original and archival research results. This issue contains a special section on forensic image analysis for crime prevention including two papers. The additional four papers deal with collusion-resistant fingerprinting systems;

Features
Since the mid 1990s, data hiding has been proposed as an enabling technology for securing multimedia communication, and is now used in various applications including broadcast monitoring, movie fingerprinting, steganography, video indexing and retrieval, and image authentication. Data hiding and cryptographic techniques are often combined to complement each other, thus triggering the development of a new […]

Fields of interest
Systems and Data Security; Computer Communication Networks; Data Encryption; Algorithm Analysis and Problem Complexity; Computers and Society; Pattern Recognition

Target groups
Research

Type of publication
Contributed volume

Available
46,00 €
ISBN 978-3-642-14297-0

Financial Cryptography and Data Security
14th International Conference, FC 2010, Tenerife, Canary Islands, January 25-28, 2010, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 14th International Conference on Financial Cryptography and Data Security, FC 2010, held in Tenerife, Canary Islands, Spain in January 2010. The 19 revised full papers and 15 revised short papers presented together with 1 panel report and 7 poster papers were carefully reviewed and selected from 130 submissions. The papers cover all aspects of securing transactions and systems and feature current research focusing on both fundamental and applied real-world deployments on all aspects surrounding commerce security.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the 14th International Conference on Financial Cryptography and Data Security, FC 2010, held in Tenerife, Canary Islands, Spain in January 2010. The 19 revised full papers and 15 revised short papers presented together with 1 panel report and 7 poster papers were carefully reviewed and selected from 130 submissions. The papers cover […]

Fields of interest
Data Encryption
Target groups
Research

Type of publication
Proceedings

Available
2010. XII, 432 p. (Security and Cryptology, Vol. 6052) Softcover
62,00 €
ISBN 978-3-642-14576-6

Autonomics Development: A Domain-Specific Aspect Language Approach

Distributed applications are difficult to write as programmers need to adhere to specific distributed systems programming conventions and frameworks, which makes distributed systems development complex and error prone and ties the resultant application to the distributed system because the application’s code is tangled with the crosscutting concern distribution. This book introduces the concept of a domain-specific aspect language called a Distribution Definition Language that generalises the distribution and distribution recovery concerns by describing the classes and methods of an existing application to be made remote, the distributed system to use to make them remote and the recovery mechanism to use in the event of an error. A software tool in the form of the RemoteJ compiler/generator that uses information contained in the Distribution Definition Language to generate the recovery and distributed system specific code and apply it to the application using bytecode manipulation and generation.[…]

Features
Distributed applications are difficult to write as programmers need to adhere to specific distributed systems programming conventions and frameworks, which makes distributed systems development complex and error prone and ties the resultant application to the distributed system because the application’s code is tangled with the crosscutting concern distribution. This book introduces the concept of a […]

Contents

Fields of interest
Computer Applications; Programming Techniques; Programming Languages, Compilers, Interpreters

Target groups
Research

Type of publication
Monograph

Available
49,95 €
ISBN 978-3-0346-0539-7
Computing and Combinatorics

This book constitutes the proceedings of the 16th Annual International Conference on Computing and Combinatorics, held in Nha Trang, Vietnam, in July 2010.

Features
This book constitutes the proceedings of the 16th Annual International Conference on Computing and Combinatorics, held in Nha Trang, Vietnam, in July 2010.

Fields of interest
Algorithm Analysis and Problem Complexity; Discrete Mathematics in Computer Science; Computer Communication Networks; Computation by Abstract Devices; Computer Graphics; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Proceedings

Available
70,00 € ISBN 978-3-642-14030-3

Hybrid Learning
Third International Conference, ICHL 2010, Beijing, China, August 16-18, 2010, Proceedings

This book constitutes the proceedings of the Third International Conference on Hybrid Learning, ICHL 2010, held in Beijing, China, in August 2010. The 50 contributions presented in this volume were carefully reviewed and selected from 225 submissions. In addition two keynote talks are included in this book. The topics covered are interactive hybrid learning systems, content management for hybrid learning, pedagogical and psychological issues, outcome-based teaching and learning, instructional design issues, experiences in hybrid learning, improved flexibility of learning processes, computer supported collaborative learning, assessment strategies for hybrid learning, and organisational frameworks and institutional policies.

Features
This book constitutes the proceedings of the Third International Conference on Hybrid Learning, ICHL 2010, held in Beijing, China, in August 2010. The 50 contributions presented in this volume were carefully reviewed and selected from 225 submissions. In addition two keynote talks are included in this book. The topics covered are interactive hybrid learning systems, content management for hybrid learning, [...] 

Fields of interest
Computers and Education

Target groups
Research

Type of publication
Proceedings

Available
54,00 € ISBN 978-3-642-14656-5

Self-Organizing Architectures
First International Workshop, SOAR 2009, Cambridge, UK, September 14, 2009, Revised Selected and Invited Papers

This book contains the refereed post-conference proceedings of the First International Self-Organizing Architectures Workshop (SOAR) in Cambridge, UK, in September 2009. The book includes 9 revised papers, which were selected from 17 submissions of the workshop, as well as 4 invited papers. The papers cover a broad range of topics related to self-organizing architectures, including self adaptive architectures, decentralized architectures, nature-inspired approaches, and learning approaches.

Features
This book contains the refereed post-conference proceedings of the First International Self-Organizing Architectures Workshop (SOAR) in Cambridge, UK, in September 2009. The book includes 9 revised papers, which were selected from 17 submissions of the workshop, as well as 4 invited papers. The papers cover a broad range of topics related to self-organizing architectures, including self adaptive [...] 

Fields of interest
Software Engineering; Computer Communication Networks; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl.Internet); Programming Techniques; Algorithm Analysis and Problem Complexity

Target groups
Research

Type of publication
Proceedings

Available
54,00 € ISBN 978-3-642-14411-0
Parallel Processing and Applied Mathematics, Part I
8th International Conference, PPAM 2009, Wroclaw, Poland, September 13-16, 2009

This book constitutes the proceedings of the 8th International Conference on Parallel Processing and Applied Mathematics, PPAM 2009, held in Wroclaw, Poland, in September 2009.

Features
This book constitutes the proceedings of the 8th International Conference on Parallel Processing and Applied Mathematics, PPAM 2009, held in Wroclaw, Poland, in September 2009.

Fields of interest
Software Engineering; Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet); Programming Techniques; Software Engineering / Programming and Operating Systems; Mathematics of Computing

Target groups
Research

Type of publication
Proceedings

Available
79,00 € ISBN 978-3-642-14389-2

Parallel Processing and Applied Mathematics, Part II
8th International Conference, PPAM 2009, Wroclaw, Poland, September 13-16, 2009, Proceedings

This book constitutes the proceedings of the 8th International Conference on Parallel Processing and Applied Mathematics, PPAM 2009, held in Wroclaw, Poland, in September 2009.

Features
This book constitutes the proceedings of the 8th International Conference on Parallel Processing and Applied Mathematics, PPAM 2009, held in Wroclaw, Poland, in September 2009.

Fields of interest
Software Engineering; Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet); Programming Techniques; Software Engineering / Programming and Operating Systems; Mathematics of Computing

Target groups
Research

Type of publication
Proceedings

Available
79,00 € ISBN 978-3-642-14402-8

Entertainment for Education. Digital Techniques and Systems
5th International Conference on E-learning and Games, Edutainment 2010, Changchun, China, August 16-18, 2010, Proceedings

This book constitutes the refereed proceedings of the 5th International Conference on E-learning and Games, Edutainment 2010, held in Changchun, China, in August 2010. The 60 revised full papers presented were carefully reviewed and selected from 222 submissions. The papers are organized in topical sections on E-learning tools and platforms; E-learning system for education; E-learning environments and applications: game techniques for edutainment; multimedia techniques for edutainment; and computer animation and graphics for edutainment.

Features
This book constitutes the refereed proceedings of the 5th International Conference on E-learning and Games, Edutainment 2010, held in Changchun, China, in August 2010. The 60 revised full papers presented were carefully reviewed and selected from 222 submissions. The papers are organized in topical sections on E-learning tools and platforms; E-learning system for education; E-learning environments and [...]
Earth Sciences

The book presents modern and efficient methods for solving Geodetic and Geoinformatics algebraic problems illustrated with Mathematica using computer algebra techniques of Ring, Polynomials, Groebner basis. The book presents alternative algebraic techniques based on computer algebra tools. This new approach meets such modern challenges as resection by laser techniques, solution of orientation in Robotics, transformation and bundle block adjustment in Geoinformatics, densification of Engineering networks, analytical solution for GPS-meteorology and many other problems. For Mathematicians, the book provides some practical examples of application of abstract algebra and multidimensional scaling. The accompanying CD-ROM contains Mathematica notebooks with computational illustrations and application packages to solve for filename.

Features

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Contents


Fields of interest

Computer Applications in Earth Sciences: Geographical Information Systems / Cartography; Computational Mathematics and Numerical Analysis; Remote Sensing / Photogrammetry; Math. Applications in Earth Sciences

Target groups

Research

Type of publication

Monograph

Available

2010. XVIII, 377 p. With CD-ROM. Hardcover
149,95 €
ISBN 978-3-642-12123-4

Digital Soil Mapping

Digital Soil Mapping is the creation and the population of a geographically referenced soil database. It is generated at a given resolution by using field and laboratory observation methods coupled with environmental data through quantitative relationships. Digital soil mapping is advancing on different fronts at different rates all across the world. This book presents the state-of-the-art and explores strategies for bridging research, production, and environmental application of digital soil mapping. It includes examples from North America, South America, Europe, Asia, and Australia. The chapters address the following topics: - evaluating and using legacy soil data - exploring new environmental covariates and sampling schemes - using integrated sensors to infer soil properties or status - innovative inference systems predicting soil classes, properties, and estimating their uncertainties - using digital soil mapping and techniques for soil assessment and environmental application - protocol and...
Dynamics of the Earth
Theory of the Planet’s Motion Based on Dynamic Equilibrium

In their search for solutions to problems concerning the dynamics of the Earth as a self-gravitating body, the authors have applied the fundamentals found in their book “Jacobi Dynamics” (1987, Reidel). First, satellite observations have shown that the Earth does not remain in hydrostatic equilibrium, which forms the physical basis of modern geodynamics. Secondly, satellite data has established a relationship between the planet’s polar moment of inertia and the potential of the Earth’s outer force field, which proves the most basic point of Jacobi dynamics. This allowed the authors to revise their derivation of the classical virial theorem, introducing the concept of a volumetric force and volumetric moment, and so to obtain a generalized virial theorem in the form of Jacobi’s equation. The main dynamical effects are: the kinetic energy of oscillation of the interacting particles, which explains the physical meaning and nature of gravitational forces; separation of shells of a self-gravitating...[

Features
In their search for solutions to problems concerning the dynamics of the Earth as a self-gravitating body, the authors have applied the fundamentals found in their book “Jacobi Dynamics” (1987, Reidel). First, satellite observations have shown that the Earth does not remain in hydrostatic equilibrium, which forms the physical basis of modern geodynamics. Secondly, satellite data has established a ...[

Contents

Fields of interest
Geophysics / Target groups Research

Type of publication
Monograph

Available
2010. XV, 300 p. 70 illus., 35 in color. Hardcover
99,95 €

Earth Sciences

W. Lahez, Norsk Institutt for Luftforsking, Kjeller, Norway; B. Khattatov, Fusion Numerics, Boulder, CO, USA; R. Menard, Atmospheric Science and Technology Directorate Environment, Dorval, Canada (Eds.)

Data Assimilation
Making Sense of Observations

Data assimilation methods were largely developed for operational weather forecasting, but in recent years have been applied to an increasing range of earth science disciplines. This book will set out the theoretical basis of data assimilation with contributions by top international experts in the field. Various aspects of data assimilation are discussed including: theory; observations; models; numerical weather prediction; evaluation of observations and models; assessment of future satellite missions; application to components of the Earth System. References are made to recent developments in data assimilation theory (e.g. Ensemble Kalman filter), and to novel applications of the data assimilation method (e.g. ionosphere, Mars data assimilation).

Features
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Contents

Fields of interest
Math. Applications in Earth Sciences; Computer Applications in Earth Sciences; Remote Sensing / Photogrammetry; Meteorology / Climatology; Oceanography; Atmospheric Protection / Air Quality Control / Air Pollution

Target groups
Research

Type of publication
Monograph

Available
2010. XIV, 732 p. Hardcover
129,95 €
ISBN 978-3-540-74702-4

Mine Wastes
Characterization, Treatment and Environmental Impacts

This book provides a thorough, up-to-date overview of wastes accumulating at mine sites. It deals comprehensively with sulfidic mine wastes, mine water, tailings, cyanidation wastes of gold-silver ores, radioactive wastes of uranium ores, and wastes of phosphate and potash ores. The book emphasizes the characterization, prediction, monitoring, disposal and treatment as well as environmental impacts of problematic mine wastes. The strong pedagogical framework is supported by case studies from around the world, presentation of crucial aspects of mine wastes as scientific issues; end-of-chapter summaries as well as lists of resource materials and wwe sites for each waste type. The considerably updated third edition has novel and notable changes including: revision of text to reflect major developments and contemporary issues that are taking place in the field of mine waste science; new web pages at the end of each chapter; over 20 case studies and scientific issues; over 150 figures and tables; and an...[

Contents
An introduction to mine wastes; sulfidic wastes; mine waters; tailings; cyanidation wastes of gold-silver ores, radioactive wastes of uranium ores, and wastes of phosphate and potash ores. The book emphasizes the characterization, prediction, monitoring, disposal and treatment as well as environmental impacts of...[

Fields of interest
Applied Earth Sciences; Terrestrial Pollution; Mineral Resources; Waste Management / Waste Technology; Hydrogeology

Target groups
Research

Type of publication
Monograph

Available
2010. XIV, 400 p. Hardcover
129,95 €
ISBN 978-3-642-12418-1

B. Lottermoser, James Cook University, Cairns, QLD, Australia

Characterization, Treatment and Environmental Impacts

This book provides a thorough, up-to-date overview of wastes accumulating at mine sites. It deals comprehensively with sulfidic mine wastes, mine water, tailings, cyanidation wastes of gold-silver ores, radioactive wastes of uranium ores, and wastes of phosphate and potash ores. The book emphasizes the characterization, prediction, monitoring, disposal and treatment as well as environmental impacts of problematic mine wastes. The strong pedagogical framework is supported by case studies from around the world, presentation of crucial aspects of mine wastes as scientific issues; end-of-chapter summaries as well as lists of resource materials and wwe sites for each waste type. The considerably updated third edition has novel and notable changes including: revision of text to reflect major developments and contemporary issues that are taking place in the field of mine waste science; new web pages at the end of each chapter; over 20 case studies and scientific issues; over 150 figures and tables; and an...[

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Fields of interest
Applied Earth Sciences; Terrestrial Pollution; Mineral Resources; Waste Management / Waste Technology; Hydrogeology

Target groups
Research

Type of publication
Monograph

Available
2010. XIV, 732 p. Hardcover
129,95 €
ISBN 978-3-540-74702-4

B. Lottermoser, James Cook University, Cairns, QLD, Australia
Remote Sensing Tools for Exploration

Observing and Interpreting the Electromagnetic Spectrum

This is a comprehensive book on remote sensing, covering the entire spectrum of energies, wave and particle interactions and field generation, spectrum and image production, from magnetosphere to surface, from high energy gamma-rays to low energy sonic waves, for the Earth and planets. Software and hardware tools specific to each spectral region for capturing, analyzing, and combining data will also be discussed. This book reviews and creates a basis for those experts in one energy region or one system to gain insight in understanding and combining data from other regions and systems (data fusion).

Features
This book is intended to cover remote sensing as a process applied to solar system exploration, with emphasis on understanding and utilizing the entire electromagnetic spectrum. The goal is to create a common ground for those individuals and groups involved in every aspect of remote sensing, representing a wide range of science, engineering, and management disciplines. Despite their varying viewpoints and [...] Contents

Fields of interest
Remote Sensing / Photogrammetry; Aerospace Technology and Astronautics; Astrophysics and Astroparticles; Geographical Information Systems / Cartography; Earth Sciences (general)

Target groups
Popular/general

Type of publication
Monograph

Available
2010. XV, 346 p. 240 illus., 120 in color. Hardcover
119,95 €
ISBN 978-1-4419-6829-6

Ground Vibration Engineering
Simplified Analyses with Case Studies and Examples

Ground vibration consideration is gaining significance with people’s decreasing tolerance of vibration, introduction of new environmental legislations, increasing use of equipment sensitive to vibration, ageing of existing buildings and expanding construction sites to/near collapsible/liquefiable/thixotropic soil. This volume bridges the gap that exists between rather limited provisions of engineering codes/standards and complex numerical analyses/small-scale tests. The book contains descriptions of ground vibration measurements, predictions and control for engineers. Effects of most frequent sources of ground vibration arising from construction/demolition, traffic and machinery, ground wave amplification and attenuation as well as foundation kinematic and inertial interaction have been considered by simplified analyses aimed at ease and speed of use for major problems in ground vibration engineering. Comments on assumptions, limitations, and factors affecting the results are given. Case studies and [...] Features
Ground vibration consideration is gaining significance with people’s decreasing tolerance of vibration, introduction of new environmental legislations, increasing use of equipment sensitive to vibration, ageing of existing buildings and expanding construction sites to/near collapsible/liquefiable/thixotropic soil. This volume bridges the gap that exists between rather limited [...] Contents

Fields of interest
Geotechnical Engineering; Geoenvironment, Foundations, Hydraulics; Building Construction, HVAC, Refrigeration; Applied Earth Sciences; Geocology / Natural Processes

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XXXVIII, 1100 p. 110 ilus., 55 in color. Hardcover
199,95 €
ISBN 978-3-540-74697-3

Applied Agrometeorology

This compendium first reviews regional operational applications of agrometeorology in the form of case studies of agrometeorological services and information. These services prepare farmers of different income levels for extreme weather and climate events and for the use of weather and climate “windows of opportunity” under conditions of a changing climate. Subsequently wide fields of application are covered such as crops (monocropping and multiple cropping, for which aspects of soils, pests, diseases, water, fertilizers and labour are discussed, in so far as they interact with agrometeorological factors), forestry, agroforestry, livestock, and fisheries. These fields are dealt with in a way that the contents form the bedrock material for establishment, improvement, extension and updating of agrometeorological services and information under these changing conditions. Operational supportive methods are finally reviewed and exemplified through case studies of their applications in the above [...] Features
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Introduction.- Regional operational applications of agrometeorology.- Fields of application in agrometeorology.- Methods successfully applied in applications leading to agrometeorological services.

Fields of interest
Meteorology / Climatology; Agriculture; Applied Earth Sciences; Environmental Management; Forestry; Climate Change

Target groups
Research

Type of publication
Monograph

Available
99,95 €
MATLAB® Recipes for Earth Sciences

MATLAB® is used for a wide range of applications in geosciences, such as image processing in remote sensing, the generation and processing of digital elevation models, and the analysis of time series. This book introduces methods of data analysis in geosciences using MATLAB, such as basic statistics for univariate, bivariate and multivariate datasets, jackknife and bootstrap resampling schemes, processing of digital elevation models, gridding and contouring, geostatistics and kriging, processing and geo-referencing of satellite images, digitizing from the screen, linear and nonlinear time-series analysis, and the application of linear time-invariant and adaptive filters. The revised and updated Third Edition includes ten new sections and has greatly expanded on most chapters from the previous edition, including a step by step discussion of all methods before demonstrating the methods with MATLAB functions. New sections include: Data Storage and Handling, Data Structures and Classes of Objects, [...] Features

Contents


Fields of interest

Computer Applications in Earth Sciences; Quantitative Geology; Math. Applications in Earth Sciences

Target groups

Research

Type of publication

Professional book

Available

2010. Xi, 336 p. With CD-ROM. Hardcover

119,95 €
ISBN 978-1-4419-6390-1

Lunar Reconnaissance Orbiter Mission

This book describes the Lunar Reconnaissance Orbiter, its scientific objectives, mission design, flight system, its scientific objectives and the instruments that carry out these investigations. Major objectives of this mission include the search for accessible water; the interior structure of the Moon, its surface chemistry and geophysical processes and the radiation environment. This book is of interest to all those engaged in lunar and terrestrial planetary studies.

Features

Forthcoming

Contents


Fields of interest

Planetology; Extraterrestrial Physics; Space Sciences; Geophysics and Environmental Physics

Target groups

Research

Type of publication

Monograph

Available

2010. IV, 304 p. Hardcover

99,95 €
ISBN 978-3-642-12256-9

e-Research Collaboration

Theory, Techniques and Challenges

The shift of paradigm from collaborations of convenience to collaborations of opportunity using Web 2.0 technologies is called Research 2.0. Research 2.0 is becoming a critical component in research management and collaboration and has led to the creation of new research networks such as MyNetResearch. Many universities are familiar with the concepts of Web 2.0 including Wikis, blogs, and social networking tools, but have not implemented these tools holistically in a research setting. Unfortunately, many researchers have difficulties either to understand how to implement the change in paradigm associated with online collaboration, or else cannot convince the university administrators of the value of a research cyberinfrastructure. Universities are under increasing pressure to embrace the Research 2.0 paradigm in order to stay competitive, attract the best students and faculty, publish, apply for research grants, and empower their stakeholders in all aspects.

Features

Research in both academic and non-academic circles has remained virtually identical in its conduct and organization over the last few decades. Disparate groups of researchers have worked on their ideas, projects and inventions in isolated clusters, with little sharing of information and synergies from collaboration. The advent of social networks and Web portals such as MyNetResearch have led to the creation[...]

Contents


Fields of interest

Business & Economics (general)

Target groups

Research

Type of publication

Monograph

Available

2010. XVI, 326 p. Hardcover

99,95 €
ISBN 978-3-642-12256-9
**Deskriptive Statistik**


**Features**

Dieses Lehrbuch gibt einen umfassenden Überblick über Methoden der deskriptiven Statistik, die durch einige Verfahren der explorativen Datenaanalyse ergänzt wurden. Die zahlreichen statistischen Möglichkeiten zur Quantifizierung empirischer Phänomene werden problemorientiert dargestellt, wobei ihre Entwicklung schrittweise erfolgt, sodass Notwendigkeit und Nutzen der Vorgehensweise deutlich hervortreten. […]

**Contents**


**Fields of interest**

Game Theory / Mathematical Methods; Statistics for Business, Economics, Mathematical Finance, Insurance

**Available**

2010. XVI, 269 S. (Springer-Lehrbuch) Softcover

23,32 €

ISBN 978-3-642-13385-5

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**Population Ageing - A Threat to the Welfare State?**

**The Case of Sweden**

This book is the first to take a comprehensive view of the challenges that population ageing present in the near future taking Sweden as the case. Can the increasing number of retirees per worker be stopped by immigration or increasing fertility or will we need to increase pension age instead? Cost for the social-care system is readily increasing; even more is the costs for health care. Can the galloping costs be funded by an increase in taxes or do we need to make reforms, similar to the ones already made in the pension system, which has been used as a model for many other countries. The fact that it is difficult to make health care dependent on personal contributions, as is the case of the pension system, funding of health care is a true test of solidarity across generations. The book ends with a discussion on whether the demographic challenge to the welfare system is also a threat to the welfare state as such.

**Features**

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**Contents**


**Fields of interest**

Population Economics; Demography; Aging; Public Finance & Economics; Social Policy

**Available**

2010. XVI, 210 p. 60 illus., 30 in color. Hardcover

89,95 €

ISBN 978-3-642-12611-6

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**Mood Matters**

From Rising Skirt Lengths to the Collapse of World Powers

'Mood Matters' makes the radical assertion that all social events ranging from fashions in music and art to the rise and fall of civilizations are biased by the attitudes a society holds toward the future. When the 'social mood' is positive and people look forward to the future, events of an entirely different character tend to occur than when society is pessimistic. The book presents many examples from every walk of life in support of this argument. In addition, methods are given to actually measure the social mood and to project it into the future in order to forecast what's likely or not over varying periods of time. Cast's writing is a pleasure to read and its contents an eye-opener. 'They [the chapters] tell an engrossing story, and the mystery heightens as it goes. . . . it's chatty and knowing.' Greg Benford, Physicist and science-fiction writer, author of "Timescape" and "Deep Time" "I am struck by how thought provoking it all is. I am sure that your book will draw a lot of attention" Tor[...]

**Features**

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Economic Dynamics

This fourth edition of Gandolfo’s masterful book on economic dynamics is the premier source on dynamic mathematical tools for economists, with illustrations from many areas of current economic research. Not only is the book valuable as an encyclopedic reference book for researchers but is an excellent choice for a textbook on economic dynamics. Gandolfo has managed to provide background in even the most advanced areas of nonlinear dynamics in a readable manner avoiding unnecessarily advanced notation. As a result, the book is broadly accessible while including coverage of many of the deepest areas of current research in economic dynamics. A glance through the table of contents is enough to indicate to almost any serious economist that this is a book to buy. William A. Barnett, Oswald (Distinguished Professor of Macroeconomics, Department of Economics, University of Kansas, USA, and Editor, Macroeconomic Dynamics)

Features

Features
'This fourth edition of Gandolfo’s masterful book on economic dynamics is the premier source on dynamic mathematical tools for economists, with illustrations from many areas of current economic research. Not only is the book valuable as an encyclopedic reference book for researchers but is an excellent choice for a textbook on economic dynamics. Gandolfo has managed to provide background in even the most [...]'

Contents

Contents
Linear Difference Equations.- Linear Differential Equations.- Advanced Topics.

Fields of interest

Fields of interest
Economic Theory; Game Theory, Economics, Social and Behav. Sciences

Target groups

Research

Type of publication

Type of publication
Monograph

Available

Available
2010: XVI, 829 p. Softcover
79,95 €
ISBN 978-3-642-13503-3

Financial Economics

Financial Economics is a fascinating topic where ideas from economics, mathematics and, most recently, psychology are combined to understand financial markets. This book gives a concise introduction into this field and includes for the first time recent results from behavioral finance that help to understand many puzzles in traditional finance. The book is tailor made for master and PhD students and includes tests and exercises that enable the students to keep track of their progress. Parts of the book can also be used on a bachelor level. Researchers will find it particularly useful as a source for recent results in behavioral finance and decision theory.

Features

Features
Financial economics is a fascinating topic where ideas from economics, mathematics and, most recently, psychology are combined to understand financial markets. This book gives a concise introduction into this field and includes for the first time recent results from behavioral finance that help to understand many puzzles in traditional finance. The book is tailor made for master and PhD students and includes [...]'

Contents

Contents

Fields of interest

Fields of interest
Financial Economics; Finance / Banking; Quantitative Finance; Economic Theory

Target groups

Target groups
Upper undergraduate

Type of publication

Type of publication
Graduate/advanced undergraduate textbook

Available

Available
2010: XI, 373 p. Hardcover
74,95 €
ISBN 978-3-540-36146-6
Handbook on Approval Voting

Under Approval Voting, voters can “approve” as many candidates as they want, and the candidate approved by the largest number of voters is elected. Since the publication of the seminal book written by Steven Brams and Peter Fishburn in 1983, a variety of theoretical and empirical works have enhanced our understanding of this method. The behavior of voters in such elections has been observed both in the laboratory and in the field; social choice theorists and political scientists have considered the structure of electoral competition entailed by Approval Voting. This book surveys this large body of knowledge through a collection of contributions written by specialists of the various disciplines involved.

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Contents

Fields of interest
Economics; Political Science; Game Theory; Economics, Social and Behavior Sciences

Target groups
Research

Type of publication
Monograph

Available
2010. XVIII, 480 p. (Studies in Choice and Welfare) Hardcover
139,95 €
ISBN 978-3-642-02838-0

Handbook of Quantitative Finance and Risk Management

Quantitative finance is a combination of economics, accounting, statistics, econometrics, mathematics, stochastic process, and computer science and technology. Increasingly, the tools of financial analysis are being applied to assess, monitor, and mitigate risk, especially in the context of globalization, market volatility, and economic crisis. This two-volume handbook, comprised of over 100 chapters, is the most comprehensive resource in the field to date, integrating the most current theory, methodology, policy, and practical applications. SHOWCASING CONTRIBUTIONS FROM AN INTERNATIONAL ARRAY OF EXPERTS, THE HANDBOOK OF QUANTITATIVE FINANCE AND RISK MANAGEMENT IS UNPARALLELED IN THE BREATH AND DEPTH OF ITS COVERAGE. VOLUME 1 PRESENTS AN OVERVIEW OF QUANTITATIVE FINANCE AND RISK MANAGEMENT RESEARCH, COVERING THE ESSENTIAL THEORIES, POLICIES, AND EMPirical METHODOLOGIES USED IN THE FIELD. CHAPTERS PROVIDE IN-DEPTH DISCUSSION OF PORTFOLIO THEORY AND INVESTMENT ANALYSIS. VOLUME 2 COVERS OPTIONS AND [...] FEATURES

Quantitative finance is a combination of economics, accounting, statistics, econometrics, mathematics, stochastic process, and computer science and technology. Increasingly, the tools of financial analysis are being applied to assess, monitor, and mitigate risk, especially in the context of globalization, market volatility, and economic crisis. This three-volume handbook, comprised of over 100 chapters, [...] Features

Contents

Fields of interest
Finance / Banking; Quantitative Finance; Econometrics

Target groups
Research

Type of publication
Reference work

Available
2010. XX, 1550 p. 670 illus., 335 in color. Hardcover
699,00 €

Verfassen und Vortragen


Features

Contents

Fields of interest
Economics; Social Sciences (general); Physics (general); Life Sciences (general); Biomedicine (general)

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. XIII, 168 S. (Springer-Lehrbuch) Softcover
18,64 €
ISBN 978-3-642-13419-7

139,95 €
ISBN 978-3-642-02838-0

699,00 €

18,64 €
ISBN 978-3-642-13419-7
Data Mining for Social Network Data

Driven by counter-terrorism efforts, marketing analysis and an explosion in online social networking in recent years, data mining has moved to the forefront of information science. This proposed Special Issue on Data Mining for Social Network Data will present a broad range of recent studies in social networking analysis. It will focus on emerging trends and needs in discovery and analysis of communities, solitary and social activities, activities in open for a and commercial sites as well. It will also look at network modeling, infrastructure construction, dynamic growth and evolution pattern discovery using machine learning approaches and multi-agent based simulations. Editors are three rising stars in world of data mining, knowledge discovery, social network analysis, and information infrastructures, and are anchored by Springer author/editor Hsinchun Chen (Terrorism Informatics; Medical Informatics; Digital Government), who is one of the most prominent intelligence analysis and data mining.

Features

Social Network Data Mining: Research Questions, Techniques, and Applications Nasrullah Memon, Jennifer Xu, David L. Hicks and Hsinchun Chen Automatic expansion of a social network using sentiment analysis Hristo Tanev, Bruno Pouliquen, Vanni Zavarella and Ralf Steinberger Automatic mapping of social networks of actors from text corpora: Time series analysis James A. Danowski and Noah Cepela A social network [...] 

Contents


Fields of interest

Business Information Systems; Pattern Recognition; Computer Appl. in Social and Behavioral Sciences 

Target groups

Professional/practitioner 

Type of publication

Available 

Exploring Services Science

First International Conference, IESS 2010, Geneva, Switzerland, February 17-19, 2010, Revised Papers

This book contains the refereed post-proceedings of the First International Conference on Exploring Services Science (IESS) in Geneva, Switzerland, in February 2010. The goal of the conference was to build upon the growing community to further study and understand this emerging discipline, which leverages methods, results and knowledge stemming from management, social and cognitive science, law, ethics, economics, and computer science towards the development of own concepts, methods, techniques and approaches and thus creating the basis for the production of transdisciplinary results. The 19 full and 8 short papers accepted for IESS were selected from 42 submissions and cover a wide spectrum of issues related to service design, service creation, service composition, service management, and service networks as well as their applications in businesses and public administration.

Features

This book contains the refereed post-proceedings of the First International Conference on Exploring Services Science (IESS) in Geneva, Switzerland, in February 2010. The goal of the conference was to build upon the growing community to further study and understand this emerging discipline, which leverages methods, results and knowledge stemming from management, social and cognitive science, law, ethics, [...] 

Fields of interest

Business Information Systems; Computer Appl. in Administrative Data Processing; Information Systems Applications (incl.Internet) 

Target groups

Research 

Type of publication

Proceedings 

Available 

Sustainable e-Business Management


This book contains selected papers from the e-Commerce and e-Business (SIGeBIZ) track at the 16th Americas Conference on Information Systems, AMCIS 2010, held in Lima, Peru, August 12-15, 2010. The 13 papers presented here were selected from 48 submissions and have been organized into three research lines: e-business models and information systems in financial markets, e-commerce use and design, and e-business research issues and methods.

Features

This book contains selected papers from the e-Commerce and e-Business (SIGeBIZ) track at the 16th Americas Conference on Information Systems, AMCIS 2010, held in Lima, Peru, August 12-15, 2010. The 13 papers presented here were selected from 48 submissions and have been organized into three research lines: e-business models and information systems in financial markets, e-commerce use and design, and [...] 

Fields of interest

Business Information Systems; e-commerce / e-business; Computer Appl. in Administrative Data Processing; Information Systems Applications (incl.Internet) 

Target groups

Research 

Type of publication

Proceedings 

Available 


46,00 € 

ISBN 978-3-642-15140-8 


104,95 € 

ICT for the Next Five Billion People
Information and Communication for Sustainable Development

Currently, around one to two billion users are able to connect to the Internet, most of them living in the industrialized parts of the world. However, if we want to improve the quality of life of the world population with the help of access to information and education, it is necessary that in the next decade an additional five billion people gain access to the Internet. The next five billion Internet users are mainly living in emerging economies. Therefore, the main challenge is to lower the economic barrier using new approaches for infrastructure deployment and service delivery to billions of people. This book reflects the discussions of the challenges from the Münchner Kreis with representatives from the ICT industry, academia, non-governmental organizations and governmental development organizations, among them many representatives from emerging economies in Africa and Asia. They had highlighted the real demand for ICT, and what impact ICT creates for the wealth and lifestyle of the people.

Features
Currently, around one to two billion users are able to connect to the Internet, most of them living in the industrialized parts of the world. However, if we want to improve the quality of life of the world population with the help of access to information and education, it is necessary that in the next decade an additional five billion people gain access to the Internet. The next five billion Internet users [...]
Erfolgreich Forschen
Ein Leitfaden für Bachelor-, Master-Studierende und Doktoranden


Features
Die konszenenzierten and umsetzungsorientierten Hilfestellungen in diesem Forschungs-Leitfaden sollen Studierende und Doktoranden befähigen, ein gewähltes Forschungsthema in einem strukturierten Prozess mit definierten und damit nachvollziehbaren Teilschritten zielorientiert zu bearbeiten, so dass hieraus aussagefähige wissenschaftliche Ergebnisse resultieren. Der disziplinäre Ansätze sind die [...]}

Contents

Fields of interest
Business & Economics (general); Science; Social Sciences (general)

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. XXII, 427 S. (Springer-Lehrbuch) Softcover
26,12 € ISBN 978-3-642-13901-7

C. Walter, Fondation de la Maison des Sciences de l’Homme, Paris, France

Nouvelles normes financières
S’organiser face à la crise

En réaction à la crise de 2008, une forte contestation des normes financières dites « modernes » est apparue chez toutes les parties prenantes du système économique conduisant à un diagnostic pessimiste sur la pertinence et la qualité du dispositif de normes installé dans le milieu des années 1990. Répondant à ce constat, ce livre propose une refondation des normes de la finance à partir d’un diagnostic nouveau porté sur la crise : une pensée défaillante de l’incertitude financière, schématisée dans le recours systématique à la représentation brownienne des aléas. La proposition centrale de l’ouvrage est déclinée suivant différentes perspectives afin de permettre une reconstruction d’un système prudentiel et comptable, libéré des impasses régulatoires causées par la réduction probabiliste brownienne. A partir d’une approche transdisciplinaire est établi le rôle crucial joué par les représentations probabilistes de l’incertitude dans les constructions sociales des normes financières.

Features
La crise financière de 2008 a placé l’ensemble des règles comptables et prudentielles de la finance sur le banc des accusés. Or ces normes qui règlent la vie du monde financier ont subi une profonde refonte depuis les années Devant l’ampleur des dysfonctionnements révélés par la crise, ce livre propose de nouvelles normes financières à partir du

Contents

Fields of interest
Economics; Financial Economics; Epistemology

Target groups
Professional/practitioner

Type of publication
Monograph

Available

L. Wankhade, SGGS Institute of Engineering & Technology, Nanded, India; B. Dabade, SGGS Institute of Engineering & Technology, Nanded, India

Quality Uncertainty and Perception
Information Asymmetry and Management of Quality Uncertainty and Quality Perception

The book addresses the complex issue of quality uncertainty due to information asymmetry in the backdrop of information economics, total quality management and marketing science. Reliability Engineering, Seven Management Tools and System Dynamics are used to develop theories on quality uncertainty and perception. Quality perception is identified as a multidisciplinary measure of business performance. The tools are developed to minimize quality uncertainty or to maximize quality perception. A few worksheets are provided for applying these theories to improve business performance.

Features
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Contents
1 Introduction 1.1 Recent metrics for business performance 1.3 Quality commonality and multidisciplinary approach 1.4 Management of quality uncertainty and perception 2 Quality uncertainty due to information asymmetry 2.1 Prelude to quality uncertainty 2.2 Information asymmetry and quality uncertainty 2.3 Examples of information asymmetry and quality uncertainty 2.4 Implications of asymmetric informatica 2.5 Product manufacturing and quality uncertainty 2.6 Causes of quality uncertainty due to[...]

Fields of interest
Organization / Planning; Technology Management; Production / Logistics; Engineering Economics, Organization, Logistics, Marketing; Quality Control, Reliability, Safety and Risk

Target groups
Research

Type of publication
Monograph

Available
2010. XIV, 115 p. (Contributions to Management Science) Hardcover
89,95 € ISBN 978-3-7908-2194-9
Education

J. Cenoz, University of the Basque Country, Donostia-San Sebastian, Spain; N.H. Hornberger, University of Pennsylvania, Philadelphia, PA, USA (Eds.)

Knowledge About Language

The 29 chapters in this volume offer insight in the various interdisciplinary approaches to the study of knowledge about language or language awareness. They reflect the breadth of the area and chart its possible development in topics such as: Language awareness in the mother tongue and second and foreign languages; Studies aimed at improving the teaching of languages in educational settings; Studies of Psycholinguistic processes, explicit and implicit knowledge; Bilingualism and multilingualism, in particular metalinguistic awareness; Critical language awareness, social practices of language and the role of power and ideology. This is one of ten volumes of the Encyclopedia of Language and Education published by Springer. The Encyclopedia bears testimony to the dynamism and evolution of the language and education field, as it confronts the ever-burgeoning and irreplaceable linguistic diversity and ongoing pressures and expectations placed on education around the world.

Features

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Fields of interest

Language Education; Theoretical Linguistics; Psycholinguistics

Target groups

Graduate

Type of publication

Encyclopaedia

Available

2010. XXII, 442 p. Softcover

69.95 €

Advancing Social Studies Education through Self-Study Methodology

The Power, Promise, and Use of Self-Study in Social Studies Education

Advancing Social Studies Education through Self-Study Methodology provides a collection of works that highlights ways in which self-study of teaching and teacher education practices can advance conversations and knowledge in social studies education. Some of the pieces chosen for this book will provide theoretical connections between the two fields (e.g. how values and principles important to both fields work together, are similar, and can help each field expand). Others will provide specific examples of self-studies that focus on social studies specific concepts. The book provides a strong and clear introduction of self-study to the field of social studies education as well as an argument for its use to further understand social studies teaching and teacher education. It also provides the self-study community with an example of how self-study can be used to look at content specific aspects of teaching and teacher education.

Features

This collection of works highlights ways that self-study of teaching and teacher education practices can advance conversations and knowledge in social studies education. The book contains chapters which explicitly address the power of self-study for social studies teachers and teacher educators. For example, how a social studies teacher engaged in self-study learns and grows as a teacher; how a teacher [...]
Developing Successful Leadership

Research has shown that school leadership is second only to classroom teaching in its effect on pupil learning. As the demands on management teams become ever more complex, this volume offers a fresh and expansive view on the challenges to be met in developing a leadership career. With contributions from some of the most accomplished commentators on school leadership and management from around the world, this book moves away from the simple ‘how to’ of becoming a principal, focusing instead on the wider issues of becoming a successful leader. The central aim has been to assemble powerful statements from international authorities that encapsulate leading-edge thinking on a group of interconnected themes based on the notion of developing successful leadership in, and beyond, schools. In so doing the text examines strategies for existing leaders developing their full capacity as well as enhancing the skills of those new to, or aspiring to, a leadership role. The chapters contributed by a carefully selected range of authors around the world represent a fresh and expansive view on the challenges to be met...

Language Socialization

This volume, Research Methods in Language, offers an overview of the wide range of methodological approaches to language and education across the axes of micro and macro-linguistic and social levels of analysis, as well as the multiple connections between them. The four sections each offer several reviews of different broad areas or subfields. Articles with a more narrow focus or demonstrating the application of an approach: International scope • Diversity of scholarly perspectives • The resultant breadth and depth of theoretical and methodological research perspective makes this a unique and highly valuable resource. This is one of ten volumes of the Encyclopedia of Language and Education published by Springer. The Encyclopedia bears testimony to the dynamism and evolution of the language and education field, as it confronts the ever-burgeoning and irrepressible linguistic diversity and ongoing pressures and expectations placed on education around the world.

Features
This volume addresses language socialization, the research area that focuses on the social, cultural and interactional contexts in which language and other knowledge are learned, both formally and informally. The volume offers: • An important 30-year retrospective of the roots and development of language socialization • Insights from a wide range of linguistic, ethnic, and geographical regions of the world.

Contents
General Editor’s Introduction. Introduction to Volume 8: Language and Socialization Contributors Reviewers. Section 1: Language Socialization. Theoretical and Methodological Approaches Section 2: Language Socialization at Home and in the Community Section 3: Language Socialization and Schooling Section 4: Language Socialization among Adolescents and Adults Section 5: Language Socialization in Particular Communities of Practice Subject Index Name Index Tables of Contents: Volumes 1–10

Fields of interest
Language Education; Psycholinguistics; Sociolinguistics; Literacy; Migration; Linguistics (general)

Target groups
Graduate

Type of publication
Encyclopedia

Available
2010. XXIV, 380 p. Softcover
69.95 €

Research Methods in Language and Education

This volume, Research Methods in Language, offers an overview of the wide range of methodological approaches to language and education across the axes of micro and macro-linguistic and social levels of analysis, as well as the multiple connections between them. The four sections each offer several reviews of different broad areas or subfields. Articles with a more narrow focus or demonstrating the application of an approach: International scope • Diversity of scholarly perspectives • The resultant breadth and depth of theoretical and methodological research perspective makes this a unique and highly valuable resource. This is one of ten volumes of the Encyclopedia of Language and Education published by Springer. The Encyclopedia bears testimony to the dynamism and evolution of the language and education field, as it confronts the ever-burgeoning and irrepressible linguistic diversity and ongoing pressures and expectations placed on education around the world.

Features
This volume, Research Methods in Language and Education, offers an overview of the wide range of methodological approaches to language and education across the axes of micro and macro-linguistic and social levels of analysis, as well as the multiple connections between them. The four sections each offer several reviews of different broad areas or subfields. Articles with a more narrow focus or demonstrating the application of an approach: International scope • Diversity of scholarly perspectives • The resultant breadth and depth of theoretical and methodological research perspective makes this a unique and highly valuable resource. This is one of ten volumes of the Encyclopedia of Language and Education published by Springer. The Encyclopedia bears testimony to the dynamism and evolution of the language and education field, as it confronts the ever-burgeoning and irrepressible linguistic diversity and ongoing pressures and expectations placed on education around the world.

Contents
General Editor’s Introduction. Introduction to Volume 10: Research Methods in Language and Education. Contributors. Reviewers. Section 1: Language, Society and Education. Section 2: Language Variation, Acquisition and Education. Section 3: Language, Culture, Discourse and Education. Section 4: Language, Interaction and Education. Subject Index. Name Index. Cumulative Subject Index. Cumulative Name Index. Tables of Contents: Volumes 1–10

Fields of interest
Language Education; Literacy; Sociolinguistics; Linguistics (general)

Target groups
Graduate

Type of publication
Encyclopedia

Available
2010. XXII, 444 p. Softcover
69.95 €
Discourse and Education
Encyclopedia of Language and Education Volume 3

This volume surveys the research on discourse and
and constituting the social world', the critical,
post-structuralist view of discourse as a source of
power. Several themes resonate across the four sec-
tions of Volume 3: Discourse and the Construction of
Knowledge. These studies show that the development of research
in these institutions leads to quite complex interac-
tions with universities, both in the sense of conver-
gence (academic drift) and/or of differentiation of
a specific research mandate oriented towards the
regional economy. Therefore, this book aims to fill
this gap by first analysing a number of transversal
issues related to the[...]

Features
The European Union’s Lisbon strategy, which
aims to make the region the most competitive and
dynamic knowledge economy in the world, has given
a much higher profile to tertiary education institu-
tions outside the traditional university sector in a
number of member states. With the EU looking to
maximize these colleges’ contribution to the Union’s
development, their role is now very much on the
political agenda. [...]
Identifying Potential for Equitable Access to Tertiary Level Science

Digging for Gold

Higher education internationally is in a state of transition and transformation, leading to an increase in the level of participation, and a consequent increase in number of non traditional and underprepared students. The appearance of these students provides a particular challenge in the sciences where adequate grounding is crucial. One response to this challenge has been the provision of access, foundation or “second chance programmes” which operate on different models internationally. In South Africa, where the push for equity is strong in the wake of the apartheid era, programmes have generally been established at all tertiary institutions with some of the most successful of these programmes based at universities characterised by a high research output. Consequently in the last decade there has been a great deal of research into the effectiveness of these programmes both at a micro and macro level. Similar research in other countries exists, but is patchy and often based on small groups of [...] 

Features

Higher education reforms internationally have led to large increases in student numbers, and thus a consequent rise in so-called ‘non-traditional’ and underprepared students who arrive at higher education institutions with a variety of educational back-grounds. The appearance of these students provides a particular challenge in the sciences where adequate grounding is crucial. One response to this challenge has [...] 

Contents


Fields of interest

Science Education; Higher Education; Mathematics Education; Educational Policy and Politics; Assessment, Testing and Evaluation

Target groups

Research

Type of publication

Monograph

Available

2010. VII, 5 p. Hardcover

99,95 €

Literacy

Encyclopedia of Language and Education Volume 2

Literacy is the second volume of the Encyclopedia of Language and Education, the first attempt to overview an area which has emerged as a coherent and exciting field of study in the last two decades. While forming part of a series of ten volumes, Literacy also stands on its own, drawing on some state-of-the-art reviews of current concerns in the study of literacy prepared by leading writers and researchers. The book is organised in three main sections: Literacies and Social Theory, Literacies and Social Institutions and Living Literacies – Social and Cultural Experience. The approach is multidisciplinary, drawing on insights from fields as diverse as anthropology and computer science, sociolinguistics and psychology. The international flavour of the volume is reflected not only in the choice of contributors from nine different countries but also in the emphasis throughout on the impact of globalization on our understanding of literacy.

Features

Literacy is the second volume of the Encyclopedia of Language and Education, the first attempt to overview an area which has emerged as a coherent and exciting field of study in the last two decades. While forming part of a series of ten volumes, Literacy also stands on its own, drawing on some state-of-the-art reviews of current concerns in the study of literacy prepared by leading writers and researchers. [...] 

Contents

General Editor’s Introduction. - Introduction to Volume 2: Literacy – Brian V. Street. - Contributors. - Reviewers. - Section 1: Literacies and Social Theory. - Section 2: Literacies and Social Institutions. - Section 3: Living Literacies – Social and Cultural Experience. - Subject. - Index. - Name Index. - Tables of Contents: Volumes 1-10.

Fields of interest

Language Education

Target groups

Graduate

Type of publication

Encyclopedia (a)edia

Available

2010. XXIV, 390 p. Softcover

69,95 €

Second and Foreign Language Education

Encyclopedia of Language and Education Volume 4

This volume presents the most recent theoretical, methodological, and pedagogical insights on foreign and second language learning and teaching in diverse educational settings and situations, learner populations, proficiency levels and teaching practices. Five thematic sections each include theoretical and practical approaches to second and foreign language education: • Theoretical underpinnings • Current approaches • International perspectives • Teacher preparation and professional development • The role of technology This is one of ten volumes of the Encyclopedia of Language and Education published by Springer. The Encyclopedia bears testimony to the dynamism and evolution of the language and education field, as it confronts the ever-burgeoning and irrepressible linguistic diversity and ongoing pressures and expectations placed on education around the world.

Features

This volume presents the most recent theoretical, methodological, and pedagogical insights on foreign and second language learning and teaching in diverse educational settings and situations, learner populations, proficiency levels and teaching practices. Five thematic sections each include theoretical and practical approaches to second and foreign language education: • Theoretical underpinnings • Current [...] 

Contents

General Editor’s Introduction / Nancy H. Hornberger. - Introduction to Volume 4: Second and Foreign Language Education / Nelleke Van Deussen-Scholl. - Contributors . - Reviewers . - Section 1: Theoretical Underpinnings. - Section 2: Current Approaches to Second and Foreign Language Education. - Section 3: International Perspectives on Second Foreign Language Learning. - Section 4: Teacher Preparation and Professional Development. - Section 5: The Role of Technology in Second and Foreign Language Education. - Subject Index . - Name Index . - Tables of Contents: Volumes 1–10.

Fields of interest

Language Education; Applied Linguistics; Sociolinguistics; Linguistics (general)

Target groups

Graduate

Type of publication

Encyclopedia (a)edia

Available

2010. XXIV, 420 p. Softcover

69,95 €
Activity Systems Analysis Methods

In the last two decades, there has been growing interest in pursuing theoretical paradigms that capture complex learning situations. Cultural Historical Activity Theory (CHAT) is one of several theoretical frameworks that became very popular among educational researchers because it conceptualizes individuals and their environment as a holistic unit of analysis. It assumes a non-dualistic ontology and acknowledges the complexities involved in human activity in natural settings. Recently, reputable journals such as the American Psychologist, Educational Psychologist, and Educational Researcher that are targeted for a wide-range of audience have included articles on CHAT. In many of such articles, CHAT has been referred to as social constructivism, socio-cultural theory, or activity theory. Activity systems analysis is one of the popular methods among CHAT researchers for mapping complex human interactions from qualitative data. However, understanding the methods involved in activity systems analysis,[...] Features

Cultural Historical Activity Theory (CHAT) has its origins in Lev Vygotsky's pioneering work in the 1920s. More recently, education scholars have used CHAT to study learning behavior through the creation of activity systems analysis. Activity Systems Analysis Methods brings the CHAT framework into action on contemporary learning process in context. By understanding the methods involved in activity systems analysis,[...]

Contents


Fields of interest

Educational Technology; Learning and Instruction

Target groups

Research

Type of publication

Monograph

Available

2010. XVI, 148 p. 60 illus., 30 in color. Hardcover

89,95 €

ISBN 978-1-4419-6320-8

Global Pedagogies

Schooling for the Future

Global Pedagogies: Schooling for the Future, which is the twelfth volume in the 12-volume book series Globalisation, Comparative Education and Policy Research, presents scholarly research on major discourses in comparative education research with reference to globalisation, educational policy and classroom pedagogy. It is a sourcebook of ideas for researchers, practitioners and policy makers in education, globalisation, global pedagogies and schooling for the future around the world. The aim of the book is to provide an easily accessible, practical yet scholarly source of information about the international concern in the field of globalisation, global pedagogies, and educational transformation. Readers will find here the very latest thinking on globalisation, global pedagogies and educational transformation in the context of global culture. It offers a timely overview of current issues affecting discourses pertaining to global pedagogies and policy research in the global culture. It provides[...]

Features

In a postmodern world characterized by flux and uncertainty, parents often view education institutions as a major, if not the only, provider of moral certainties for their children. Yet ironically, as these expectations of schools and their staff have increased, conservative-minded governments have attenuated the ability of schools to achieve them, through funding cuts, centralization and the blunt instrument[...]

Contents


Fields of interest

International and Comparative Education; Curriculum Studies; Educational Policy and Politics; Sociology of Education; Teaching and Teacher Education

Target groups

Research

Type of publication

Contributed volume

Available


99,95 €


Motion Control in Offshore and Dredging

High loads with high dynamics in severe conditions can only be driven by fluid power mechanisms. Motion Control is often used as a description in various engineering disciplines to refer to a technological solution that is able to control motion, e.g. the movement of at least one part relative to another. This volume describes how drives, sometimes very large, are designed and realised. The book gives a practical explanation of the way in which the different mechanisms described work. A distinction is made between rotating and linear drives. In the case of rotating drives, the choice for an electrical drive is becoming more and more prevalent. Linear drives remain important, because of the large forces and highly dynamic behaviour in the domain of hydraulic drive technology. Both these important technologies are extensively discussed in this book, together with design rules and the many installation requirements for applications in the offshore and dredging industry.

Features

Motion Control finds applications in many offshore, subsea and dredging installations. Motion Control is always based on a combination of mechanical-, electrical- and hydraulic drive systems together with control techniques. The book provides the basic theory of hydraulic controls, behaviour of hydraulic fluids, hydraulic component functions, parameter selections, calculation of basic hydraulic systems and[...]

Contents


Fields of interest

Vibration, Dynamical Systems, Control; Offshore Engineering; Engineering Design; Quality Control, Reliability, Safety and Risk

Target groups

Research

Type of publication

Monograph

Available

2010. XIV, 316 p. Hardcover

129,95 €

Tactile Perception of Textiles in a Virtual-Reality System

This work was part of the EU funded HAPTEX project, which aimed at developing a VR system for the visual and haptic presentation of textiles. The project was coordinated by the MIRALab at the University of Geneva which also contributed the physical based simulation system of the fabrics.

Features
Virtual Reality (VR) has a lot of applications ranging from entertainment to mechanical design and medical training. VR systems are often used in training situations where training in a real environment would be inappropriate and possibly even dangerous. This work was part of the EU funded HAPTEX project, which aimed at developing a VR system for the visual and haptic presentation of textiles.

Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Textile Engineering; Cognitive Psychology

Target groups
Research

Type of publication
Monograph

Available
79,95 €
ISBN 978-3-642-13973-4

Cellular and Porous Materials in Structures and Processes

The book covers the state-of-the-art treatment in modelling and experimental investigation of the mechanical behaviour of cellular and porous materials. Starting from the continuum mechanical modelling, to the numerical simulation, several important questions related to applications such as the fracture and impact behaviour are covered.

Features
The book covers the state-of-the-art treatment in modelling and experimental investigation of the mechanical behaviour of cellular and porous materials. Starting from the continuum mechanical modelling, to the numerical simulation, several important questions related to applications such as the fracture and impact behaviour are covered.

Fields of interest
Continuum Mechanics and Mechanics of Materials; Structural Mechanics; Appl. Mathematics / Computational Methods of Engineering

Target groups
Research

Type of publication
Contributed volume

Available
149,00 €
ISBN 978-3-7091-0296-1

Handbook for Heat Exchangers and Tube Banks design

When a heating fluid transfers heat to a heated fluid through a wall, if the fluids are in parallel flow or counter flow it is possible to compute exactly both the transferred heat and the temperatures of the fluids via well-known equations. This holds true both for design and verification computation. However, the motion of the fluids is never in parallel flow or counter flow in heat exchangers and in tube banks. Instead, it is rather complex and consists of a combination of various cross flows. Hence, a precise design of the above components requires, on a case-by-case basis, the availability of the value of certain crucial factors or of corrective factors so as to make it possible to use the equations relative to parallel flow or counter flow. This handbook contains the introduction to the problem, its design criteria, and about 70 tables for the exact design and verification computation. It also indicates how to proceed in the case of cross flow.

Features
When a heating fluid transfers heat to a heated fluid through a wall, if the fluids are in parallel flow or counter flow it is possible to compute exactly both the transferred heat and the temperatures of the fluids via well-known equations. This holds true both for design and verification computation. However, the motion of the fluids is never in parallel flow or counter flow in heat exchangers and in tube [..]

Contents
Introduction to Computation.- Design Computation.- Verification Computation.- Appendix A – Corrective Factors for Design Computation.- Appendix B – Factor # or Corrective Factors for Verification Computation.

Fields of interest
Engineering Thermodynamics, Heat and Mass Transfer; Industrial Chemistry / Chemical Engineering; Engineering Design; Energy Technology

Target groups
Research

Type of publication
Monograph

Available
99,95 €
ISBN 978-3-642-13308-4
Geometry of Single-point Turning Tools and Drills
Fundamentals and Practical Applications

Geometry of Single-point Turning Tools and Drills outlines clear objectives of cutting tool geometry selection and optimization, using multiple examples to provide a thorough explanation. It addresses several urgent problems that many present-day tool manufacturers, tool application specialists, and tool users, are facing. It is both a practical guide, offering useful, practical suggestions for the solution of common problems, and a useful reference on the most important aspects of cutting tool design, application, and troubleshooting practices. Covering emerging trends in cutting tool design, cutting tool geometry, machining regimes, and optimization of machining operations, Geometry of Single-Point Turning Tools and Drills is an indispensable source of information for tool designers, manufacturing engineers, research workers, and students.

Features
Tools for metal cutting have many shapes and features, each of which is described by its angles or geometries. The selection of the right cutting tool geometry is critical because it directly affects the integrity of the machined surface, tool life, power needed for machining, and thus the overall machining efficiency. Geometry of Single-Point Turning Tools and Drills outlines clear objectives of [...] 

Contents

Fields of interest
Manufacturing, Machines, Tools; Machinery and Machine Elements; Operating Procedures, Materials Treatment

Target groups
Research

Type of publication
Monograph

Available
169.95 € ISBN 978-1-84996-052-6

Cracked Rotors
A Survey on Static and Dynamic Behaviour Including Modelling and Diagnosis

Cracks can develop in rotating shafts and can propagate to relevant depths without affecting consistently the normal operating conditions of the shaft. In order to avoid catastrophic failures, accurate vibration analyses have to be performed for crack detection. The identification of the crack location and depth is possible by means of a model based diagnostic approach, provided that the model of the crack and the model of the cracked shaft dynamical behaviour are accurate and reliable. This monograph shows the typical dynamical behaviour of cracked shafts and presents tests for detecting cracks. The book describes how to model cracks, how to simulate the dynamical behaviour of cracked shaft, and compares the corresponding numerical with experimental results. All effects of cracks on the vibrations of rotating shafts are analyzed, and some results of a numerical sensitivity analysis of the vibrations to the presence and severity of the crack are shown. Finally the book describes some crack [...]

Features
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Contents

Fields of interest
Continuum Mechanics and Mechanics of Materials; Structural Mechanics; Machinery and Machine Elements; Energy Technology; Manufacturing, Machines, Tools

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XV, 534 p. Hardcover
99.95 € ISBN 978-3-642-01484-0

Advanced Power MOSFET Concepts

During the last decade many new concepts have been proposed for improving the performance of power MOSFETS. The results of this research are dispersed in the technical literature among journal articles and abstracts of conferences. Consequently, the information is not readily available to researchers and practicing engineers in the power device community. There is no cohesive treatment of the ideas to provide an assessment of the relative merits of the ideas. 'Advanced Power MOSFET Concepts' provides an in-depth treatment of the physics of operation of advanced power MOSFETs. Analytical models for explaining the operation of all the advanced power MOSFETs will be developed. The results of numerical simulations will be provided to give additional insight into the device physics and validate the analytical models. The results of two-dimensional simulations will be provided to corroborate the analytical models and give greater insight into the device operation.

Features
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Contents
The SSCFET (silicon semiconductor corp FET) - The JBCEF (junction barrier controlled Schottky FET) - The CC-MOSFET (charge-coupled MOSFET) - The GD-MOSFET (graded-doped MOSFET) - The SL-MOSFET (super-linear MOSFET) - The 'COOL-MOS' FET (infineon MOSFET) - The SiC ACCUFET (accumulation-mode MOSFET) - The SiC S-UMOSFET (shielded trench MOSFET).

Fields of interest
Energy Technology; Circuits and Systems; Electronics and Microelectronics, Instrumentation; Solid State Physics; Spectroscopy and Microscopy

Target groups
Research

Type of publication
Monograph

Available
2010. XV, 534 p. Hardcover
169.95 € ISBN 978-1-4419-5916-4
Intelligent produzieren

Liber amicorum


Features

Nachhaltige Logistik

Antworten auf eine globale Herausforderung


Features

Contents

Fields of interest
Engineering Economics, Organization, Logistics, Marketing; Technology Management

Target groups
Professional/practitioner

Type of publication
Professional book

Available

2010. XI, 322 S. 200 Abb., 100 in Farbe. Hardcover
93,41 €
ISBN 978-3-642-13100-4

Conceptual Graphs and Fuzzy Logic

A Fusion for Representing and Reasoning with Linguistic Information

In this volume, first we formulate a framework of fuzzy types to represent both partial truth and uncertainty about concept and relation types in conceptual graphs. Like fuzzy attribute values, fuzzy types also form a lattice laying a common ground for lattice-based computation of fuzzy granules. Second, for automated reasoning with fuzzy conceptual graphs, we develop foundations of order-sorted fuzzy set logic programming, extending the theory of annotated logic programs of Kifer and Subrahmanian (1992). Third, we show some recent applications of fuzzy conceptual graphs to modelling and computing with generally quantified statements, approximate knowledge retrieval, and natural language query understanding.

Features
The capacity for humans to communicate using language allows us to give, receive, and understand information expressed within a rich and flexible representational framework. Moreover, we can reason based on natural language expressions, and make decisions based on the information they convey, though this information usually involves imprecise terms and uncertain facts. In particular, conceptual graphs invented […]

Contents

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

Target groups
Research

Type of publication
Monograph

Available

99,95 €
ISBN 978-3-642-14086-0
Modeling Biomolecular Networks in Cells

Structures and Dynamics

Modeling Biomolecular Networks in Cells shows how the interaction between the molecular components of basic living organisms can be modeled mathematically and the models used to create artificial biological entities within cells. Such forward engineering is a difficult task but the nonlinear dynamical methods espoused in this book simplify the biology so that it can be successfully understood and the synthesis of simple biological oscillators and rhythm-generators made feasible. Such simple units can then be co-ordinated using intercellular signal biomolecules. The formation of such man-made multicular networks with a view to the production of biosensors, logic gates, new forms of integrated circuitry based on "gene-chips" and even biological computers is an important step in the design of faster and more flexible "electronics". The book also provides theoretical frameworks and tools with which to analyze the nonlinear dynamical phenomena which arise from the connection of building units in [..]

Features
Taking ideas from nature has been a theme of humanity’s technological progress but it is only our newfound expertise in molecular manipulation and complex nonlinear dynamics that allows us the prospect of conscripting the building blocks of life as a means of furthering our abilities in circuits, systems and computers by the control of cellular networks. Modeling Biomolecular Networks in [..]

Contents

Fields of interest
Biomedical Engineering

Type of publication
Monograph

Available
129,95 €
ISBN 978-1-84996-213-1

Linear CMOS RF Power Amplifiers for Wireless Applications

Efficiency Enhancement and Frequency-Tunable Capability

The RF power amplifier is a key component in a wireless transceiver and is considered by many as the design bottleneck in the transmitting chain. Linear CMOS RF Power Amplifiers for Wireless Applications addresses two fundamental aspects in RF power amplifier design for integration in CMOS technologies at 2.4, 3.7 and 5.2 GHz: efficiency enhancement and frequency agility. The well-known linearity-efficiency trade-off is circumvented by employing an efficiency-enhancement technique called the dynamic supply RF power amplifier. The design of this system is described with great detail and compared with other efficiency enhancement techniques. The frequency agility is achieved with a novel impedance matching network based on coupled inductors. The design of a dual-band RF power amplifier is shown, with a careful analysis of the tunable matching network and its interaction with the rest of the circuit. The considerations and conclusions drawn throughout this book are based on simulation as well as [..]

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Contents

Fields of interest
Microwaves, RF and Optical Engineering; Solid State Physics; Spectroscopy and Microscopy

Target groups
Research

Type of publication
Monograph

Available
99,95 €

The Nuclear Imperative

A Critical Look at the Approaching Energy Crisis (More Physics for Presidents)

In this well documented global wake-up call, nuclear physicist Jeff Eerkens explores remedies for the impending energy crisis, when oil and natural gas are depleted. Because burning coal worsens the problem of global warming, alternate energy sources must be instituted. The Nuclear Imperative demonstrates with scientific documentation that solar, wind, and biomass power alone, while helpful, are incapable of supplying and sustaining the enormous quantities of electricity and heat needed for manufacturing portable synthetic fuels (synfuels) to replace our current use of fossil fuels. Instead, it offers a fresh look at uranium-produced energy as the optimal affordable solution. Long misunderstood and irrationally feared because of antiquated beliefs by the general public, modern nuclear power generation is safer, cleaner, and essential for solving the future energy shortfall. Using a detailed, scientific approach to dispel common myths, The Nuclear Imperative shows that uranium fission power is [..]

Features
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Contents

Fields of interest
Renewable and Green Energy; Nuclear Engineering; Environmental Management; R & D / Technology Policy; Quality Control, Reliability, Safety and Risk

Target groups
Research

Type of publication
Monograph

Available
99,95 €
Moisture Sensitivity of Plastic Packages of IC Devices

Moisture Sensitivity of Plastic Packages of IC Devices provides information on the state-of-the-art techniques and methodologies related to moisture issues in plastic packages. The most updated, in-depth and systematic technical and theoretical approaches are addressed in the book. Numerous industrial applications are provided, along with the results of the most recent research and development efforts, including, but not limited to: thorough exploration of moisture's effects based on lectures and tutorials by the authors, consistent focus on solution-based approaches and methodologies for improved reliability in plastic packaging, emerging theories and cutting-edge industrial applications presented by the leading professionals in the field. Moisture plays a key role in the reliability of plastic packages of IC devices, and moisture-induced failures have become an increasing concern with the development of advanced IC devices. This second volume in the Micro- and Opto-Electronic Materials series concentrates on the reliability of plastic packages of IC devices, and moisture-induced failures have become an increasing concern with the development of advanced IC devices. This second volume in the Micro- and Opto-Electronic Materials series concentrates on the reliability of plastic packages of IC devices, and moisture-induced failures have become an increasing concern with the development of advanced IC devices. This second volume in the Micro- and Opto-Electronic Materials series concentrates on the reliability of plastic packages of IC devices, and moisture-induced failures have become an increasing concern with the development of advanced IC devices. This second volume in the Micro- and Opto-Electronic Materials series concentrates on the reliability of plastic packages of IC devices, and moisture-induced failures have become an increasing concern with the development of advanced IC devices. 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Innovations in Defence Support Systems – 1

Innovations in the area of Defence Support Systems are multi-disciplinary, cover a broad range of technologies, and could not possibly be covered within a single volume. This research book presents a sample of research as below: • On the Transition of Innovation and Technology in Defence • Inserting Innovations In-Service • Classification of Battlefield Ground Vehicles based on the Acoustic Emissions • Convoy Movement Problem – An Optimization Perspective • Machine Vision Algorithms for Autonomous Aerial Refueling for UAVs using the USAF Refueling Boom Method • Motion Optimization Scheme for Cooperative Mobile Robots • An Automated Decision System for Landmine Detection and Classification.

The book is directed to the application engineers, research students, professors, decision makers and scientists & engineers working in defence and related areas.

Features
Innovations in the area of Defence Support Systems are multi-disciplinary, cover a broad range of technologies, and could not possibly be covered within a single volume. This research book presents a sample of research as below: • On the Transition of Innovation and Technology in Defence • Inserting Innovations In-Service • Classification of Battlefield Ground Vehicles based on the Acoustic Emissions • Convoy Movement Problem – An Optimization Perspective • Machine Vision Algorithms for Autonomous Aerial Refueling for UAVs using the USAF Refueling Boom Method • Motion Optimization Scheme for Cooperative Mobile Robots • An Automated Decision System for Landmine Detection and Classification Using Metal Detector Signals.

Fields of interest
Appl. Mathematics / Computational Methods of Engineering

Target groups
Research

Type of publication
Monograph

Available

2010. 200 p. (Studies in Computational Intelligence, Vol. 304) Hardcover

99,95 €
ISBN 978-3-642-14083-9

52 Engineering

Fuzzy Cognitive Maps
Advances in Theory, Methodologies, Tools and Applications

The theory of cognitive maps was developed in 1976. Its main aim was the representation of (causal) relationships among “concepts” also known as “factors” or “nodes”. Concepts could be assigned values. Causal relationships between two concepts could be of three types: positive, negative or neutral. Increase in the value of a concept would yield a corresponding positive or negative increase at the concepts connected to it via relationships. In 1986 Bart Kosko introduced the notion of fuzziness to cognitive maps and created the theory of Fuzzy Cognitive Maps (FCMs). The relationship between two concepts in (FCMs) can take a value in the interval [-1,1]. This relationship value is called “weight”. For the last twenty years extensive research in the theory of FCMs has been performed that provided major improvements and enhancements in its theoretical underpinning. New methodologies and approaches have been developed. FCMs have also been applied to many different sectors. New software tools have been [...]
Holistic Engineering Education

Beyond Technology

Holistic Engineering Education: Beyond Technology is a compilation of coordinated and focused essays from world leaders in the engineering profession who are dedicated to a transformation of engineering education and practice. The contributors define a new and holistic approach to education and practice that captures the creativity, interdisciplinarity, complexity, and adaptability required for the profession to grow and truly serve global needs. With few exceptions today, engineering students and professionals continue to receive a traditional, technically-based education and training using curriculum models developed for early 20th century manufacturing and machining. While this educational paradigm has served engineering well, helping engineers create awe-inspiring machines and intellectual exploration to focus on consistent technological precision and study. Why this dichotomy? While[...]

Features

Holistic Engineering Education: Beyond Technology is a compilation of coordinated and focused essays from world leaders in the engineering profession who are dedicated to a transformation of engineering education and practice. The contributors define a new and holistic approach to education and practice that captures the creativity, interdisciplinarity, complexity, and adaptability required for[...]

Contents

FOREWORDS: C. Judson King, Provost and Senior Director, Center for Studies in Higher Education; Professor of Chemical Engineering, Emeritus; University of California-Berkeley. Rick Miller, President, Franklin W. Chris College of Engineering. Maria Klase, President, Harvey Mudd College. - Beyond Technology: The Holistic Advantage: Domenico Grasso, Vice President for Research and Dean of the Graduate College, College of Engineering and Mathematical Sciences, The University of Vermont, Melody Brown Burkins, Senior Director for Research and[...]

Fields of interest

Engineering (general); Science Education; Complexity; Statistical Physics, Dynamical Systems and Complexity

Target groups

Professional/practitioner

Type of publication

Monograph

Available

2010. XXVII, 299 p. 2 illus., 1 in color. Hardcover

99.95 €
ISBN 978-1-4419-1392-0

Multiscale Modelling of Plasticity and Fracture by Means of Dislocation Mechanics

The latest state of simulation techniques to model plasticity and fracture in crystalline materials on the nano- and microscale is presented. Discrete dislocation mechanics and the neighbouring fields molecular dynamics and crystal plasticity are central parts. The physical phenomena, the theoretical basics, their mathematical description and the simulation techniques are introduced and important problems from the formation of dislocation structures to fatigue and fracture from the nano- to microscale as well as it’s impact on the macro behaviour are considered.

Features

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Fields of interest


Target groups

Research

Type of publication

Contributed volume

Available


179,00 €
ISBN 978-3-7091-0282-4

Centrifugal Pumps

This book gives an unparalleled, up-to-date, in-depth treatment of all kinds of flow phenomena encountered in centrifugal pumps including the complex interactions of fluid flow with vibrations and wear of materials. The scope includes all aspects of hydraulic design, 3D-flow phenomena and partload operation, cavitation, numerical flow calculations, hydraulic forces, pressure pulsations, noise, pump vibrations (notably bearing housing vibration diagnostics and remedies), pipe vibrations, pump characteristics and pump operation, design of intake structures, the effects of highly viscous flows, pumping of gas-liquid mixtures, hydraulic transport of solids, fatigue damage to impellers or diffusers, material selection under the aspects of fatigue, corrosion, erosion-corrosion or hydro-abrasive wear, pump selection, and hydraulic quality criteria. The 2nd ed. has been enhanced by hydraulic design information on axial pumps and sewage pumps, turbine performance curve prediction, torsional rotor vibrations[...]

Features

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Contents


Fields of interest

Machinery and Machine Elements; Engineering Fluid Dynamics; Energy Technology; Industrial and Production Engineering

Target groups

Professional/practitioner

Type of publication

Professional book

Available

2010. XXXIV, 966 p. 896 illus., 448 in color. Hardcover

199,95 €
ISBN 978-3-642-12823-3
Handbuch Fabrikprojektierung


Features

Contents
Produktionssystematik für die Technologische Fabrikprojektierung. - Grundlagen der Systematischen und methodischen Fabrikprojektierung. - Grundlagen und Methodik der Technologischen Fabriksystemprojektierung. - Projektierung der Fabriksysteme. - Projektierung der Gesamt fabrik.

Fields of interest
- Manufacturing, Machines, Tools; Production / Logistics
- Target groups
- Research
- Type of publication
- Monograph

Spranger.com
2010. XXIV, 1454 S. Hardcover
232,71 €
ISBN 978-3-642-01617-2

S. Hinduja, The University of Manchester, Manchester, UK; L. Li, The University of Manchester, Manchester, UK (Eds.)

Proceedings of the 36th International MATADOR Conference

Presented here are 130 refereed papers given at the 36th MATADOR Conference held at The University of Manchester in July 2010. The MATADOR series of conferences covers the topics of Manufacturing Automation and Systems Technology, Applications, Design, Organisation and Management, and Research. The proceedings of this Conference contain original papers contributed by researchers from many countries on different continents. The papers cover the principles, techniques and applications in aerospace, automotive, biomedical, energy, consumable goods and process industries. The papers in this volume reflect: - the importance of manufacturing to international wealth creation; - the emerging fields of micro- and nano-manufacture; - the increasing trend towards the fabrication of parts using lasers; - the growing demand for precision engineering and part inspection techniques; and - the changing trends in manufacturing within a global environment.

Features
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Contents

Fields of interest
- Manufacturing, Machines, Tools; Robotics and Automation; Engineering Design; Engineering Economics, Organization, Logistics, Marketing
- Target groups
- Research
- Type of publication
- Proceedings

Spranger.com
2010. XX, 598 p. 848 illus. With CD-ROM. Hardcover
249,00 €
Handbook of FPGA Design Security

The purpose of Handbook of FPGA Design Security is to provide a practical approach to managing security in FPGA designs for researchers and practitioners in the electronic design automation (EDA) and FPGA communities, including corporations, industrial and government research labs, and academics. Handbook of FPGA Design Security combines theoretical underpinnings with a practical design approach and worked examples for combating real world threats. To address the spectrum of lifecycle and operational threats against FPGA systems, a holistic view of FPGA security is presented, from formal top level specification to low level policy enforcement mechanisms. This perspective integrates recent advances in the fields of computer security theory, languages, compilers, and hardware. The net effect is a diverse set of static and runtime techniques that, working in cooperation, facilitate the composition of robust, dependable, and trustworthy systems using commodity components.

Features
The purpose of Handbook of FPGA Design Security is to provide a practical approach to managing security in FPGA designs for researchers and practitioners in the electronic design automation (EDA) and FPGA communities, including corporations, industrial and government research labs, and academics. Handbook of FPGA Design Security combines theoretical underpinnings with a practical design approach.

Contents

Fields of interest
Circuits and Systems

Target groups
Research

Type of publication
Monograph

Available
2010. XVIII, 177 p. Hardcover

99,95 €

P. Husar, TU Ilmenau

Biosignalverarbeitung


Features
„Biosignalverarbeitung“ ist eine breit angelegte Einführung in ein zunehmend wichtiger werdendes Thema. Der Überblick gelingt leicht, da jedes Kapitel einheitlich aufgebaut ist: Theorie, Methoden, Realisierungsalternativen, methodische und praktische Vor- und Nachteile, Beispiele aus industrieller und medizinischer sowie Forschungs- und Entwicklungspraxis. Der Inhalt orientiert sich an der Ablage der […]

Contents

Fields of interest
Biomedical Engineering; Signal, Image and Speech Processing; Computational Intelligence; Biophysics and Biological Physics; Bioinformatics; Health Informatics

Target groups
Professional/practitioner

Type of publication
German textbook

Available
2010 IV, 600 S. Softcover

56,03 €
ISBN 978-3-642-12656-7

L.C. Jain, University of South Australia, Adelaide, SA, Australia;
C.P. Lin, University of Science Malaysia, Malaysia (Eds.)

Handbook on Decision Making

Vol 1: Techniques and Applications

The present “Vol 1: Techniques and Applications” of the “Handbook on Decision Making” presents a useful collection of AI techniques, as well as other complementary methodologies, that are useful for the design and development of intelligent decision support systems. Application examples of how these intelligent decision support systems can be utilized to help tackle a variety of real-world problems in different domains, such as business, management, manufacturing, transportation and food industries, and biomedicine, are presented. The handbook includes twenty condensed chapters, which are divided into two parts, i.e., (i) modelling and design techniques for intelligent decision support systems; and (ii) reviews and applications of intelligent decision support systems.

Features
Decision making is a multi-faceted and challenging, yet important task. A decision maker normally has to take into consideration a number of alternatives, which often conflict with one another, before reaching a good decision. To cope with the challenges of decision making, decision support systems have been developed to provide assistance in human decision making processes. The key to decision support […]

Contents

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

Target groups
Research

Type of publication
Monograph

Available

169,95 €
ISBN 978-3-642-13638-2
Theory of Applied Robotics
Kinematics, Dynamics, and Control (2nd Edition)

Theory of Applied Robotics: Kinematics, Dynamics, and Control 2E is appropriate for courses in robotics that emphasize kinematics, dynamics, and control. The contents of this book are presented at a theoretical-practical level. It explains robotics concepts in detail, concentrating on their practical use. Related theorems and formal proofs are provided as are real-life applications. Students, researchers, and practicing engineers alike will appreciate this user-friendly presentation of a wealth of robotics topics, most notably orientation, velocity, and forward kinematics. The second edition includes updated and expanded exercise sets and problems, new coverage includes, Components and Mechanisms of a Robotic Systems with actuators, sensors and controllers and updated and expanded material on Kinematics including geometric kinematics, Derivative Kinematics, velocity kinematics, and new coverage on sensing and control including position sensors, speed sensors and acceleration sensors.

Features
Theory of Applied Robotics: Kinematics, Dynamics, and Control (2nd Edition) explains robotics concepts in detail, concentrating on their practical use. Related theorems and formal proofs are provided as are real-life applications. The second edition includes updated and expanded exercise sets and problems. New coverage includes: components and mechanisms of a robotic system with actuators, sensors and controllers and updated and expanded material on Kinematics including geometric kinematics, Derivative Kinematics, velocity kinematics, and new coverage on sensing and control including position sensors, speed sensors and acceleration sensors.

Contents

Fields of interest
Vibration, Dynamical Systems, Control, Control, Robotics, Mechatronics; Systems Theory, Control

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2010. XXII, 883 p. 400 illus., 200 in color. Hardcover
79,95 €

Technologisches Wissen
Entstehung, Methoden, Strukturen

Mit der Konferenz „Technisches Wissen“ leistete acatech im ersten Jahr als Deutsche Akademie der Technikwissenschaften einen wesentlichen Beitrag zur Diskussion um die Formulierung eines technikwissenschaftlichen Selbstverständnisses. Im Fokus der interdisziplinären Beiträge standen Fragen nach der Entstehung, Methode und Struktur technischen Wissens, und damit die Fortführung einer Systematisierung der Technikwissenschaften. Vor dem Hintergrund der Diskussionen reflektieren die Konferenzbeiträge methodische, wissenschaftstheoretische und formale Grundlagen der Technikwissenschaften.

Features
Mit der Konferenz “Technisches Wissen” leistete acatech im ersten Jahr als Deutsche Akademie der Technikwissenschaften einen wesentlichen Beitrag zur Diskussion um die Formulierung eines technikwissenschaftlichen Selbstverständnisses. Im Fokus der interdisziplinären Beiträge standen Fragen nach der Entstehung, Methode und Struktur technischen Wissens, und damit die Fortführung einer Systematisierung der [...]
Fuzzy Optimization
Recent Advances and Applications

Optimization is an extremely important area in science and technology which provides powerful and useful tools and techniques for the formulation and solution of a multitude of problems in which we wish, or need, to find a best possible option or solution. The volume is divided into a couple of parts which present various aspects of fuzzy optimization, some related more general issues, and applications.

Features
Optimization is an extremely important area in science and technology which provides powerful and useful tools and techniques for the formulation and solution of a multitude of problems in which we wish, or need, to find a best possible option or solution. The volume is divided into a couple of parts which present various aspects of fuzzy optimization, some related more general issues, and applications.

Contents

Fields of interest
Appl. Mathematics / Computational Methods of Engineering, Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Monograph

Available

169,95 €
ISBN 978-3-642-13934-5

Features
This monograph focuses on the formulation and solution of a multitude of problems in which we wish, or need, to find a best possible option or solution. The volume is divided into a couple of parts which present various aspects of fuzzy optimization, some related more general issues, and applications.

Contents

Fields of interest
Appl. Mathematics / Computational Methods of Engineering, Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Monograph

Available

169,95 €
ISBN 978-3-642-13934-5
**Soft Computing in XML Data Management**

Intelligent Systems from Decision Making to Data Mining, Web Intelligence and Computer Vision

This book covers in a great depth the fast growing topic of techniques, tools and applications of soft computing in XML data management. It is shown how XML data management (like model, query, integration) can be covered with a soft computing focus. This book aims to provide a single account of current studies in soft computing approaches to XML data management. The objective of the book is to provide the state of the art information to researchers, practitioners, and graduate students of the Web intelligence, and at the same time serving the information technology professional faced with non-traditional applications that make the application of conventional approaches difficult or impossible.

**Features**

This book covers in a great depth the fast growing topic of techniques, tools and applications of soft computing in XML data management. It is shown how XML data management (like model, query, integration) can be covered with a soft computing focus. This book aims to provide a single account of current studies in soft computing approaches to XML data management. The objective of the book is to provide the [...]
Advances in Wireless Sensors and Sensor Networks

In recent times wireless sensors and sensor networks have become a great interest to research, scientific and technological community. Though the sensor networks have been in place for more than a few decades now, the wireless domain has opened up a whole new application spaces of sensors. Wireless sensors and sensor networks are different from traditional wireless networks as well computer networks and therefore pose more challenges to solve such as limited energy, restricted life time, etc. This book intends to illustrate and to collect recent advances in wireless sensors and sensor networks, not as an encyclopedia but as clever support for scientists, students and researchers in order to stimulate exchange and discussions for further developments.

Features
In recent times wireless sensors and sensor networks have become a great interest to research, scientific and technological community. Though the sensor networks have been in place for more than a few decades now, the wireless domain has opened up a whole new application spaces of sensors. Wireless sensors and sensor networks are different from traditional wireless networks as well computer networks and [...]
The Apollo Guidance Computer

Architecture and Operation

The technological marvel that facilitated the Apollo missions to the Moon was the on-board computer. In the 1960s most computers filled an entire room, but the spacecraft’s computer was required to be compact and low power. Although people today find it difficult to accept that it was possible to control a spacecraft using such a ‘primitive’ computer, it nevertheless had capabilities that are advanced even by today’s standards. This is the first book to fully describe the Apollo guidance computer’s architecture, instruction format and programs used by the astronauts. As a comprehensive account, it will span the disciplines of computer science, electrical and aerospace engineering. However, it will also be accessible to the ‘space enthusiast’. In short, the intention is for this to be the definitive account of the Apollo guidance computer. Frank O’Brien’s interest in the Apollo program began as a serious amateur historian. About 12 years ago, he began performing research and writing essays for the [..]

Features

By today’s standards, the on-board computer used by the Apollo astronauts was a primitive affair, but in an age when most computers filled an entire room, this was small, required little power, and incorporated several technologies that were revolutionary for its time. This is the first book to fully describe the Apollo guidance computer’s architecture, Executive software, and the programs used by [..]

Contents

History, evolution and packaging.- Machine organization.- Interpretive instructions.- The executive program.- Important background routines.- Display and keyboard (DSKY).- I/O devices and interfaces.- Application programs.- Erasable memory programs.- Interaction with the ground.- Selected case studies.- Epilogue.

Fields of interest

Aerospace Technology and Astronautics

Target groups

Popular/general

Type of publication

Popular science

Available

2010. 300 p. 30 illus. (Space Exploration) Softcover

44.95 €

ISBN 978-1-4419-0876-6

Super Light Water Reactors and Super Fast Reactors

Supercritical-Pressure Light Water Cooled Reactors

Super Light Water Reactors and Super Fast Reactors provide an overview of the design and analysis of nuclear power reactors. Readers will gain the understanding of the conceptual design elements and specific analysis methods of supercritical-pressure light water cooled reactors. Nuclear fuel, reactor core, plant control, plant stand-up and stability are among the topics discussed, in addition to safety system and safety analysis parameters. Providing the fundamentals of reactor design criteria and analysis, this volume is a useful reference to engineers, industry professionals, and graduate students involved with nuclear engineering and energy technology.

Features

Super Light Water Reactors and Super Fast Reactors provides an overview of the design and analysis of nuclear power reactors. Readers will gain an understanding of the conceptual design elements and specific analysis methods for supercritical-pressure light water cooled reactors. Nuclear fuel, reactor core, plant control, plant stand-up and stability are among the topics discussed, in addition to safety system [..]

Contents


Fields of interest

Nuclear Engineering; Nuclear Chemistry; Nuclear Physics, Heavy Ions, Hadrons; Energy Technology

Target groups

Research

Type of publication

Monograph

Available

2010. XXI1. 416 p. 400 illus., 200 in color. Hardcover

129.95 €

ISBN 978-1-4419-6034-4

Flows of Reactive Fluids

The modeling of reactive flows has progressed mainly with advances in aerospace, which gave birth to a new science called aerothermochemistry, as well as through developments in chemical and process engineering. The methods employed, the phenomena investigated, and the aims of modeling differ for each field; however, in all cases, the results obtained have considerably enriched the working knowledge of reactive flows. This work examines basic concepts and methods necessary to study reactive flows and transfer phenomena in areas such as fluid mechanics, thermodynamics, and chemistry. The book presents tools of interest to graduate students, researchers in mathematical physics, and engineers who wish to investigate problems of reactive flows. Portions of the text may be used in courses on the physics of liquids or in seminars on mechanics.

Features

The modeling of reactive flows has progressed mainly with advances in aerospace, which gave birth to a new science called aerothermochemistry, as well as through developments in chemical and process engineering. The methods employed, the phenomena investigated, and the aims of modeling differ for each field; however, in all cases, the results obtained have considerably enriched the working knowledge [..]

Contents


Fields of interest

Engineering Fluid Dynamics; Mathematical Modeling and Industrial Mathematics; Engineering Thermodynamics; Heat and Mass Transfer; Classical Continuum Physics; Fluid- and Aerodynamics; Thermodynamics

Target groups

Research

Type of publication

Monograph

Available


129.95 €

Underwater SLAM for Structured Environments Using an Imaging Sonar

This book is a revised version of the doctoral dissertation presented by D. Ribas in the Department of Computer Engineering at the University of Girona. The main purpose of this work is to present different techniques developed with the objective of providing a solution to the navigation problem for Autonomous Underwater Vehicles (AUVs) operating in structured environments, with special attention to localization techniques but, particularly, to the application of SLAM (Simultaneous Localization And Mapping) techniques as a self-contained system which requires neither previous knowledge of the scenario nor the use of absolute positioning systems like GPS, LBL or USBL. This book also presents techniques for feature extraction capable of dealing with the particular complexities of a mechanically scanned imaging sonar. The approaches described in this book are designed for use in structured environments like those present in many industrial scenarios, specifically for scenarios containing manmade [...]
Yearbook on Space Policy
2008/2009

Setting New Trends

The Yearbook on Space Policy aims to be the reference publication analysing space policy developments. Each year it presents issues and trends in space policy and the space sector as a whole. Its scope is global and its perspective is European. The Yearbook also links space policy with other policy areas. It highlights specific events and issues, and provides useful insights, data and information on space activities. The Yearbook on Space Policy is edited by the European Space Policy Institute (ESPI) based in Vienna, Austria. It combines in-house research and contributions of members of the European Space Policy Research and Academic Network (ESPRAN), coordinated by ESPI. The Yearbook is designed for government decision-makers and agencies, industry professionals, as well as the service sector, researchers and scientists and the interested public.

Features
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Contents

Fields of interest
Aerospace Technology and Astronautics; Political Science

Target groups
Research

Type of publication
Reference work

Unified Computational Intelligence for Complex Systems

Computational intelligence encompasses a wide variety of techniques that allow computation to learn, to adapt, and to seek. That is, they may be designed to learn information without explicit programming regarding the nature of the content to be retained, they may be imbued with the functionality to adapt to maintain their course within a complex and unpredictably changing environment, and they may help us seek out truths about our own dynamics and lives through their inclusion in complex system modeling. These capabilities place our ability to compute in a category apart from our ability to erect suspension bridges, although both are products of technological advancement and reflect an increased understanding of our world. In this book, we show how to unify aspects of learning and adaptation within the computational intelligence framework. While a number of algorithms exist that fall under the umbrella of computational intelligence, with new ones added every year, all of them focus on [...] Features
Computational intelligence encompasses a wide variety of techniques that allow computation to learn, to adapt, and to seek. That is, they may be designed to learn information without explicit programming regarding the nature of the content to be retained, they may be imbued with the functionality to adapt to maintain their course within a complex and unpredictably changing environment, and they may help us [...] Contents

Fields of interest
Computational Intelligence; Complexity; Artificial Intelligence (incl. Robotics); Game Theory / Mathematical Methods; Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Type of publication
Monograph

Available
2010. 300 p. Hardcover
99,95 €
ISBN 978-3-642-13659-7

Theory of Bridge Aerodynamics

In this second edition a new chapter has been added covering the buffeting theory in a finite element format. The motivation for this has been that a finite element format is becoming more and more dominant in all areas of structural mechanics. It is streamlined for computer programming, and it facilitates the use of general purpose routines that are applicable in several types of structural engineering problems. In this book the finite element formulation of the problem of dynamic response calculations follows the general principle of virtual work, a general principle which may be found in many other text books. While the buffeting wind load itself has with no trouble been included in a finite element format, the main challenge has been to obtain a consistent formulation that includes all the relevant motion induced forces. This has been important, because, while many structures (e.g. long-span suspension bridges) may suffer greatly and become unstable at high wind velocities, the same structures [...] Features
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Structural Mechanics; Continuum Mechanics and Mechanics of Materials; Civil Engineering; Engineering (general); Appl. Mathematics / Computational Methods of Engineering; Theoretical and Applied Mechanics

Target groups
Research

Type of publication
Monograph

Available
2010. 150 p. 9 illus. in color. (Adaptation, Learning, and Optimization, Vol. 6) Hardcover
99,95 €
ISBN 978-3-642-03179-3

Setting New Trends

The Yearbook on Space Policy aims to be the reference publication analysing space policy developments. Each year it presents issues and trends in space policy and the space sector as a whole. Its scope is global and its perspective is European. The Yearbook also links space policy with other policy areas. It highlights specific events and issues, and provides useful insights, data and information on space activities. The Yearbook on Space Policy is edited by the European Space Policy Institute (ESPI) based in Vienna, Austria. It combines in-house research and contributions of members of the European Space Policy Research and Academic Network (ESPRAN), coordinated by ESPI. The Yearbook is designed for government decision-makers and agencies, industry professionals, as well as the service sector, researchers and scientists and the interested public.

Features
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Contents

Fields of interest
Aerospace Technology and Astronautics; Political Science

Target groups
Research

Type of publication
Reference work

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Fields of interest
Computational Intelligence; Complexity; Artificial Intelligence (incl. Robotics); Game Theory / Mathematical Methods; Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Type of publication
Monograph

Available
2010. 300 p. Hardcover
99,95 €
ISBN 978-3-642-13659-7

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Structural Mechanics; Continuum Mechanics and Mechanics of Materials; Civil Engineering; Engineering (general); Appl. Mathematics / Computational Methods of Engineering; Theoretical and Applied Mechanics

Target groups
Research

Type of publication
Monograph

Available
2010. 150 p. 9 illus. in color. (Adaptation, Learning, and Optimization, Vol. 6) Hardcover
99,95 €
ISBN 978-3-642-03179-3
"Future Internet" is a worldwide hot topic. The Internet has become a critical infrastructure for business development and social interactions. However, the immense growth of the Internet has resulted in additional stresses on its architecture, resulting in a network difficult to monitor, understand, and manage due to its huge scale in terms of connected devices and actors (end users, content providers, equipment vendors, etc.). This book presents and discusses the ongoing initiatives and experimental facilities for the creation of new Future Internet Architectures using alternative approaches like Clean Slate and Incremental improvements: It considers several possible Internet network use scenarios that include seamless mobility, ad hoc networks, sensor networks, Internet of things and new paradigms like content and user centric networks.

**Features**

"Future Internet" is a worldwide hot topic. The Internet has become a critical infrastructure for business development and social interactions. However, the immense growth of the Internet has resulted in additional stresses on its architecture, resulting in a network difficult to monitor, understand, and manage due to its huge scale in terms of connected devices and actors (end users, content providers, etc.). This book presents and discusses the ongoing initiatives and experimental facilities for the creation of new Future Internet Architectures using alternative approaches like Clean Slate and Incremental improvements: It considers several possible Internet network use scenarios that include seamless mobility, ad hoc networks, sensor networks, Internet of things and new paradigms like content and user centric networks.

**Contents**


**Fields of interest**

Communications Engineering, Networks; Computer Communication Networks

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. 250 p. (Studies in Computational Intelligence, Vol. 297)

Hardcover

99,95 €

ISBN 978-3-642-13246-9

G.A. Tsihrintzis, University of Piraeus, Greece; M. Virvou, University of Piraeus, Greece; L.C. Jain, University of South Australia, Adelaide, SA, Australia (Eds.)

Multimedia Services in Intelligent Environments

Software Development Challenges and Solutions

This book presents various software development challenges and related solutions that are faced when attempting to accommodate multimedia services in intelligent environments.

**Features**

This book presents various software development challenges and related solutions that are faced when attempting to accommodate multimedia services in intelligent environments.

**Contents**

Part 1 Multimedia Services in Intelligent Environments - Software Development Challenges and Solutions: Editorial Note. - Part 2 Evaluating the generality of a life-cycle framework for incorporating clustering algorithms in adaptive systems. - Part 3 A Distributed Multimedia Data Management over the Grid. - Part 4 A View of Monitoring and Tracing Techniques and their Application to Service-based Environments. - Part 5 An ontological SW architecture supporting contribution and retrieval of service and process models. - Part 6 Model-driven Quality Engineering of Service-based Systems. - Part 7...

**Fields of interest**

Computational Intelligence; Artificial Intelligence (incl. Robotics); Media Design

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. 200 p. 45 illus. in color. (Smart Innovation, Systems and Technologies, Vol. 2)

Hardcover

99,95 €

ISBN 978-3-642-13354-1

G.A. Tsihrintzis, University of Piraeus, Greece; M. Virvou, University of Piraeus, Greece; L.C. Jain, University of South Australia, Adelaide, SA, Australia (Eds.)

Multimedia Services in Intelligent Environments

Integrated Systems

This book is a continuation of our previous books on multimedia services in intelligent environments [1-4]. It includes fourteen chapters on integrated multimedia systems and services covering various aspects such as geographical information systems, recommenders, interactive entertainment, e-learning, medical diagnosis, telemonitoring, attention management, e-welfare and brain-computer interfaces. Each chapter in the book was reviewed by two independent reviewers for novelty and clarity of the research presented in it.

**Features**

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**Contents**


**Fields of interest**

Appl. Mathematics / Computational Methods of Engineering; Artificial Intelligence (incl. Robotics); Multimedia Information Systems

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. 350 p. (Smart Innovation, Systems and Technologies, Vol. 3)

Hardcover

129,95 €

ISBN 978-3-642-13395-4
**VDI Heat Atlas**

The Springer VDI Heat Atlas (VDI Wärmeatlas) is one of the most important established books in matters of heat transfer engineering. For more than 50 years it has been an indispensable working means for engineers dealing with questions of heat transfer, and it is well-established for industrial engineering in Europe and worldwide. This reference book allows calculating the heat transport in technical equipment for the process industry, thermal power engineering and related subjects and thereby is a powerful tool for design purposes. The 1st international edition published in 1993 was based on the 6th German edition and soon was sold out. The 10th German edition (2006) is now followed by a second international edition. For this 2nd international edition all parts were examined thoroughly and revised, thus ensuring a maximum of security in the data, and modern state-of-the-art methods and analyses. The reference book covers most fields of heat transfer in industrial and engineering applications.[…]

**Fields of interest**

Engineering Thermodynamics, Heat and Mass Transfer; Energy Technology; Industrial Chemistry / Chemical Engineering; Thermodynamics

**Target groups**

Professional/practitioner

**Type of publication**

Handbook

**Available**

2010. XXII, 1586 p. 1069 illus., 24 in color. (VDI-Buch) Hardcover

**699,00 €
ISBN 978-3-642-13112-7**

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**Enterprise Networks and Logistics for Agile Manufacturing**

Enterprise Networks and Logistics for Agile Manufacturing presents a focused collection of quality chapters on state-of-the-art research efforts in the areas of enterprise networks and logistics, as well as their practical applications towards agile manufacturing. With the increasing decentralisation of manufacturing systems and outsourcing of processes, more robust and practical approaches and systems are needed to support agile manufacturing operations. Enterprise Networks and Logistics for Agile Manufacturing consists of two major sections: the first presents a broad-based review of the key areas of research in enterprise networks and logistics; the second focuses on an in-depth treatment of a particular methodology or system relevant to the book title. Examples include: • sustainable green supply chain; • value creation and supplier selection; • extended enterprise network management; • reverse logistics; and • innovative supply chain systems. The authors take into account the need to pose[…]

**Fields of interest**

Engineering Thermodynamics, Heat and Mass Transfer

**Target groups**

Upper undergraduate

**Type of publication**

German textbook

**Available**


**27,99 €
ISBN 978-3-642-13112-7**

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**Thermodynamik kompakt**

Thermodynamik kompakt stellt den Lehrstoff der Thermodynamik in kurzer und prägnanter Weise dar.

**Features**

Thermodynamik kompakt stellt den Lehrstoff der Thermodynamik in kurzer und prägnanter Weise dar. Den Autoren gelingt es, die Sachverhalte inhaltlich auf hohem Niveau, aber gut verständlich zu vermitteln. Die Studierenden lernen so, das Wichtige vom Nebensächlichen zu unterscheiden. Das Buch besitzt neue Wege in der Präsentation des Stoffes. So werden Bilanzgleichungen allgemein betrachtet, und es wird relativ[…]

**Fields of interest**

Engineering Thermodynamics, Heat and Mass Transfer

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. XX, 496 p. 123 illus. Hardcover

**129,95 €
Computational Space Flight Mechanics

The general practice in this book is to provide numerical solutions for all discussed topics and problems. This could be the orbit determination by the orbital elements, Lagrange's perturbation equations for disturbed Earth's orbits, the flight of a mass point in flight path coordinates (three degree of freedom), and the flight of a controlled space vehicle in body fixed coordinates (six degree of freedom). This book has been written not only for graduate and doctoral students but also for non-specialists who may be interested in this subject or concerned with space flight mechanics.

Features
The mechanics of space flight is an old discipline. Its topic originally was the motion of planets, moons and other celestial bodies in gravitational fields. Kepler's (1571 - 1630) observations and measurements have led to the first mathematical description of planet's motion. Newton (1642 - 1727) gave then, with the development of his principles of mechanics, the physical explanation of these [..]

Contents

Fields of interest
Aerospace Technology and Astronautics; Automotive Engineering; Extraterrestrial Physics, Space Sciences; Engineering Fluid Dynamics; Astronomy, Observations and Techniques

Target groups
Research

Type of publication
Monograph

Available
2010. 310 p. Hardcover

129,95 €
ISBN 978-3-642-13582-8

Mastication Robots

Mastication Robotics: Biological Inspiration to Implementation

Mastication Robotics: Biological Inspiration to Implementation is the first book in the special field of masticatory robots for applications including foods texture analysis, dental training and speech therapy. It is a collection of the efforts we have made in the field at Massey University, New Zealand. The book provides a thorough review of the human masticatory system, and presents principles, analysis, design, simulations and experiments of a number of masticatory robots developed by the authors. This book is a valuable reference for researchers, engineers and graduates in the field of robotics, mechatronics, automatic control, artificial intelligence and food sciences.

Features
Mastication Robotics: Biological Inspiration to Implementation is the first book in the special field of masticatory robots for applications including foods texture analysis, dental training and speech therapy. It is a collection of the efforts we have made in the field at Massey University, New Zealand. The book provides a thorough review of the human masticatory system, and presents principles, analysis, [..]

Contents

Fields of interest
Appl. Mathematics / Computational Methods of Engineering, Artificial Intelligence (incl. Robotics); Control, Robotics, Mechatronics; Food Science; Dentistry; Human Physiology

Target groups
Research

Type of publication
Monograph

Available
2010. 295 p. 133 illus. in color. (Studies in Computational Intelligence, Vol. 290) Hardcover

99,95 €
ISBN 978-3-540-93902-3

Innovation through Knowledge Transfer

Knowledge transfer between universities, business and the community is a topical subject of increasing importance. The first International Conference on ‘Innovation through Knowledge Transfer: Research with Impact’, InnovationKT'09, held in Kingston, London, UK, provided a rare and welcome opportunity to share some of the successes of knowledge transfer. The conference attracted 150 delegates and featured 42 oral presentations. This volume, representing the proceedings of the conference, contains 35 papers based on selected conference presentations. The papers are divided into seven sections entitled ‘Key Knowledge Transfer Perspectives’, ‘Knowledge Transfer Case Studies’, ‘Innovative Knowledge Transfer Techniques’, ‘Strategic and Organisational Approaches to Knowledge Transfer’, ‘Knowledge transfer in the Arts and the Community’, ‘Knowledge Transfer Methodology and Practice’ and ‘Innovation and Enterprise’. The first InnovationKT conference was unique in gathering such a tremendous range of [..]

Features
Knowledge transfer between universities, business and the community is a topical subject of increasing importance. The first International Conference on ‘Innovation through Knowledge Transfer: Research with Impact’, InnovationKT’09, held in Kingston, London, UK, provided a rare and welcome opportunity to share some of the successes of knowledge transfer. The conference attracted 150 delegates and featured 42 [..]

Contents

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

Target groups
Research

Type of publication
Proceedings

Available
2010. 381 p. 29 illus. in color. (Smart Innovation, Systems and Technologies, Vol. 5) Hardcover

189,95 €
ISBN 978-3-642-14593-3
Environment

M.M. Aral, Georgia Institute of Technology, Branch Post Office, GA, USA

Environmental Modeling and Health Risk Analysis (Acts/Risk)

This book is intended to serve as a comprehensive source for the advancements and contributions made in environmental transformation and transport modeling in general and the associated health risk assessment topics in particular. The selection of the title, “Environmental Modeling and Health Risk Analysis” stems from an ambitious objective of providing a review of air, surface water and groundwater quality modeling topics and linking these models with exposure and health risk analysis. Thus, the purpose is to provide the reader with an integrated perspective on these two seemingly distant fields. The ACTS and RISK software that is an integral part of this book include computational platforms for all models discussed in the book. Using these two software tools, the models described in the book can be readily accessed and used in classroom or professional applications as demonstrated in the book.

Features
This book is intended to serve as a comprehensive source for the advancements and contributions made in environmental transformation and transport modeling in general and the associated health risk assessment topics in particular. The selection of the title, “Environmental Modeling and Health Risk Analysis” stems from an ambitious objective of providing a review of air, surface water and groundwater quality [...] Contents


Features
This book is the result of a NATO Advanced Research Workshop which was held at Imperial College London in January 2009. It features contributions from a range of international experts covering topics related to the transport of hazardous materials, such as routing and scheduling, risk assessment, security, and social and environmental exposure. There is also a broad look at the implications of climate change for transport, provide a useful context for the more analytical material. The book is timely and topical as the subjects covered have become a focus for public concern in recent years, due in part to terrorism [...] Contents


Fields of interest
Sustainable Development; Optimization; Climate Change; Environmental Chemistry

Target groups
Professional/practitioner

Type of publication
Professional book

Available

2010. XIV, 462 p. Hardcover
59.95 €

Impact of Climate Change on Natural Resource Management

As climate change takes hold, there is an ever-growing need to develop and apply strategies that optimize the use of natural resources, both on land and in water. This book covers a huge range of strategies that can be applied to various sectors, from forests to flood control. Its aim, as with resource management itself, is to combine economics, policy and science to help rehabilitate and preserve our natural resources. Beginning with papers on carbon sequestration, including the practice of artificial desertification, the topics move on to cover the use of distributed modeling and neural networks in estimating water availability and distribution. Further chapters look at uncertainty analysis applied to the spatial variation of hydrologic resources, and finally the book covers attempts at estimating meteorological parameters in the context of hydrological variables such as evapo-transpiration from stream flow. Within the next decade, the effects of climate change will be severe, and felt by ordinary [...] Features
As climate change takes hold, there is an ever-growing need to develop and apply strategies that optimize the use of natural resources, both on land and in water. This book covers a huge range of strategies that can be applied to various sectors, from forests to flood control. Its aim, as with resource management itself, is to combine economics, policy and science to help rehabilitate and preserve our [...] Contents

Climate Change; Hydrogeology; Remote Sensing / Photogrammetry; Geographical Information Systems / Cartography

Target groups
Research

Type of publication
Monograph

Available

2010. XI, 415 p. 122 illus., 61 in color. Hardcover
129.95 €
Ecosystems change on a multitude of spatial and temporal scales. While analyses of ecosystem dynamics in short timespans have received much attention, the impacts of changes in the long term have, to a great extent, been neglected, provoking a lack of information and methodological know-how in this area. This book fills this gap by focusing on studies dealing with the investigation of complex, long-term ecological processes with regard to global change, the development of early warning systems, and the acquisition of a scientific basis for strategic conservation management and the sustainable use of ecosystems. Within this book, theoretical ecological questions of long-term processes, as well as an international dimension of long-term monitoring, observations and research are brought together. The outcome is an overview on different aspects of long-term ecological research. Aquatic, as well as terrestrial ecosystems are represented.

Features
Ecosystems change on a multitude of spatial and temporal scales. While analyses of ecosystem dynamics in short timespans have received much attention, the impacts of changes in the long term have, to a great extent, been neglected, provoking a lack of information and methodological know-how in this area. This book fills this gap by focusing on studies dealing with the investigation of [...]
Environmental Bioengineering

The impact of pollution on the environment has emerged as a particularly critical area of research in recent years. The Handbook of Environmental Engineering is a collection of methodologies that study the effects of pollution and waste in their three basic forms: gas, solid, and liquid. In this invaluable volume, Volume 11: Environmental Bioengineering, expert researchers explore the engineering applications of biotechnologies. A sister volume to Volume 10, Environmental Biotechnology, this work introduces such essential and varied topics as land disposal of biosolids, heavy metal removal by crops, pre-treatment and bio-treatment of sludge, fermentation of kitchen garbage, phytoremediation for heavy metal contaminated soils, bioremediation, wetland treatment, biosorption of heavy metals, and rotating biological contactors (RBC) for carbon and nitrogen removal. A critical volume in the Handbook of Environmental Engineering series, chapters employ methods of practical design and calculation.

Contents

- Treatment And Disposal Of Biosolids
- Ultrasonic Pretreatment Of Sludge For Anaerobic Digestion
- Solubilization Of Sewage Sludge To Improve Anaerobic Digestion
- Applications Of Composted Solid Wastes For Farmland Amendment And Nutrient Balance In Soils
- Bioremediation Of Sludge And Waste
- Kitchen Refuse Fermentation
- Heavy Metal Removal By Crops From Land Application Of Sludge
- Phytoremediation Of Heavy Metal Contaminated Soils And Water Using Vetiver Grass
- Bioremediation Of Wetland For Wastewater Treatment
- Modeling Of Biosorption Processes
- Heavy Metal Removal By Microbial...
Europäisches Arbeitsrecht


Features

Contents

Fields of interest
European Law / Public International Law, Labour Law / Social Law

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XXI, 475 S. (Springers Handbücher der Rechtswissenschaft) Hardcover
90,86 € ISBN 978-3-211-99402-3

Wirtschaftsverfassung und Binnenmarkt

Festschrift für Heinz-Peter Rill zum 70. Geburtstag

Den 70. Geburtstag von em. o. Univ.-Prof. Heinz Peter Rill nahmen seine Schüler und Kollegen zum Anlass, ihn durch eine Festschrift zu ehren. Die Festschrift enthält Beiträge von: Dr. Josef Azizi, Prof. Dr. Bernd-Christian Funk, Prof. Dr. Stefan Griller, Prof. Dr. Michael Holoubek, Prof. Dr. Benjamin Knehse, Sl. Prof. Dr. Georg Liembacher, Ass.-Prof. Dr. Verena Madner, Prof. Dr. Theo Ohlinger, Prof. DDr. Michael Potacs, Prof. Dr. Heinz Schäffer und Prof. Dr. Ewald Wiederin. Die Autoren aus Wissenschaft und Praxis bieten mit ihren Beiträgen nicht nur einen abwechslungsreichen methodischen Streifzug durch aktuelle Fragestellungen, sondern machen das Werk auch zu einem umfassenden Nachschlagewerk.

Features
Den 70. Geburtstag von em. o. Univ.-Prof. Heinz Peter Rill nahmen seine Schüler und Kollegen zum Anlass, ihn durch eine Festschrift zu ehren. Die Festschrift enthält Beiträge von: Dr. Josef Azizi, Prof. Dr. Bernd-Christian Funk, Prof. Dr. Stefan Griller, Prof. Dr. Michael Holoubek, Prof. Dr. Benjamin Knehse, Sl. Prof. Dr. Georg Liembacher, Ass.-Prof. Dr. Verena Madner, Prof. Dr. Theo Ohlinger, Prof. DDr. Michael Potacs, Prof. Dr. Heinz Schäffer und Prof. Dr. Ewald Wiederin. Die Autoren aus Wissenschaft und Praxis bieten mit ihren Beiträgen nicht nur einen abwechslungsreichen methodischen Streifzug durch aktuelle Fragestellungen, sondern machen das Werk auch zu einem umfassenden Nachschlagewerk.

Contents

Fields of interest
European Law / Public International Law, Labour Law / Social Law

Target groups
Research

Type of publication
Commemorative publication

Available
2010. Etwa 300 S. Hardcover
approx. 74,72 € ISBN 978-3-211-30847-9

Internationales Gemeinschaftsrecht

Zur Herausbildung Gemeinschaftsrechtliche Strukturen im Völkerrecht der Globalisierung


Features

Contents

Fields of interest
European Law / Public International Law

Target groups
Research

Type of publication
Monograph

Available
2010. XXXV, 629 S. (Beiträge zum ausländischen öffentlichen Recht und Völkerrecht, Vol. 219) Hardcover
93,41 € ISBN 978-3-642-13140-0
**Kernfragen des Unternehmenssteuerrechts**


**Features**

Die inneren Konflikte der Ertragsbesteuerung finden im Unternehmenssteuerrecht ihren deuts-<ref>lichsten Ausdruck: das Spannungsverhältnis zwischen dem subjektiven Einkommen des Individuums und der objektiven Ertragskraft des Betriebes, der Widerspruch zwischen der zivilrechtlichen Trennung von Rechtssphären und der wirtschaftlichen Realität der Konzerne, die Bruchstellen im traditionellen Gefüge der Einkunftsarten. [...]**

**Contents**


**Fields of interest**

Financial Law / Fiscal Law; Business Taxation

**Target groups**

Research

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**PCR for Clinical Microbiology**

*An Australian and International Perspective*

Not another textbook, but a valuable tool for doctors and microbiologists wanting to know how to set up a PCR diagnostic microbiology laboratory according to current regulatory standards and perform assays supplied with patient clinical diagnostic criteria and easy to follow protocols. Whether laboratories are using commercial kits or in-house methods developed in their own laboratories or adopted from published methods, all clinical microbiology laboratories need to be able to understand, critically evaluate, perform and interpret these tests according to rigor-<ref>ous and clinically appropriate standards and interna-<ref>tional guidelines. The cost and effort of development and evaluation of in-house tests is considerable and many laboratories do not have the resources to do so. This compendium is a vehicle to improve and maint-<ref>ain the clinical relevance and high quality of diag-<ref>nostic PCR. It is a unique collection of guidelines for PCR laboratory set up and quality control, test selec-<ref>tion criteria, [...]**

**Features**

Not another textbook, but a valuable tool for doctors and microbiologists wanting to know how to set up a PCR diagnostic microbiology laboratory according to current regulatory standards and perform assays supplied with patient clinical diagnostic criteria and easy to follow protocols. Whether laboratories are using commercial kits or in-house methods developed in their own laboratories or adopted from [...]**

**Contents**


**Fields of interest**

Microbiology; Applied Microbiology; Infectious Diseases; Biological Techniques; Science; Medical Microbiology

**Target groups**

Research

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**Available**


74,72 €

ISBN 978-3-642-13340-4

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**Available**

2010, X, 500 p. Hardcover

149,95 €
**Genetik**


**Features**


**Contents**


**Fields of interest**

Cell Biology; Human Genetics; Biotechnology; Animal Genetics and Genomics; Plant Genetics and Genomics

**Target groups**

Upper undergraduate

**Type of publication**

German textbook

**Available**


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**Amino-Acid Homopolymers Occurring in Nature**

Microorganisms are capable of producing a wide variety of biopolymers. Homopolymer peptides, which are made up of only a single type of amino acid, are far less ubiquitous. The only two amino-acid homopolymers known to occur in nature are presented in this volume. Poly-epsilon-L-lysine is a polycationic peptide and exhibits antimicrobial activity against a wide spectrum of microorganisms. It is both safe and biodegradable and is therefore used as a food preservative in several countries. In addition, there has been great interest in medical and other applications of poly-lysine and its derivatives. In contrast, poly-epsilon-glutamic acid is an unusual anionic polypeptide. It is also water soluble, biodegradable, edible, non-toxic and non-immunogenic and can be chemically modified to introduce various drugs. These features are very useful for pharmaceutical and biomedical applications. Poly-glutamic acid is also a highly attractive as a food ingredient.

**Features**

Microorganisms are capable of producing a wide variety of biopolymers. Homopolymer peptides, which are made up of only a single type of amino acid, are far less ubiquitous. The only two amino-acid homopolymers known to occur in nature are presented in this volume. Poly-epsilon-L-lysine is a polycationic peptide and exhibits antimicrobial activity against a wide spectrum of microorganisms. It is both safe and biodegradable.

**Contents**

Munenori Takehara, Hideo Hirohara: Occurrence and biosynthesis of poly-epsilon-L-lysine in microorganisms; Yoshimitsu Hamano: Biochemistry and enzymology of poly-epsilon-L-lysine biosynthesis; Toyokazu Yoshida: Biochemistry and enzymology of poly-epsilon-L-lysine degradation; Kazuya Yamanaka, Yoshimitsu Hamano: Biotechnological production of poly-epsilon-L-lysine for food and medical applications; Makoto Ashiuchi: Occurrence and biosynthetic mechanism of poly-gamma-glutamic acid; Keitarou Kimura: Enzymic degradation of poly-gamma-glutamic acid; Takami Akagi, Michiya Matsusaki, Mitsuuru...

**Fields of interest**

Microbiology; Biochemistry

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**


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**Seaweeds and their Role in Globally Changing Environments**

Global warming is accelerating faster than the ability for natural repair, and environmental stresses are damaging ecosystems, all affecting physical and biological systems on Earth. A new NASA-led study shows that human activity has caused climate changes resulting in permafrost thawing, acid rain, and lower productivity in lakes as well as increased emissions of greenhouse gases, including CO2, N2O, CH4, CF3, and CFC. Marine plants play a vital role in maintaining the balance of marine environments, while serving as a source of food for human kind and important chemical compounds. Microalgae and seaweed have enormous potential for reducing global warming and climate change. During photosynthesis algae grow, draw CO2 from the atmosphere, release oxygen, and produce solar biofuel. Experts in the life of marine plant ecosystems in globally changing environments contributed chapters to this book. The target readers are physiologists, ecologists, atmospheric scholars, conservationists, environmentalists...

**Features**

Global warming is accelerating faster than the ability for natural repair, and environmental stresses are damaging ecosystems, all affecting physical and biological systems on Earth. A new NASA-led study shows that human activity has caused climate changes resulting in permafrost thawing, acid rain, and lower productivity in lakes as well as increased emissions of greenhouse gases, including CO2.

**Contents**


**Fields of interest**

Life Sciences (general); Climate Change; Pollution; Environment (general); Ecosystems; Freshwater & Marine Ecology

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**

Extracellular Nucleic Acids

Extracellular nucleic acids have recently emerged as important players in the fields of biology and the medical sciences. In the last several years, extracellular nucleic acids have been shown to be involved in not only microbial evolution as genetic elements but also to have structural roles in bacterial communities, such as biofilms. Circulating DNA and RNA have been found in human blood and expected to be useful as non-invasive markers for the diagnosis of several diseases. In addition, extracellular nucleic acids have attracted attention as active modulators of the immune system of higher organisms, including humans. This book covers nearly all of the newly developing fields related to extracellular nucleic acids, including those of basic biology, ecology and the medical sciences, and provides readers with the latest knowledge on them.

Features
Extracellular nucleic acids have recently emerged as important players in the fields of biology and the medical sciences. In the last several years, extracellular nucleic acids have been shown to be involved in not only microbial evolution as genetic elements but also to have structural roles in bacterial communities, such as biofilms. Circulating DNA and RNA have been found in human blood and expected to be [...]
Materials Science

J. Ayache, Institut Gustave Roussy, Villejuif, France; L. Beaunier, Université Pierre et Marie Curie, Paris, France; J. Boumendil, Université Claude Bernard-Lyon, Villeurbanne, France; G. Ehret, Université Strasbourg, Strasbourg, France; D. Laub, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

Atlas of Comparative Sectional Anatomy of 6 invertebrates and 5 vertebrates

This atlas contains 189 coloured images taken from transversal, horizontal and sagittal sections of eleven organisms widely used in university teaching. Six invertebrate and five vertebrate species – from the nematode worm (Ascaris suum) to mammals (Rattus norvegicus) – are shown in detailed images. Images show photographs taken from original preparations and 3D photos on the enclosed CD. Studying the macrosections with unaided eyes, with a simple magnifier or binocular microscope might be of great help to accomplish traditional anatomical studies and to establish a certain spatial experience/space perception. This volume will be of great interest for biology students, researchers and teachers of comparative anatomy. It might act as supporting material of practical courses. Furthermore, medical practitioners, agricultural specialists and researchers having an interest in comparative anatomy might also benefit from it.

Features
This atlas contains 189 coloured images taken from transversal, horizontal and sagittal sections of eleven organisms widely used in university teaching. Six invertebrate and five vertebrate species – from the nematode worm (Ascaris suum) to mammals (Rattus norvegicus) – are shown in detailed images. Images show photographs taken from original preparations and 3D photos on the enclosed CD. Studying the [...]
Carbon Nanowalls
Synthesis and Emerging Applications

Representing the first text to cover this exciting new area of research, this book will describe synthesis techniques of CNWs, their characterization and various expected applications using CNWs. Carbon-nanowalls (CNWs) can be described as two-dimensional graphite nanostructures with edges comprised of stacks of plane graphene sheets standing almost vertically on the substrate. These sheets form a wall structure with a high aspect ratio. The thickness of CNWs ranges from a few nm to a few tens of nm. The large surface area and sharp edges of CNWs may prove useful for a number of applications such as electrochemical devices, field electron emitters, storage materials for hydrogen gas, catalyst support. In particular, vertically standing CNWs with a high surface-to-volume ratio, serve as an ideal material for catalyst support for fuel cells and in gas storage materials.

Features
Representing the first text to cover this exciting new area of research, this book will describe synthesis techniques of CNWs, their characterization and various expected applications using CNWs. Carbon-nanowalls (CNWs) can be described as two-dimensional graphite nanostructures with edges comprised of stacks of plane graphene sheets standing almost vertically on the substrate. These sheets form a wall […]

Contents
Introduction: Discovery of two-dimensional carbon nanostructures; Characteristics of carbon nanowalls; Research on carbon nanowalls; Preparation methods and growth mechanism; Microwave plasma enhanced chemical vapor deposition; Capacitively coupled plasma enhanced chemical vapor deposition with radio frequency induction; Inductively coupled plasma enhanced chemical vapor deposition; Electron beam excited plasma enhanced chemical vapor deposition; Hot filament chemical vapor deposition; Atmospheric pressure plasma enhanced chemical vapor deposition; Sputtering; Discussion. - Physics of carbon […]

Fields of interest
Nanotechnology; Power Electronics; Electrical Machines and Networks; Mechanics; Electrochemistry; Catalysis; Organic Chemistry

Target groups
Research

Type of publication
Monograph

Available
2010, X, 161 p., 298 illus., 149 in color. Hardcover

99.95 €
ISBN 978-3-211-99717-8

Inorganic and Metallic Nanotubular Materials
Recent Technologies and Applications

This book describes the synthesis, characterization and applications of inorganic and metallic nanotubular materials. It cover a wide variety of nanotubular materials excluding carbon nanotubes, ranging from metal oxides, sulfides and nitrides such as titanium oxide, tungsten sulfide, and boron nitride, as well as platinum and other noble-metals to unique nanotubes consisting of water, graphene or fullerene. Based on their structural and compositional characteristics, these nanotubular materials are of importance for their potential applications in electronic devices, photocatalysts, dye-sensitized solar cells, nanothermometer, electrodes for fuel cells and batteries, sensors, and reinforcing fillers for plastics, among others. Such materials are also having a great impact on future developments, including renewable energy sources as well as highly efficient energy-conversion and energy-saving technologies. This book will be of particular interest to graduate students in chemistry and physics as well;

Features
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Contents

Fields of interest
Nanotechnology; Metallic Materials; Solid State Physics; Spectroscopy and Microscopy; Engineering (general)

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010, X, 300 p., 500 illus., 250 in color. (Topics in Applied Physics, Vol. 117) Hardcover

139.95 €
ISBN 978-3-642-03620-0

Zinc Oxide
From Fundamental Properties Towards Novel Applications

This book gives a comprehensive review of the present state of the art in ZnO R&D, including growth, doping, lattice dynamics, electric magnetic and optical properties. The emphasis is on the electric and optical properties, because this is the area where novel applications may be expected with highest promise. The book highlights not only the most recent results but gives both an overview of past research and of the present status -- not avoiding critical and controversial discussions of various aspects such as bank symmetries and laser processes. Intended to have long-lasting impact on ZnO R&D, this monograph addresses (post-)graduate students but also advanced scientists, who want to embark on ZnO research or are already involved, the present state of the art and assists them in avoiding duplication of old results (or mistakes).

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Contents

Fields of interest
Optical and Electronic Materials; Applied Optics, Optoelectronics, Optical Devices; Engineering (general)

Target groups
Research

Type of publication
Monograph

Available
2010, XII, 300 p. 200 illus., 100 in color. (Springer Series in Materials Science, Vol. 120) Hardcover

99.95 €
ISBN 978-3-642-10576-0
Mathematics

A. Alonso Rodríguez, University of Trento, Povo, Italy; A. Valli, University of Trento, Povo, Italy

Eddy Current Approximation of Maxwell Equations

Theory, Algorithms and Applications

This book deals with the mathematical analysis and the numerical approximation of eddy current problems in the time-harmonic case. All the most used formulations are taken into account, placing the problem in a rigorous functional framework. Nodal or edge finite elements are used for approximation. A detailed analysis of each formulation is presented, focusing on the well-posedness and on the efficiency of numerical schemes. A particular attention is devoted to the topology of the physical domain. Some specific applications to real-life problems are described. The reader will also find a complete presentation of some recent and new results on the subject.

Features

This book deals with the mathematical analysis and the numerical approximation of time harmonic eddy current problems. It is self-contained and suitable for mathematicians and engineers working in the field, and also accessible for beginners. Depending on the choice of the physical unknowns, these problems are formulated in different variational ways, with specific attention to the topology of the [...]
K. Bezdek, University of Calgary, AB, Canada

**Classical Topics in Discrete Geometry**

This multipurpose book can serve as a textbook for a semester long graduate level course giving a brief introduction to Discrete Geometry. It also can serve as a research monograph that leads the reader to the frontiers of the most recent research developments in the classical core part of discrete geometry. Finally, the forty-some selected research problems offer a great chance to use the book as a short problem book aimed at advanced undergraduate and graduate students as well as researchers. The text is centered around four major and by now classical problems in discrete geometry. The first is the problem of densest sphere packings, which has more than 100 years of mathematically rich history. The second major problem is typically quoted under the approximately 50 years old illumination conjecture of V. Boltianski and H. Hadwiger. The third topic is on covering by planks and cylinders with emphases on the affine invariant version of Tarski’s plank problem, which was raised by T. Bang more than...[...]

**Features**

About the author: Karoly Bezdek received his Dr.rer.nat.(1980) and Habilitation (1997) degrees in mathematics from the Eotvos Lorand University, in Budapest and his Candidate of Mathematical Sciences (1985) and Doctor of Mathematical Sciences (1994) degrees from the Hungarian Academy of Sciences. He is the author of more than 100 research papers and currently he is professor and Canada Research Chair of [...] 

**Contents**

Preface.- Part I: Sphere Packings.- Finite Packings by Translates of Convex Bodies.- Coverings by Homothetic Bodies - Illumination and Related Topics.- Coverings by Planks and Cylinders.- On the Volume of Finite Arrangements of Spheres.- Ball-Polyhedra as Intersections of Congruent Balls.- Part II: Selected Proofs on Sphere Packings.- Selected Proofs on Finite Packagings of Convex Bodies.- Selected Proofs on Illumination and Related Topics.- Selected Proofs on Coverings by Planks and Cylinders.- Selected Proofs on the Kesner-Poulsen Conjecture.- Selected Proofs on [...] 

**Fields of interest**

Geometry

**Target groups**

Graduate

**Type of publication**

Graduate/advanced undergraduate textbook

**Available**

2010. XIV, 166 p. (CMS Books in Mathematics) Hardcover

39.95 €

ISBN 978-1-4419-0599-4

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C. Charela, University of Technology, Sydney, Australia; A. Novikov, University of Technology, Sydney, Australia (Eds.)

**Contemporary Quantitative Finance**

Essays in Honour of Eckhard Platen

The contributors to this volume write a series of articles outlining contemporary advances in a number of key areas of mathematical finance such as, optimal control theory applied to finance, interest rate models, credit risk and credit derivatives, use of alternative stochastic processes, numerical solution of equations of mathematical finance, estimation of stochastic processes in finance. The list of authors includes many of the researchers who have made the major contributions to these various areas of mathematical finance.

**Features**

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**Contents**

C. Charela and A. Novikov; Introduction.- D. Fernholz and I. Karatzas; Probabilistic aspects of arbitrage.- C. Kardaras; Finitely additive probabilities and the fundamental theorem of asset pricing.- H. Hulley and M. Schweizer; M6 - On minimal market models and minimal martingale measures.- H. Hulley; The economic plausibility of strict local martingales in financial modelling.- J. Najnudel and A. Nikeghbali; A remarkable S\sqrt{\pi}-finite measure associated with last passage times and penalisation problems.- G. Galesso and W. Runggaldier; Pricing without equivalent martingale measure.- [...] 

**Fields of interest**

Quantitative Finance; Calculus of Variations and Optimal Control; Optimization; Probability Theory and Stochastic Processes; Statistics for Business, Economics, Mathematical Finance, Insurance; Numerical Analysis

**Target groups**

Research

**Type of publication**

Monograph

**Available**


89.95 €

ISBN 978-3-642-03478-7

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A. Chinchuluun, Imperial College London, UK; P.M. Pardalos, University of Florida, Gainesville, FL, USA; R. Enkhbat, National University of Mongolia, Ulaanbaatar, Mongolia; I. Tsvetkendorf, Université de Versailles-Saint Quentin en Yvelines, Versailles, France (Eds.)

**Optimization and Optimal Control**

Theory and Applications

During the last four decades there has been a remarkable development in optimization and optimal control. Due to its wide variety of applications, many scientists and researchers have paid attention to fields of optimization and optimal control. A huge number of new theoretical, algorithmic, and computational results have been observed in the last few years. This book gives the latest advances, and due to the rapid development of these fields, there are no other recent publications on the same topics. Key features: Provides a collection of selected contributions giving a state-of-the-art account of recent developments in the field Covers a broad range of topics in optimization and optimal control, including unique applications Includes chapters written by experts in their respective disciplines Appeals to a broad audience of researchers, practitioners, and advanced graduate students in applied mathematics and engineering

**Features**

Optimization and optimal control are the main tools in decision making. Because of their numerous applications in various disciplines, research in these areas is accelerating at a rapid pace. "Optimization and Optimal Control: Theory and Applications" brings together the latest developments in these areas of research as well as presents applications of these results to a wide range of real-world problems. The [...] 

**Contents**


**Fields of interest**

Calculus of Variations and Optimal Control; Optimization; Mathematical Modeling and Industrial Mathematics; Operations Research, Mathematical Programming

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**


99.95 €

Quadratic Forms, Linear Algebraic Groups, and Cohomology

The invited papers collected in this volume address topics related to the research of Raman Parimala (plenary speaker at the upcoming ICM 2010). These themes focus primarily on the interplay between algebra, number theory, and algebraic geometry. The included contributions cover exciting research in areas such as field patching and a proof of the Serre’s Conjecture II for function fields of complex surfaces.

Features
This volume of invited works collects the most recent research and developments in quadratic forms, linear algebraic groups, and cohomology; topics that are each at the intersection of algebra, number theory and algebraic geometry. The contributions to this volume are the work of renowned experts and present new results related to the research of Raman Parimala, to whom this collection is dedicated. Some [...] Contents
- Foreword - Surveys - Multiples of forms (Eva Bayer-Fluckiger) - On Saltman’s p-adic curves papers (Eric Brussel) - Serre’s Conjecture II: a survey (Philippe Gille) - Field patching, factorization, and local-global principles (Daniel Krashen) - Defor- mation theory and rational points on rationally connected varieties (Max Lieblich) - Recent progress on the Kato Conjecture (Shuji Saito) - Elliptic curves and Iwasawa’s µ=0 conjecture (R. Sujatha) - Cohomo- logical invariants of central simple algebras with involution (Jean-Pierre Tignol) - Witt groups of varieties and the purity problem [...] Fields of interest
Number Theory; Algebraic Geometry; Category Theory; Homological Algebra; General Algebraic Systems

Target groups
Research

Type of publication
Contributed volume

Available
2010, X, 348 p. 94 illus., 47 in color. (Developments in Mathematics, Vol. 18) Hardcover
109.95 €

R. Diestel, University of Hamburg, Germany

Graph Theory

The fourth edition of this standard textbook of modern graph theory has been carefully revised, updated, and substantially extended. Covering all its major recent developments it can be used both as a reliable textbook for an introductory course and as a graduate text: on each topic it covers all the basic material in full detail, and adds one or two deeper results (again with detailed proofs) to illustrate the more advanced methods of that field. electronic edition: diestel-graph-theory.com From the reviews of the first two editions (1997, 2000): “This outstanding book cannot be substituted with any other book on the present textbook market. It has every chance of becoming the standard textbook for graph theory.” Acta Scientiarum Mathematiciarum “The book has received a very enthusiastic reception, which it amply deserves. A masterly elucidation of modern graph theory.” Bulletin of the Institute of Combinatorics and its Applications “A highlight of the book is what is by far the best account [...] Features
This standard textbook of modern graph theory, now in its fourth edition, combines the authority of a classic with the engaging freshness of style that is the hallmark of active mathematics. It covers the core material of the subject with concise yet reliably complete proofs, while offering glimpses of more advanced methods in each field by one or two deeper results, again with proofs given in full [...] Fields of interest
Combinatorics

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2010, XVIII, 410 p. (Graduate Texts in Mathematics, Vol. 173) Softcover
49.95 €
ISBN 978-3-642-14278-9

T. Eisner, Universität Tübingen, Germany

Stability of Operators and Operator Semigroups

The asymptotic behaviour, in particular “stability” in some sense, is studied systematically for discrete and for continuous linear dynamical systems on Banach spaces. Of particular concern is convergence to an equilibrium with respect to various topologies. Paral- lels and differences between the discrete and the con- tinuous situation are emphasised.

Features
This book is about stability of linear dynamical sys- tems, discrete and continuous. More precisely, we discuss convergence to zero of strongly continu- ous semigroups of operators and of powers of a bounded linear operator, both with respect to different topologies. The discrete and the continuous cases are treated in parallel, and we systematically employ a comparison of methods and results in either case. Apart [...] Fields of interest
Operator Theory; Dynamical Systems and Ergodic Theory; Systems Theory; Control

Target groups
Research

Type of publication
Monograph

Available
79.95 €
ISBN 978-3-0346-0194-8
Mathematical Foundations of Neuroscience

This book is motivated by a perceived need for an overview of how dynamical systems and computational analysis have been used in understanding the types of models that come out of neuroscience. The book arose out of several courses that the authors have taught including a graduate course in computational neuroscience with students from psychology, mathematics, computer science, physics and neuroscience backgrounds. The book begins with biophysics of the cell membrane and from this introduces compartmental models, continuum limits and cable theory and active ion channels. Prior to the work on active channels, all equations are linear and in theory completely solvable in closed form.

Features
This book applies methods from nonlinear dynamics to problems in neuroscience. It uses modern mathematical approaches to understand patterns of neuronal activity seen in experiments and models of neuronal behavior. The intended audience is researchers interested in applying mathematics to important problems in neuroscience, and neuroscientists who would like to understand how to create models, as well as the [...]
The Theory of the Top

Volume II. Development of the Theory in the Case of the Heavy Symmetric Top

The Theory of the Top. Volume II. Development of the Theory in the Case of the Heavy Symmetric Top is the second in a series of four self-contained English translations of the classic and definitive treatment of rigid body motion. Key features: * Complete and unabridged presentation with recent advances and additional notes * Annotations by the translators provide insights into the nature of science and mathematics in the late 19th century * Each volume interweaves theory and applications The first volume established the general kinematic and kinetic foundations of the theory. Volume II discusses the motion of the symmetric top with a fixed support point, under the influence of gravity, in all its details. The Theory of the Top was originally presented by Felix Klein as an 1895 lecture at Göttingen University that was broadened in scope and clarified as a result of collaboration with Arnold Sommerfeld. Graduate students and researchers interested in theoretical and applied mechanics will[...]

Features
Published in honor of his 70th birthday, this volume explores and celebrates the work of G.W. (Pete) Stewart, a world-renowned expert in computational linear algebra. It is widely accepted that Stewart is the successor to James Wilkinson, the first giant in the field, taking up the perturbation theory research that Wilkinson so ably began and using it as a foundation for algorithmic insights. Stewart’s results in many areas of computational linear algebra broke new ground and are still widely used in an increasing number of applications. Stewart’s papers, widely cited, are characterized by elegance in theorems and algorithms and clear, concise, and beautiful exposition. His six popular textbooks are excellent sources of knowledge and history. Stewart is a member of the National Academy of Engineering and has received numerous additional honors, including the Bauer Prize. This volume includes: forty-four of Stewart’s most influential research papers in two subject areas: matrix algorithms, and[...]

Contents

Fields of interest
Linear and Multilinear Algebras, Matrix Theory; Algorithms; Computational Mathematics and Numerical Analysis; Appl. Mathematics / Computational Methods of Engineering; History of Mathematics

Target groups
Research

Type of publication
Collected works

Image and Geometry Processing for 3-D Cinematography

The book presents an overview of 3-D cinematography, the science and technology of generating 3-D models of dynamic scenes from multiple cameras at video frame rates. The book covers recent developments in computer vision and computer graphics that have made 3-D cinematography possible, and reviews the challenges and open issues that need to be addressed in future work. Important applications areas are presented, including production of stereoscopic movies, full 3-D animation from multiple videos, special effects for more traditional movies, and broadcasting of multiple-viewpoint television. The book brings together researchers and practitioners from computer graphics, computer vision, broadcasting and motion pictures, to offer a broad perspective on all current areas of research related to the production of high quality 3-D models of live-action scenes.

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Contents

Fields of interest
Mathematics (general); Artificial Intelligence (incl. Robotics); Classical Electrodynamics, Wave Phenomena

Target groups
Research

Type of publication
Contributed volume

Available

2010. X, 305 p. 94 illus., 47 in color. (Geometry and Computing, Vol. 5) Hardcover

89,95 €
ISBN 978-3-642-12391-7
The Use of Ultraproducts in Commutative Algebra

In spite of some recent applications of ultraproducts in algebra, they remain largely unknown to commutative algebraists, in part because they do not preserve basic properties such as Noetherianity. This work wants to make a strong case against these prejudices. More precisely, it studies ultraproducts of Noetherian local rings from a purely algebraic perspective, as well as how they can be used to transfer results between the positive and zero characteristics, to derive uniform bounds, to define tight closure in characteristic zero, and to prove asymptotic versions of homological conjectures in mixed characteristic. Some of these results are obtained using variants called chromatic products, which are often even Noetherian. This book, neither assuming nor using any logical formalism, is intended for algebraists and geometry enthusiasts called chromatic products, which are often even Noetherian. This book, neither assuming nor using any logical formalism, is intended for algebraists and geometeters, in the hope of popularizing ultraproducts and their applications in algebra.

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Fields of interest

Commutative Rings and Algebras; Algebraic Geometry

Target groups

Research

Type of publication

Monograph

Available

44,95 €
ISBN 978-3-642-13367-1
Wissenschaftliches Rechnen


Features

Contents

Fields of interest
Computational Science and Engineering; Applied Mathematics / Computational Methods of Engineering; Mathematical Methods in Physics; Computational Mathematics and Numerical Analysis

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. XIV, 830 S. (Springer-Lehrbuch Masterclass) Softcover
37,34 €
ISBN 978-3-540-78494-4

Optimal Control

"Each chapter contains a well-written introduction and notes. They include the author's deep insights on the subject matter and provide historical com ments and guidance to related literature. This book may well become an important milestone in the liter ature of optimal control."

Mathematical Reviews
"Thanks to a great effort to be self-contained, [this book] renders accessibly the subject to a wide audi ence. Therefore, it is recommended to all researchers and professionals interested in Optimal Control and its engineering and economic applications. It can serve as an excellent textbook for graduate courses in Optimal Control (with special emphasis on Nonsmooth Analysis)."

Automatica
"The book may be an essential resource for potential readers, experts in control and optimization, as well as postgraduates and applied mathematicians, and it will be valued for its accessibility and clear exposition." Applications of Mathematics

Features
Optimal Control brings together many of the impor tant advances in 'nonsmooth' optimal control over the last several decades concerning necessary con ditions, minimizer regularity, and global optimal ity conditions associated with the Hamilton–Jacobi equation. The book is largely self-contained and incorporates numerous simplifications and unifying features for the subject’s key concepts and [...]

Contents

Fields of interest
Systems Theory; Control; Control; Calculus of Vari ations and Optimal Control; Optimization

Target groups
Graduate

Type of publication
Monograph

Available
2010. XX, 500 p. 13 illus. (Modern Birkhäuser Classics) Softcover
64,95 €
ISBN 978-0-8176-4990-6

Mathematica® in Action

Problem Solving Through Visualization and Computation

With the third edition of his popular Mathematica in Action, award-winning author Stan Wagon guides readers through the important changes that have been made to Mathematica 6.0. To utilize the more sophisticated graphics capabilities of 6.0, Wagon has significantly expanded the chapters on surfaces and the parametric plotting of surfaces. The chap ter on differential equations now includes material from VisualDSolve, built into Mathematica 6.0. Like previous editions, this is not only an introduc tion to Mathematica 6.0, but also a tour of modern mathematics by one of the field’s most gifted expos itors. Wagon explores some of the most important areas of modern mathematics with new chapters on optimization, including algebraic and numerical optimization, and linear and integer programming. Connections are also made to computer science with new material on graphs and networks. All Math ematica code is included on a CD, saving students hours of typing. Wagon is the author of nine books on mathematics.[...]

Features
In this third edition of Mathematica® in Action, award-winning author Stan Wagon guides beginner and veteran users alike through Mathematica’s pow erful tools for mathematical exploration. The transi tion to Mathematica 7 is made smooth with plenty of examples and case studies that utilize Mathematica’s newest tools, such as dynamic manipulations and adaptive [...]

Contents

Fields of interest
Computational Mathematics and Numerical Analy sis; Mathematical Software; Visualization; Applications of Mathematics

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2010. XVIII, 574 p. 531 illus., 216 in color. Softcover
64,95 €
Cardiorenal Syndrome
Mechanisms, Risk and Treatment

Chronic kidney disease with a worldwide prevalence of 10% in the general population is emerging as a major public health priority. Renal dysfunction is associated with a high risk for cardiovascular complications. The relationship between renal insufficiency and cardiovascular disease, termed the cardiorenal syndrome exists whether impairment of renal function is a consequence of primary renal parenchymal disease or primary heart disease. Several pathophysiologic mechanisms have been postulated to explain the relationship between renal dysfunction and cardiovascular disease. Recent studies indicate an integrated response of the vascular smooth muscles and glomerular mesangial cells to traditional and uremia related cardiovascular risk factors. Traditional risk factors can incite renal impairment and cardiac damage. As renal function deteriorates, uremia related risk factors play an increasing role both in reduction in glomerular filtration rate and cardiovascular damage. Several uremia related [...] Features
Accelerated cardiovascular disease is a frequent complication of chronic kidney disease. Individuals with evidence of renal functional impairment are more likely to die of cardiovascular events than to progress to end stage renal disease. This relationship, which has been termed the cardiorenal syndrome, exists whether impairment of renal function is a consequence of primary renal parenchymal or [...] Fields of interest Cardiology; Nephrology

Target groups Professional/practitioner

Type of publication Professional book

Available

2010. 320 p. Hardcover

159.95 €

F. Bonnet, Th. Lescot (Eds.)

Analgésie et sédation en réanimation

Cet ouvrage se propose de faire le point sur l’avancée des connaissances scientifiques et médicales dans les domaines de l’analgésie et de la sédation en réanimation. Le lecteur pourra y trouver aussi bien des rappels pharmacologiques que les modalités d’administration et de sevrage de ces thérapeutiques quotidiennement utilisées dans ce contexte. La place des techniques d’analgésie systémique et locorégionales en réanimation sera discutée. Le thème de la sédation sera abordé sous l’angle des différentes spécialités.

Features
La sédation en réanimation est un traitement à la fois nécessaire, indissociable d’autres pratiques de soins et en même temps difficile à adapter car non dénué d’effets secondaires. Parce qu’il s’agit d’un problème quotidien et non complètement résolu pour les acteurs de la réanimation, il a fait l’objet de nombreuses études et enquêtes récentes. L’objectif de cet ouvrage, qui fait suite aux recommandations [...] Fields of interest Anesthesiology; Intensive / Critical Care Medicine; Pain Medicine; Pharmacology / Toxicology

Target groups Professional/practitioner

Type of publication Monograph

Available

2010. Env. 250 p. (Le point sur ...) Softcover

61.61 €

M. Buck, Stichting Revalidatie Limburg, Hoensbroek, Niederlande; D. Beckers, Stichting Revalidatie Limburg, Hoensbroek, Niederlande; S.S. Adler, 161 E Chicago Ave, Apt. 35E, Chicago, IL 60611, USA

PNF in der Praxis
Eine Anleitung in Bildern

PNF in der Praxis, inzwischen in der überarbeiteten 6. Auflage, stellt Prinzipien, Techniken, Bewegungsmuster und die funktionelle Anwendung dieser Behandlungs methode systematisch und präzise dar. - Knapp 650 Fotos machen Techniken und Behandlungsschritte leicht nachvollziehbar. - PNF-Pattern und die Anwendung der Techniken werden gut verständlich erklärt. - [...] Contents

Fields of interest Physiotherapy; Neurology; Sports Medicine; Occupational Therapy

Target groups Professional/practitioner

Type of publication Professional book

Available

2010. XIV, 366 S. 646 Abb. in Farbe. Softcover

42.01 €
ISBN 978-3-642-12975-9
**Cardiac CT Imaging**

**Diagnosis of Cardiovascular Disease**

CT is an accurate technique for assessing cardiac structure and function, but advances in computing power and scanning technology have resulted in increased popularity. It is useful in evaluating the myocardium, coronary arteries, pulmonary veins, thoracic aorta, pericardium, and cardiac masses; because of this and the speed at which scans can be performed, CT is even more attractive as a cost-effective and integral part of patient evaluation. This book collates all the current knowledge of cardiac CT and presents it in a clinically relevant and practical format appropriate for both cardiologists and radiologists. The images have been supplied by an experienced set of contributing authors and represent the full spectrum of cardiac CT. As increasing numbers have access to cardiac CT scanners, this book provides all the relevant information on this modality. A CD-ROM is included containing a large number of cardiac CT images and videos, providing the reader with a dynamic primer in cardiac CT.

**Features**

The comprehensive assessment of cardiovascular structure and function with computed tomography (CT) has progressed at an astounding rate due to advances in scanning technology and image processing. Given the importance of cardiovascular CT, this book collates all relevant imaging findings and presents them in a clinically relevant and practical manner appropriate for the spectrum of physicians who...

**Contents**

Computed Tomography: Methodology for Image Acquisition. Cardiac Anatomy by CT. Interpreting CT Angiography: 3D Reconstruction Techniques. Assessment of Cardiac Structure and Function by X-Ray Computed Tomography. Assessment of Cardiovascular Calcium: Interpretation and Relevance of Calcium Scoring Relationship to Lipids and Other Cardiovascular Risk Factors. Natural History and Impact of Interventions on Coronary Calcium. Extra-Coronary Calcium. CT Coronary Angiography: Coronary Angiography after Revascularization. An Interventionalist's Vision: Diagnosis of Cardiovascular...

**Fields of interest**

Cardiology; Imaging / Radiology; Diagnostic Radiology; Internal Medicine; Cardiac Surgery

**Target groups**

Professional/practitioner

**Type of publication**

Professional book

**Available**

2010. XVI, 252 p. 40 illus., 20 in color. Softcover

39,95 €

ISBN 978-3-642-05024-4

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**Evidence-Based Practice: Toward Optimizing Clinical Outcomes**

Health care is witnessing an explosion of fundamental, clinical, and translational research evidence. The emerging paradigm of evidence-based health care rests on the judicious integration of the patient's needs/wants, the provider’s expertise, and the best available research evidence in the treatment plan. The purpose of this book is to discuss the promise and the limitations of incorporating the best available evidence in clinical practice. It seeks to characterize and define how best available research evidence can be used in clinical practice and to what respect it applies to current public health issues.

**Features**

Health care is witnessing an explosion of fundamental, clinical, and translational research evidence. The emerging paradigm of evidence-based health care rests on the judicious integration of the patient’s needs/wants, the provider’s expertise, and the best available research evidence in the treatment plan. The purpose of this book is to discuss the promise and the limitations of incorporating the best...

**Contents**

The Science of Research Synthesis in Clinical Decision-Making: Introduction - Research Synthesis in Evidence-Based Clinical Decision-Making - Overview, strengths and limitations of systematic reviews and meta-analyses. Understanding and interpreting systematic reviews and meta-analysis results. Making Evidence-Based Decisions: Making Evidence-Based Decisions in Nursing - A Model for Implementing Evidence-Based Decisions in Dental Practice - Evidence-Based Decisions in Human Immunodeficiency Virus Infection and Cardiac disease. Bringing evidence basis to decision making in Complementary...

**Fields of interest**

Medicine (general); Public Health; Dentistry

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2010. XIV, 252 p. 40 illus., 20 in color. Softcover

39,95 €

ISBN 978-3-642-05024-4

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**Thyroid Cytopathology**

Thyroid Cytopathology, Second Edition, in the Essentials in Cytopathology Series, provides an overview to the examination and diagnosis of thyroid cytopathology specimens. Each concise desktop reference in the Essentials in Cytopathology Series is designed as an easy-to-use and authoritative synopsis of specific topics in cytopathology. Thyroid Cytopathology uses a simple algorithmic approach to the diagnosis of thyroid fine needle aspirations (FNA). This user-friendly reference begins with an introduction to clinical aspects, a guide to performing and processing thyroid FNAs, and an overview to the algorithmic approach to thyroid FNA cytopathology. Organized in 11 easy-to-read chapters, this volume discusses the background, diagnostic approaches and criteria, differential diagnoses, and clinical management of inflammatory, colloid, follicular, Hurthle cell and cystic lesions, as well as, papillary, medullary and undifferentiated carcinomas. With 116 full-color images, 4 tables and a series of...

**Features**

Thyroid Cytopathology, Second Edition, in the Essentials in Cytopathology Series, provides an overview to the examination and diagnosis of thyroid cytopathology specimens. Each concise desktop reference in the Essentials in Cytopathology Series is designed as an easy-to-use and authoritative synopsis of specific topics in cytopathology. Thyroid Cytopathology uses a simple ...

**Contents**

Introduction and Clinical Aspects - How to Perform and Process a Thyroid FNA - Approach to Thyroid FNA Cytopathology: An Overview - Inflammatory Lesions and Lymphoma - Colloid-Prepondent Lesions - Follicular Lesions - Hurthle Cell Lesions - Cystic Lesions of the Thyroid - Papillary Thyroid Carcinoma - Medullary Thyroid Carcinoma - Undifferentiated (Anaplastic) Carcinoma and Metastatic Disease - Index

**Fields of interest**

Pathology; Endocrinology

**Target groups**

Professional/practitioner

**Type of publication**

Handbook

**Available**

2010. IX, 135 p. 121 illus., 116 in color. (Essentials in Cytopathology, Vol. 8) Softcover

59,95 €

### Modern Trends in THA Bearings

In the present book with the title "Modern Trends in THA Bearings - Material and Clinical Performance" a notable editor and many worldwide renowned experts are contributing to this topic. The surgeons are describing their long-term experience regarding the behaviour and clinical performance of primary and revision hip arthroplasty. Material aspects, indications, surgical techniques as well as problems and recommendations for different bearing couples are extensively discussed. The clinical performance of ceramic bearings is highlighted as well as the recommendations for safe implantation. Altogether, for the experienced surgeon as well as for the resident, this book gives a valuable overview on the state-of-the-art techniques and bearing materials used in hip arthroplasty.

**Features**

- In the present book with the title "Modern Trends in THA Bearings - Material and Clinical Performance" a notable editor and many worldwide renowned experts are contributing to this topic. The surgeons are describing their long-term experience regarding the behaviour and clinical performance of primary and revision hip arthroplasty. Material aspects, indications, surgical techniques as well as problems [...]

**Contents**

- Premise for a successful surgery
- Materials and Clinical Performance
- Noise in THR
- Recommendations in hip arthroplasty. Material aspects, indications, surgical techniques as well as problems
- Future applications

**Fields of interest**

- Orthopedics; Surgical Orthopedics

**Target groups**

- Research

**Type of publication**

- Proceedings

**Available**

- 2010. Approx. 300 p. 130 illus. (Ceramics in Orthopaedics) Hardcover

46.95 €
ISBN 978-3-642-13988-8

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### Complications of Laparoscopic and Robotic Urologic Surgery

There has been a huge rise in minimally invasive surgery (MIS) in urology. This has led for an urgent need for a textbook specifically dedicated to the issues and complications arising from laparoscopic and robotic procedures. With contributions from recognized urologic experts in MIS, Complications of Laparoscopic and Robotic Urologic Surgery fills this need by familiarizing the modern urologist with the common and the more eccentric complications of laparoscopic and robotic urologic surgery. Brief descriptions of the procedures are provided, as well as an in-depth discussion of the diagnosis and management of complications associated with that particular procedure. The book is divided into three specific sections. The first section covers medical and general considerations. The second section provides a generalized discussion of common surgical complications. Complications specific to robotic surgery in general are emphasized in a separate chapter. The third section is dedicated to procedure [...]

**Features**

- There has been a huge rise in minimally invasive surgery (MIS) in urology. This has led for an urgent need for a textbook specifically dedicated to the issues and complications arising from laparoscopic and robotic procedures. With contributions from recognized urologic experts in MIS, Complications of Laparoscopic and Robotic Urologic Surgery fills this need by familiarizing the modern urologist with the [...]

**Contents**

- Section 1: General and Medical Considerations
- Physiology of Laparoscopy and Pneumoperitoneum
- Anesthesia and Management of Anesthetic Complications of Laparoscopic Urological Surgery
- Metabolic and Renal Complications and Immunologic Implications of Laparoscopic Urologic Surgery
- Positional and Neuromuscular Complications of Laparoscopic and Robotic Urologic Surgery
- Visceral and Gastrointestinal...

**Fields of interest**

- Urology / Andrology; Minimally Invasive Surgery; Abdominal Surgery; Surgery

**Target groups**

- Professional/practitioner

**Type of publication**

- Professional book

**Available**

- 2010. X, 328 p. 34 illus., 17 in color. With 8 page color insert. Hardcover

159.95 €

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### BOLD fMRI

A Guide to Functional Imaging for Neuroscientists

Functional magnetic resonance imaging (fMRI) measures quick, tiny metabolic changes that take place in the brain, providing the most sensitive method currently available for identifying, investigating, and monitoring brain tumors, stroke, and chronic disorders of the nervous system like multiple sclerosis, and brain abnormalities related to dementia or seizures. This overview explains the principles of fMRI, scanning methodologies, experimental design and data analysis, and outlines challenges and limitations of fMRI. It also provides a detailed neuroanatomical atlas, and describes clinical applications of fMRI in cognitive, sensory, and motor cases, translating research into clinical application.

**Features**

- BOLD fMRI: A Guide for Neuroscientists is a compilation of key chapters selected by the editors to present neuroscientists with a comprehensive introduction to the basic principles of BOLD fMRI and its applications in cognitive neuroscience. This comprehensive book introduces important topics in BOLD fMRI such as scanning methodologies, experimental design and data analysis, and its challenges and [...]

**Contents**

- Part I: BOLD Functional MRI
- Principles of Functional MRI
- fMRI Scanning Methodologies
- Experimental Design and Data Analysis for fMRI
- Challenges in fMRI and Its Limitations
- Clinical Challenges of fMRI
- Part II: IMRI Clinical Applications
- Brain Mapping for Neurosurgery and Cognitive Neuroscience
- IMRI of Memory in Aging and Dementia
- IMRI of Language Systems: Methods and Applications
- IMRI Wada Test: Prospects for Presurgical Mapping of Language and Memory
- Cognitive Neuroscience Applications
- Part III: Neuroanatomical Atlas
- Neurorotical Atlas

**Fields of interest**

- Imaging / Radiology; Neuroradiology; Diagnostic Radiology; Neurology; Psychiatry

**Target groups**

- Research

**Type of publication**

- Professional book

**Available**

- 2010. X, 291 p. 38 illus., 19 in color. Softcover

39.95 €

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### A Guide to Functional Imaging for Neuroscientists

2010. XIV, 291 p. 38 illus., 19 in color. With 8 page color insert. Hardcover

64.95 €
ISBN 978-3-642-13988-8

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### Professional book

2010. X, 291 p. 38 illus., 19 in color. Softcover

39.95 €
**Escalade: Pathologies de la main et des doigts**

Malgré leur petite taille et leur fragilité, les doigts sont les outils essentiels à la progression du grimpeur. La multiplicité des lésions possibles et leur « réparation » nous ont amenés à réaliser cet ouvrage. Réaliser le lien médecin – terrain est notre objectif. La recherche scientifique et médicale peut apporter un regard différent sur la pratique et sur l’ entraînement. La collaboration médecin spécialiste – entraîneur, toute au bénéfice des sportifs, permet de limiter les risques de lésion et d’avancer dans le domaine de l’ entraînement. Notre ouvrage doit permettre au sportif, à l’ entraîneur, de comprendre la consultation médicale ; nous voulons également apporter une réflexion sur le déroulement de la pratique. Dans le domaine médical, l’explication des forces exercées sur les doigts et les mouvements doit permettre une meilleure compréhension des circonstances de la lésion et donner au grimpeur des indications sur la reprise de l’ entraînement.

**Features**

Malgré leur petite taille et leur fragilité, les doigts sont les outils essentiels à la progression du grimpeur. La multiplicité des lésions possibles et leur « réparation » nous ont amenés à réaliser cet ouvrage. Réaliser le lien médecin – terrain est notre objectif. La recherche scientifique et médicale peut apporter un regard différent sur la pratique et sur l’ entraînement. La collaboration médecin […]

**Fields of interest**

Medicine (general)

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2010. 280 p. (Sports et Traumatologie Sports and Traumatology) Softcover

47,39 €


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**Atlas of endoscopic major pulmonary resections**

Video-assisted major pulmonary resections are gaining popularity, as it becomes obvious that minimally invasive surgery is beneficial in terms of reduced postoperative pain, shortened hospital stay, shorter recovery and better compliance to adjuvant chemotherapy, without compromising oncological principles. Different techniques have been described, depending on the use or non-use of an accessory mini-thoracotomy and of endoscopic instrumentation and video display. One of these techniques is the totally endoscopic approach. This technique can prove challenging and tedious because the operating mode and even the anatomical landmarks are different and, in some ways, have to be relearned. The purpose of this atlas is to describe each endoscopic pulmonary lobectomy and segmentectomy step by step, relying on brief technical notes and high-quality still pictures which are orientated and labelled to make them as comprehensible as possible. Each chapter is introduced by an anatomical background which is […]

**Features**

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**Fields of interest**

Surgery; Thoracic Surgery; Minimally Invasive Surgery; Oncology

**Target groups**

Professional/practitioner

**Type of publication**

Atlas

**Available**

2010. XIV, 170 p. Softcover

90,00 €


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**Handbook of Evidence-Based Radiation Oncology**

Building on the success of this book’s first edition, Dr. Eric Hansen and Dr. Mack Roach have updated, revised, and expanded the Handbook of Evidence-based Radiation Oncology, a portable reference that utilizes evidence-based medicine as the basis for practical treatment recommendations and guidelines. Organized by body site, concise clinical chapters provide easy access to critical information. Important ‘pearls’ of epidemiology, anatomy, pathology, and clinical presentation are highlighted. Key facets of the work-up are listed, followed by staging and/or risk classification systems. Treatment recommendations are discussed based on stage, histology, and/or risk classification. Brief summaries of key trials and studies provide rationale for the recommendations. Practical guidelines for radiation techniques are described. Finally, complications and follow-up guidelines are outlined. Updates from the first edition include brand new color figures and color contouring mini-atlases for head and neck, […]

**Features**

Building on the success of this book’s first edition, Dr. Eric Hansen and Dr. Mack Roach have updated, revised, and expanded the Handbook of Evidence-based Radiation Oncology, a portable reference that utilizes evidence-based medicine as the basis for practical treatment recommendations and guidelines. Organized by body site, concise clinical chapters provide easy access to critical information. […]

**Contents**


**Fields of interest**

Oncology; Imaging / Radiology; Diagnostic Radiology; Interventional Radiology

**Target groups**

Professional/practitioner

**Type of publication**

Handbook

**Available**

2010. XVIII, 786 p. 12 illus., 6 in color. Softcover

49,95 €

Color Atlas of Burn Reconstructive Surgery

Post-burn scar contractures are a commonly encountered problem in the field of plastic and reconstructive surgery. Nevertheless, many physicians still lack adequate knowledge on beneficial treatments. In this up-to-date atlas, leading specialists in post-burn treatment and the reconstruction of post-burn scar contractures depict in detail not only surgical techniques but also a variety of advantageous wound treatments. Many new methods invented by the authors are presented. Operative techniques are depicted in detail, and clear guidance is provided on selection of the most appropriate flap surgery. Advice is also given on how to prevent permanently disabling restriction of joint movement as a result of contractures and how to achieve good aesthetic reconstruction. This atlas is designed to appeal to a wide audience, from beginners to specialists. It will prove invaluable for doctors of every kind who deal with wound management.

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Contents

Fields of interest
Plastic Surgery; Dermatology; Intensive / Critical Care Medicine; General Surgery

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. Etwa 510 S. 1200 Abb. in Farbe. (Physiotherapie Basisc) Hardcover

46,68 €
ISBN 978-3-642-12922-3

Manual of Aesthetic Surgery

This second edition of the highly acclaimed Manual of Aesthetic Surgery again focuses on the most important and most frequently used procedures in aesthetic surgery. All chapters have been updated, and useful tips and tricks have been added. A number of important new methods are included, such as a facial mini lift (M-lift), a mini abdomen procedure, a so-called de-epithelializing method for use in buttock lifts, and liposuction by means of a sophisticated Micro-Air system. All techniques are displayed in a step-by-step manner with unsurpassed instructive drawings and high-quality pre- and postoperative photographs; only as much text is included as is absolutely necessary to support the illustrations. The accompanying DVD has been enhanced by additional new clips. Using the book and the DVD in conjunction, the reader will be able to identify and execute the most appropriate technique in each situation, avoid potential pitfalls, and institute appropriate complication management should it prove necessary.

Features
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Heart Failure
Bench to Bedside

Heart Failure (HF) is the final and common pathway of all cardiovascular diseases. Heart Failure: Bench to Bedside helps address a significant need to develop new paradigms and to identify novel therapeutic targets for this pervasive disease. An authoritative contribution to the field, this book provides a detailed description of new findings and emerging methodologies, as well as a critical clinical evaluation of the complex HF syndrome and future therapies. Heart Failure: Bench to Bedside includes a primer on gene profiling and bioenergetics of the normal heart and a discussion of the molecular, genetic, biochemical and cellular techniques critical to understanding HF. Further chapters discuss cardiac remodeling, oxidative stress, and alterations in other organs and systems that are often associated with HF. This book thoughtfully evaluates current and forthcoming diagnostic techniques and therapies, pharmaceutical and pharmacogenomic-based individualized medicine, gene and cell-based therapies,

Contents
Introduction to Heart Failure. • Cardiac Function in Heart Failure: The ROLE of Calcium Cycling. • Gene Profiling of the Failing Heart. • Epigenetics. • Bioenergetics and Metabolic Changes in the Failing Heart. • The Multidimensional Role of Mitochondria in Heart Failure. • Animal Models of Heart Failure. • Signaling Cascades in Heart Failure. • Cardiomyocytes Growth and Survival to Mitochondrial Signaling Pathways. • Cyclic Nucleotides Signaling (Second Messengers) and Control of Myocardial Function. • Effects of Heart Failure. • Calcium Signaling. • Receptors, Effectors and other Signaling.

Fields of interest Cardiology; Angiology; Internal Medicine

Target groups Professional/practitioner

Type of publication Monograph

Available
2010. X, 470 p. 28 illus., 14 in color. (Contemporary Cardiology) Hardcover

Heart Failure

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Fields of interest Cardiology; Angiology; Internal Medicine

Target groups Professional/practitioner

Type of publication Monograph

Available
2010. X, 470 p. 28 illus., 14 in color. (Contemporary Cardiology) Hardcover

Bildatlas der Lungen- und Pleurasonographie


Contents

Fields of interest Internal Medicine; Pneumology/Respiratory System; Imaging / Radiology; Surgery; Intensive / Critical Care Medicine; Anesthesiology

Target groups Professional/practitioner

Type of publication Atlas

Available
121,45 € ISBN 978-3-642-03566-1

Health Assets in a Global Context

Theory, Methods, Action

As global health inequities continue to widen, policymakers are redoubling their efforts to address them. Yet the effectiveness and quality of these programs vary considerably, sometimes resulting in the reverse of expected outcomes. While local political issues or cultural conflicts may play a part in these situations, an important new book points to a universal factor: the prevailing deficit model of assessing health needs, which puts disadvantaged communities on the defensive while ignoring their potential strengths. The asset model proposed in Health Assets in a Global Context International Health and Development offers a necessary complement to the problem-focused framework by assessing multiple levels of health-promoting aspects in populations, and promoting joint solutions between communities and outside agencies. The book provides not only rationales and methodologies (e.g., measuring resilience and similar elusive qualities) but also concrete examples of asset-based initiatives in use.

Features
Health Assets in a Global Context: Theory, Methods, Action Edited by Antony Morgan, Maggie Davies, and Erio Ziglio As global health inequities continue to widen, policymakers are redoubling their efforts to address them. Yet the effectiveness and quality of these programs vary considerably, sometimes resulting in the reverse of expected outcomes. While local political issues or cultural conflicts may play a ...

Contents

Fields of interest Public Health; Health Promotion and Disease Prevention; Health Administration

Target groups Research

Type of publication Monograph

Available
2010. XXVIII, 324 p. 62 illus., 31 in color. Hardcover
119,95 € ISBN 978-1-4419-5920-1
**Critical Care of Children with Heart Disease**

*Basic Medical and Surgical Concepts*

Critical Care of Children with Heart Disease will summarize the comprehensive medical and surgical management of the acutely ill patient with congenital and acquired cardiac disease. The aim of the book is to teach bedside physicians, nurses and other caregivers, basic and practical concepts of anatomy, pathophysiology, surgical techniques and peri-operative management of critically ill children and adults with congenital heart disease, allowing these professionals to anticipate, prevent or else treat such pathologies. The book will cover specific cardiac lesions, review their anatomy, pathophysiology, current preoperative, intraoperative and postoperative assessment and management; medical and surgical complications will be briefly described with each lesion further discussed in specific chapters. In addition, the book will have dedicated chapters to management of cardiac patients on extracorporeal membrane oxygenation, hemofiltration, hemo or peritoneal dialysis and plasma exchange. Practical...[\[...\]]

**Features**

Pediatric cardiac intensive care patients pose special challenges to those practitioners caring for them. Many issues may be encountered when caring for children in a cardiac intensive care setting, which will significantly influence the management of these patients. Critical Care of Children with Heart Disease provides the physician with an overview of both the medical and surgical aspects...[\[...\]]

**Contents**


**Fields of interest**

Cardiology; Intensive / Critical Care Medicine; Pediatrics; Primary Care Medicine; Cardiac Surgery

**Target groups**

Professional/practitioner

**Type of publication**

Reference work

*[Available](#)*

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**The Female Pelvic Floor**

*Function, Dysfunction and Management According to the Integral Theory*

"...This represents a new refreshing and logical approach to the whole anatomy and function of the pelvic floor. The Integral Theory over the years has been debated and discussed at various Scientific Meetings but this is the first time that the Theory has been condensed to an exciting and readable format with excellent illustrations and diagrams. I think it is an important publication which has been long overdue..." Comment on first edition from a prominent British Urologist in this 3rd Edition. Multimedia in the accompanying DVD is used to more fully explain how lax suspensory ligaments may cause multiple pelvic floor dysfunctions, how to diagnose which structures are causing the problem, and how to perform ‘simulated’ or ‘virtual’ operations. New insights into the pathogenesis of pelvic organ prolapse, pelvic pain, vulvodynia, and Interstitial Cystitis are presented. The tensioned miuning as used for cystocele, uterine prolapse, rectocele stress incontinence and other symptoms is[\[...\]]

**Features**

"...This represents a new refreshing and logical approach to the whole anatomy and function of the pelvic floor. The Integral Theory over the years has been debated and discussed at various Scientific Meetings but this is the first time that the Theory has been condensed to an exciting and readable format with excellent illustrations and diagrams. I think it is an important publication which has been long [...]"

**Contents**

From the contents Overview.- The Anatomy and Dynamics of Pelvic Floor Function and Dysfunction.- Diagnosis of Connective Tissue Damage.- Reconstructive Pelvic Floor Surgery According to the Integral Theory.- Pelvic Floor Rehabilitation.- Mapping the Dynamics of Connective Tissue Dysfunction.- Current and Emerging Research Issues.- Conclusion.- Patient Questionnaire and Other Diagnostic Resource Tools.- References and Further Reading.

**Fields of interest**

Gynecology; Urology / Andrology

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

*[Available](#)*

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**Signalisation cellulaire et cancer**

Plus que jamais, les oncologues ont besoin de l’apport de la biologie, d’abord pour comprendre les cancers, mais surtout pour les traiter. Plus de 600 essais thérapeutiques sont en cours en 2010 pour évaluer les thérapies ciblées. Afin de s’y retrouver dans le dédale des voies de signalisation, dans la profusion des récepteurs et des signaux concourant à l’oncogénèse, le professeur Jacques Robert propose une vision d’ensemble, certes simplifiée et didactique, mais assez complète, des voies de transmission de l’information entre les cellules et à l’intérieur des cellules. Les voies de signalisation y sont décortiquées une à une, sans jamais esquiver la complexité de leurs interconnexions. La présentation de chaque voie est suivie d’une brève description des altérations rencontrées dans les cancers et des approches pharmacologiques ciblées qui peuvent être mises en œuvre pour y remédier. Cet ouvrage se veut le compagnon de l’oncologue dans sa quête de nouvelles thérapeutiques anticancéreuses.

**Features**

Plus que jamais, les oncologues ont besoin de l’apport de la biologie, d’abord pour comprendre les cancers, mais surtout pour les traiter. Plus de 600 essais thérapeutiques sont en cours en 2010 pour évaluer les thérapies ciblées. Il est maintenant bien établi que le cancer est, d’une certaine façon, une maladie de la signalisation cellulaire : les cellules cancéreuses détourneront à leur profit les messages...[\[...\]]

**Fields of interest**

Medicine (general); Oncology; Cancer Research; Pharmacology / Toxicology; Biological Microscopy; Biomedicine (general)

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

*[Available](#)*

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2010. VIII, 200 p. Avec CD-ROM. (Oncologie pratique) Softcover

56,87 €

ISBN 978-2-8178-0027-1

**The Female Pelvic Floor**

*Function, Dysfunction and Management According to the Integral Theory*

*[Available](#)*

2010. 250 p. 206 illus., 157 in color. Wth DVD Hardcover

84,95 €

ISBN 978-3-642-03786-3
Essential Radiology for Sports Medicine

This highly illustrated, practical book provides a systematic approach to all significant sports injuries. Imaging features are presented along with discussion of the influence of these findings on treatment and image-guided interventions. For each anatomical area, the underlying biomechanical features that produce injury are explored. All imaging modalities are featured with emphasis on MRI, MR arthrography, CT, and ultrasound. A concise guide to sports injuries, this book will help clinicians identify the appropriate imaging techniques and treatments to best serve their patients. This up-to-date resource is an excellent, high-yield resource for radiologists, emergency radiologists, orthopedists, and sports medicine professionals. International experts provide guidance as to how sports injuries occur and how to recognize relevant imaging findings.

Features
This highly illustrated, practical book provides a systematic approach to the radiological assessment of all significant sports injuries. Imaging features are presented along with discussion of the influence of these findings on treatment and image-guided interventions. For each anatomical area, the underlying biomechanical features that produce injury are explored. All imaging modalities are presented.

Contents

Fields of interest
Imaging / Radiology; Diagnostic Radiology; Interventional Radiology; Sports Medicine; Orthopedics

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2010. XII, 256 p. 398 illus., 35 in color. Hardcover
159.95 €
ISBN 978-1-4419-5972-0

Das QM-Handbuch
Qualitätsmanagement für die ambulante Pflege


Features

Contents
Einführung - Theoretische Grundlagen - Was ist Qualitätssicherung? - Was ist ein Qualitätsmanagementsystem? - Einführung eines Qualitätsmanagementsystems - Dokumentation des Qualitätsmanagementsystems - Was bewirkt die Einführung eines Qualitätsmanagementsystems in der ambulanten Pflege - Registrierung und Inhalt - Mit geltende Dokumente - Allgemeine Anforderungen an das Qualitätsmanagementsystem - Organisationsstruktur - Pflegeleitbild und Pflegekonzept - Qualitätssicherungssystem - Qualitätsmanagement - Managementbewertung - Marketing - Der kontinuierliche Verbesserungsprozess[...]

Fields of interest
Nursing Management / Nursing Research; Nursing; Geriatrics / Gerontology; Public Health

Target groups
Professional/practitioner

Type of publication
Reference work

Available
2010. 400 S. (Tipps und Tricks) Softcover
27,99 €

Tipps & Tricks für den Orthopäden und Unfallchirurgen
Problemlosungen von A bis Z

Oft sind es die kleinen Hinweise und Kniffe, die dem Arzt die Arbeit im Klinik- und Praxissalltag erleichtern können. Für das neue Fachgebiet Orthopädie und Unfallchirurgie fassen die Autoren 111 Tipps und Tricks aus der eigenen Erfahrung und aus der Literatur in einem Band zusammen: von Injektionsverfahren bis zu operativen Techniken, von der diagnostischen Abklärung bis zur Narbenpflege. Im bewährten Stil der „Tipps und Tricks“-Reihe finden sich die Antworten in kurz gefassten Texten. Die alphabetische Ordnung eignet sich bestens zum raschen Nachschlagen, aber auch zum neugierigen Stöbern und Schnöckern.

Features
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Contents
Tipps und Tricks von A bis Z - Bildnachweis - Stichwortverzeichnis

Features
Tipps und Tricks von A bis Z - Bildnachweis - Stichwortverzeichnis

Fields of interest
Orthopedics

Target groups
Professional/practitioner

Type of publication
Reference work

Available
2010. 400 S. (Tipps und Tricks) Softcover
27,99 €

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Contents
Tipps und Tricks von A bis Z - Bildnachweis - Stichwortverzeichnis

Tipps & Tricks für den Orthopäden und Unfallchirurgen
Problemlosungen von A bis Z

Oft sind es die kleinen Hinweise und Kniffe, die dem Arzt die Arbeit im Klinik- und Praxissalltag erleichtern können. Für das neue Fachgebiet Orthopädie und Unfallchirurgie fassen die Autoren 111 Tipps und Tricks aus der eigenen Erfahrung und aus der Literatur in einem Band zusammen: von Injektionsverfahren bis zu operativen Techniken, von der diagnostischen Abklärung bis zur Narbenpflege. Im bewährten Stil der „Tipps und Tricks“-Reihe finden sich die Antworten in kurz gefassten Texten. Die alphabetische Ordnung eignet sich bestens zum raschen Nachschlagen, aber auch zum neugierigen Stöbern und Schnöckern.

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Tipps und Tricks von A bis Z - Bildnachweis - Stichwortverzeichnis

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Handbook of Pediatric Surgery

Although pediatric surgery is a distinct and evolving specialty, it still remains an integral part of most general surgical and paediatric medical practice. Nevertheless, surgery in children does differ from adult practice in various fundamental ways, and there are key physiological and anatomical differences that constantly need underlining. Progress and improvement in outcome has also been rapid but it is sometimes difficult for practitioners to keep themselves up-to-date with the usual surgical or paediatric textbooks. This book will give a concise overview of all important topics and is designed to provide information in order to recognize the common surgical conditions; namely typical symptoms and signs, investigation and then treatment management. It will also provide an anatomical and physiological background to aid understanding, in addition to emphasizing logical, and where possible, evidence-based practice by the use of flow charts, tables and algorithms. Authored by an international[...]

Features
Handbook of Pediatric Surgery is an extensive yet concise distillation of the knowledge in its field, making for an ideal day-to-day reference guidebook. The sections include: Principles of Surgical Science; Fetal and Neonatal Surgery; General Children’s Surgery; Principles of Pediatric Urology; Surgery of the Liver, Pancreas and Bile Ducts; Principles of Surgical Oncology; Pediatric Surgery in[...]

Contents

Fields of interest
Pediatric Surgery; General Surgery; Pediatrics

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XXI, 256 p. 50 illus., 25 in color. Softcover

49,95 €
ISBN 978-1-84882-131-6

Inflammatory Dermatoses: The Basics

Inflammatory Dermatoses: The Basics will serve as an effective and efficient handbook for the student of dermatopathology, and as a practical bench reference for the practicing diagnostician who desires rapid access to criteria that are useful in differentiating histologically similar entities. The reader will be able to focus upon a single histologic observation, i.e., inflammatory conditions without epidermal changes, and use this as a starting point from which to build a differential diagnosis based upon pattern recognition. As each entity is addressed, there will be a concise discussion of the basic clinical findings and epidemiologic associations. This will be followed by a histologic description, highlighting areas that serve to discriminate between the entity under discussion and similar ones. Any immunologic studies that might augment the diagnostic sensitivity or specificity will be discussed. The chapters are thematically based and consist of essential bullet points arranged in organized[...]

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Contents
Granulomatous dermatitis.- Vasculitis.- Alopecia.- Panniculitis.- Lymphoma mimic.- Dermal pigmentary disorders.

Fields of interest
Pathology; Dermatology

Target groups
Professional/practitioner

Type of publication
Handbook

Available
2010. IX, 343 p. 232 illus. in color. Softcover

49,95 €
ISBN 978-1-4419-6003-0

Pharmacology & Pharmacokinetics

Effective drug administration is a crucial skill for any practitioner working in the critical care unit. This book, in providing a concise account of the fundamental principles of pharmacology and pharmacokinetics, equips the critical care physician for such a task. In addition to the principles of pharmacology and pharmacokinetics, this volume alerts the reader to factors that affect drug action such as disease, pregnancy and age, and advises on how to adjust drug dosages accordingly. The specialist therapeutics covered comprise drugs targeting the gastro-intestinal tract, sedation, non-opioid analgesia and opiates. A quick and easy reference, this volume will prove a valuable asset for both trainees and fully qualified practitioners in critical care.

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Contents

Fields of interest
Intensive / Critical Care Medicine; Pharmacy

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. IX, 86 p. 10 illus., 5 in color. (Competency-Based Critical Care) Softcover

39,95 €
Cholesterol and Beyond

The Research on Diet and Coronary Heart Disease 1900-2000

“Only once in a great while does a book come along that really does the job in addressing a major medical issue. When this happens, all can be joyful… Readers will find all their favorite dietary puzzles dealt with… With consummate scholarship, clarity and brevity, Truswell sifts out the chaff and identifies the critical questions, the responsible investigators, and the key studies.” So says Emeritus Professor Henry Blackburn from the University of Minnesota in the foreword to this remarkable concise book on the history of research on diet and heart disease. This was a theme of scientific, medical and public interest in the 20th Century, a century marked by the rise and fall of coronary heart disease as the major cause of death in the first world, followed by the rise of this cause of death in the developing world. There is obviously much to learn, and this book is an excellent starting point, tracing dietary factors and their role in heart disease one by one: fats, sugar, salt, alcohol[…]

Features

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Contents


Fields of interest

Public Health; Cardiology; Nutrition; History of Medicine; Lipidology

Target groups

Research

Type of publication

Monograph

Available

2010. XIV, 240 p. Hardcover

N. Ócs, Semmelweis University, Second Department of Obstetrics and Gynecology, Budapest, Hungary; F.G. Bánhidy, Semmelweis University, Second Department of Obstetrics and Gynecology, Budapest, Hungary; A.E. Czeizel, Foundation of the Community Control of Hereditary Diseases, Budapest, Hungary (Eds.)

Congenital Abnormalities and Preterm Birth Related to Maternal Illnesses During Pregnancy

This book provides the analysis of a uniquely large, population-based data set evaluating congenital anomalies as a consequence of maternal diseases. The possible adverse birth outcomes of babies born to mothers diagnosed with important diseases have not yet been evaluated in such a material by the same method. The greatest merit of these studies is that by analyzing their data the authors managed to identify some new previously unknown associations between maternal diseases and adverse birth outcomes. The first aim of the authors was to summarize 50 years of experiences in human teratology which may help younger experts to use them. The second objective was to show the methodological weaknesses of previous studies and to recommend the use of up-to-date methods when designing new studies. A surveillance database like the one used in these studies effectively helps to monitor the most important indicators of adverse birth outcomes such as congenital anomalies, preterm births, and low birth weight, to[…]

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Fields of interest

Maternal and Child Health; Health Promotion and Disease Prevention; Obstetrics / Gynecatology; Public Health; Epidemiology; Biomedicine (general)

Target groups

Research

Type of publication

Monograph

Available

2010. XII, 479 p. Hardcover

149,95 €

Complexity, Difference and Identity

An Ethical Perspective

“Complexity” has been part of the academic discourse for a decade or two. Texts on Complexity fall mainly in two categories: fairly technical and mathematical on the one hand, and fairly broad, vague and general on the other. Paul Cilliers’ book Complexity and Postmodernism, Understanding Complex Systems (Routledge 1998) constituted an attempt to bridge this divide by reflecting more rigorously on the philosophical implications of complexity, and by making it accessible to the social sciences. This edited volume is a continuation of this project, with specific reference to the ethical implications of acknowledging complexity. These issues are pertinent to our understanding of organisations and institutions and could contribute significantly to the development of a richer understanding of ethics in business and would be a useful tool for teachers, researchers and postgraduate students with ethical concerns in disciplines ranging from Philosophy, Applied Ethics, Sociology, Organisational Studies[…]

Features

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Contents


Fields of interest

Ethics; Business & Management Science; Interdisciplinary Studies; Philosophy (general); Epistemology

Target groups

Research

Type of publication

Contributed volume

Available

2010. XIV, 273 p. 4 illus., 2 in color (Issues in Business Ethics, Vol. 26) Hardcover

99,95 €
ISBN 978-90-481-9186-4
Freedom of Expression in a Diverse World

The debate over the foundations and boundaries of freedom of speech, once a matter of balancing the individual rights of unpopular speakers against broader social interests, took on a new shape in the 1980s when feminists began to advocate restrictions on pornography and critical race theorists to advocate restriction of certain kinds of hate speech. These challenges to traditional liberalism brought into sharp focus the issues of why we value free speech and how much weight it should be given against competing values. Difficult as it is to resolve these issues domestically, we now face new challenges arising from the increasingly rapid dissemination of information across international borders in an atmosphere of considerable political tension. The riots in response to the publication of Danish cartoons ridiculing Mohammed and the death threats against Salman Rushdie indicate how dramatically the stakes have been raised. At the same time, there is increased concern over discriminatory treatment.[...]

Features
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Contents

Fields of interest
Philosophy of Law; Law Theory / Law Philosophy; Constitutional Law; Political Philosophy; Political Science

Type of publication
Research

Dao Companion to Neo-Confucian Philosophy

This is the first volume in English to provide a comprehensive introduction to the philosophical thinking of representative Neo-Confucian thinkers from the eleventh to the eighteenth centuries. The volume describes the contributions these thinkers made to debates and discussions associated with the interpretation and deployment of key concepts and issues such as: sagehood; xing (human nature); xin (heart/mind); li (principle) and qi (vital force); dao; tian (heaven); ren (humanity); qing (feeling); cheng (sincerity); knowledge; learning; innate capacities vs. learned capacities; self-cultivation; as well as the legacies of the sages of antiquity, the Duke of Zhou, Confucius, Mencius and Xunzi. Individual chapters also locate the contexts in which these debates and discussions were developed: from interchanges with contemporaries to arguments extended through time. No other book exists which attempts to provide the same sort of comprehensive coverage and analysis. Individual contributors are all experts.[...]

Features
This Companion is the first volume to provide a comprehensive introduction, in accessible English, to the Neo-Confucian philosophical thought of representative Chinese thinkers from the eleventh to the eighteenth centuries. It brings together nineteen essays on a range of topics in Neo-Confucian philosophy, embracing natural and speculative philosophy through to virtue ethics and political philosophy.[...]

Contents

Fields of interest
Non-Western Philosophy; Religious Studies; Philosophy of Religion; History of Philosophy; Regional and Cultural Studies

Type of publication
Handbook

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Fields of interest
Non-Western Philosophy; Religious Studies; Philosophy of Religion; History of Philosophy; Regional and Cultural Studies

Type of publication
Handbook
Phenomenology and Existentialism in the Twentieth Century

The great flourishing in the Twentieth Century of the amalgamated movement of Phenomenology and Existentialism, having reached its unfolding and reverberation – as we have shown in our two preceding books and continue in this one – seems to have spanned the entire gamut of their marvels. Although the philosophical field is being still corroborated by phenomenologico-existential insights, phenomenology remains itself enigmatic. The question of its foundations, as the source of sense remaining unsolved by Husserl (herein Verducci’s study of Husserl and Fink, infra-page). And yet, the deepest phenomenologico-existential inspiration undertaken takes a new critique of reason (Verducci), the pivotal role of Imaginatio Creatrix (Euge), Jean Wahlen’s quest after ultimate meaning (Kremmer-Marietti) and the Logos of the “Moral Sense” (Czoma and Szmyd). Phenomenology is then reborn in the ontopoiesis of life (Tymieniecka) as “first philosophy” (Haney). We have here a powerful ferment we may call the New Enlightenment.

Features

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Contents


Fields of interest

Phenomenology; Modern Philosophy; History of Philosophy; Philosophy of Man; Cultural Heritage

Target groups

Research

Type of publication

Collected works

Available


139,95 €


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? This book addresses these matters by comparing the judicial review of legislation in the United Kingdom (the Human Rights Act of 1998), the Netherlands (the Halsema Proposal of 2002) and the Constitution of South Africa of 1996. These systems present valuable material to study the issues raised by judicial review. The [..]

Features

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Contents


Target groups

Research

Type of publication

Monograph

Available


99,95 €


The Attractor Mechanism

Proceedings of the INFN Laboratori Nazionali di Frascati School 2007

This book is based upon lectures presented in June 2007 at the INFN-Laboratori Nazionali di Frascati School on Attractor Mechanism, directed by Stefano Bellucci. The symposium included such prestigious lecturers as S. Ferrara, M. Günaydin, P. Levay, and T. Mohaupt. All lectures were given at a pedagogical, introductory level, which is reflected in the specific “flavor” of this volume. The book also benefits from extensive discussions about, and related reworking of, the various contributions. In addition, this volume contains contributions originating from short presentations of recent original results and an essay on the relation between complexity science and high-energy physics by A. Zichichi. It is the fourth volume in a series of books on the general topics of supersymmetry, supergravity, black holes and the attractor mechanism.

Features

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Contents


Fields of interest Elementary Particles, Quantum Field Theory; Classical and Quantum Gravitation, Relativity Theory

Target groups

Research

Type of publication

Proceedings

Available


189,95 €

ISBN 978-3-642-10735-1
Mathematical Theory of Dispersion-Managed Optical Solitons

“Mathematical Theory of Dispersion-Managed Optical Solitons” discusses recent advances covering optical solitons, soliton perturbation, optical cross-talk, Gabitov-Turitsyn Equations, quasi-linear pulses, and higher order Gabitov-Turitsyn Equations. Focusing on a mathematical perspective, the book bridges the gap between concepts in engineering and mathematics, and gives an outlook to many new topics for further research. The book is intended for researchers and graduate students in applied mathematics, physics and engineering and also it will be of interest to those who are conducting research in nonlinear fiber optics. Dr. Anjan Biswas is an Associate Professor at the Department of Applied Mathematics & Theoretical Physics, Delaware State University, Dover, DE, USA; Dr. Daniela Milovic is an Associate Professor at the Department of Telecommunications, Faculty of Electronic Engineering, University of Nis, Serbia; Dr. Matthew Edwards is the Dean of the School of Arts and Sciences at Alabama A & M[...]

General Relativity and John Archibald Wheeler

Observational and experimental data pertaining to gravity and cosmology are changing our view of the Universe. General relativity is a fundamental key for the understanding of these observations and its theory is undergoing a continuing enhancement of its intersection with observational and experimental data. These data include direct observations and experiments carried out in our solar system, among which there are direct gravitational wave astronomy, frame dragging and tests of gravitational theories from solar system and spacecraft observations. This book explores John Archibald Wheeler’s seminal and enduring contributions in relativistic astrophysics and includes: the General Theory of Relativity and Wheeler’s influence; recent developments in the confrontation of relativity with experiments; the theory describing gravitational radiation, and its detection in Earth-based and space-based interferometer detectors as well as in Earth-based bar detectors; the mathematical description of the [...] Features

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Fields of interest

Quantum Optics, Quantum Electronics, Nonlinear Optics, Microwaves, RF and Optical Engineering; Information and Communication, Circuits

Target groups

Research

Type of publication

Monograph

Available

2010. 160 p. (Nonlinear Physical Science) Hardcover

159,95 €

ISBN 978-3-642-10219-6

XXXII Brazilian Workshop on Nuclear Physics

The RTFNB (Reunião de Trabalho sobre Física Nuclear no Brasil) is a traditional nuclear physics annual meeting organized by the Brazilian Physical Society (SBF) since 1978. The XXXII-RTFNB was held at the city of Águas de Lindóia, from 8 to 12 of September, 2008. The main topics covered during this workshop comprises: Applied physics. Low energy nuclear physics. High energy nuclear physics.

Features

The RTFNB (Reunião de Trabalho sobre Física Nuclear no Brasil) is a traditional nuclear physics annual meeting organized by the Brazilian Physical Society (SBF) since 1978. The XXXII-RTFNB was held at the city of Águas de Lindóia, from 8 to 12 of September, 2008. The main topics covered during this workshop comprises: Applied physics. Low energy nuclear physics. High energy nuclear physics.

Fields of interest

Nuclear Physics, Heavy Ions, Hadrons

Target groups

Research

Type of publication

Proceedings

Available

2010. 188 p. (High Energy Physics, Vol. 1245) Softcover

89,95 €

**Probing the Nature of Gravity**

**Confronting Theory and Experiment in Space**

This set of review articles is the result of an international Workshop on Gravity focused on the various attempts to check the role of General Relativity in Gravity by measurements in space. The data on Gravitomagnetism are central in this discussion, in particular the results of the Gravity Probe B ‘null-experiment’, which has measured the Lense-Thirring effect in orbit around the Earth. In addition, the data derived from observations of astrophysical systems as well as laser ranging of Earth-orbiting satellites play an important role. Tests of possible violations of Newton’s inverse-square law and the equivalence principle are discussed. The book further addresses the question of constancy of the fundamental physical quantities and constraints on gravitational theory from cosmological observations, quantum gravity, and Grand Unified Theory. In this context, emphasis is placed on the assessment of uncertainty: to what extent are high-accuracy measurements in space possible? This volume is aimed at [...]

**Contents**


**Fields of interest**

Classical and Quantum Gravitation, Relativity Theory; Elementary Particles, Quantum Field Theory

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. VI, 574 p. (Space Sciences Series of ISSI, Vol. 34) Hardcover

139.95 €

ISBN 978-1-4419-1361-6

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J. Fransson, Uppsala University, Sweden

**Non-Equilibrium Nano-Physics**

A Many-Body Approach

The aim of this book is to present a formulation of the non-equilibrium physics in nanoscale systems in terms of many-body states and operators and, in addition, discuss a diagrammatic approach to Green functions expressed by many-body states. The intention is not to give an account of strongly correlated systems as such. Thus, the focus of this book ensues from the typical questions that arise when addressing nanoscale systems from a practical point of view, e.g. current-voltage asymmetries, negative differential conductance, spin-dependent tunneling. The focus is on nanoscale systems constituted of complexes of subsystems interacting with one another, under non-equilibrium conditions, in which the local properties of the subsystems are preferably being described in terms of its (many-body) eigenstates.

**Features**

The aim of this book is to present a formulation of the non-equilibrium physics in nanoscale systems in terms of many-body states and operators and, in addition, discuss a diagrammatic approach to Green functions expressed by many-body states. The intention is not to give an account of strongly correlated systems as such. The focus of this book ensues from the typical questions that arise when addressing [...]

**Contents**

1 Many-body representation of physical systems. - 1.1 Many-body states. - 1.2 Two-level systems. - 1.3 Many-body operators. - 1.4 Transition matrix elements. - References. - 2 Occupation number formalism. - 2.1 Perturbing the local levels. - 2.2 Occupations numbers. - 2.3 Single-level system. - 2.4 Two-level system in the Pauli spin blockade. - References. - 3 Many-body operator Green functions. - 3.1 Basic definitions. - 3.2 Equilibrium. - 3.3 Contour ordering. - 3.4 Single-level system. - References. - 4 Non-equilibrium formalism. - 4.1 Occupation number approach. - 4.2 Two-level system: Pauli.[...]

**Fields of interest**

Mathematical Methods in Physics

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. XIV, 224 p. (Lecture Notes in Physics, Vol. 809) Softcover

44.95 €


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Y.N. Grigoriev, Russian Academy of Sciences, SBRAS, Novosibirsk, Russia; N.H. Ibragimov, Blekinge Institute of Technology, Karlskrona, Sweden; V.F. Kovaliev, Russian Academy of Sciences, Moscow, Russia

**Symmetries of Integro-Differential Equations**

With Applications in Mechanics and Plasma Physics

This book aims to coherently present applications of group analysis to integro-differential equations in an accessible way. The book will be useful to both physicists and mathematicians interested in general methods to investigate nonlinear problems using symmetries. Differential and integro-differential equations, especially nonlinear, present the most effective way for describing complex processes. Therefore, methods to obtain exact solutions of differential equations play an important role in physics, applied mathematics and mechanics. This book provides an easy to follow, but comprehensive, description of the application of group analysis to integro-differential equations. The book is primarily designed to present both fundamental theoretical and algorithmic aspects of these methods. It introduces new applications and extensions of the group analysis method. The authors have designed a flexible text for postgraduate courses spanning a variety of topics.

**Features**

This book aims to coherently present applications of group analysis to integro-differential equations in an accessible way. The book will be useful to both physicists and mathematicians interested in general methods to investigate nonlinear problems using symmetries. Differential and integro-differential equations, especially nonlinear, present the most effective way for describing complex [...]

**Contents**


**Fields of interest**

Mathematical Methods in Physics; Atoms and Molecules in Strong Fields, Laser Matter Interaction; Plasma Physics; Classical Continuum Physics

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. XIII, 305 p. (Lecture Notes in Physics, Vol. 806) Softcover

69.95 €

Planets in Binary Star Systems

The discovery of extrasolar planets over the past decade has had major impacts on our understanding of the formation and dynamical evolution of planetary systems. There are features and characteristics unseen in our solar system and unexplainable by the current theories of planet formation and dynamics. Among these new surprises is the discovery of planets in binary and multiple-star systems. The discovery of such “binary-planetary” systems has confronted astrophysicists and cosmologists with many new challenges, and has led them to re-examine the theories of planet formation and dynamics. Among these challenges are: How are planets formed in binary star systems? What would be the notion of habitability in such systems? Under what conditions can binary star systems have habitable planets? How will volatiles necessary for life appear on such planets? This volume seeks to gather the current research in the area of planets in binary and multistar systems and to familiarize readers with its associated theoretical and...[

Features
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Contents

Fields of interest
Astronomy, Observations and Techniques; Planetology; Astrophysics and Astroparticles; Astrobiology

Target groups
Research

Type of publication
Monograph

Available
119.95 €
ISBN 978-90-481-6868-0

Non-Equilibrium Phase Transitions

Volume 2: Ageing and Dynamical Scaling Far from Equilibrium

The complete work consists of a two-volume set, describing two main classes of non-equilibrium phase-transitions, and surveys two main aspects of non-equilibrium phase-transitions: (a) transitions in the steady-state and (b) transitions in the relaxation behavior. Volume I, Absorbing Phase Transitions, published in 2008, covered the statics and dynamics of transitions into an absorbing state. This volume covers dynamical scaling in far-from-equilibrium relaxation behaviour and ageing. Motivated initially by experimental results, dynamical scaling has now been recognised as a cornerstone in the modern understanding of far from equilibrium relaxation. Dynamical scaling is systematically introduced, starting from coarsening phenomena, and existing analytical results and numerical estimates of universal non-equilibrium exponents and scaling functions are reviewed in detail. Ageing phenomena in glasses, as well as in simple magnets, are paradigmatic examples of non-equilibrium dynamical scaling, but...[

Features
This book is Volume 2 of a two-volume set describing two main classes of non-equilibrium phase-transitions. This volume covers dynamical scaling in far-from-equilibrium relaxation behaviour and ageing. Motivated initially by experimental results, dynamical scaling has now been recognised as a cornerstone in the modern understanding of far from equilibrium relaxation. Dynamical scaling is systematically introduced, starting from coarsening phenomena, and existing analytical results and numerical estimates of universal non-equilibrium exponents and scaling functions are reviewed in detail. Ageing phenomena in glasses, as well as in simple magnets, are paradigmatic examples of non-equilibrium dynamical scaling, but...[

Contents

Fields of interest
Physics (general); Particle and Nuclear Physics; Atomic, Molecular, Optical and Plasma Physics; Quantum Physics; Condensed Matter Physics; Engineering (general)

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010, XVI, 700 p. 200 illus., 100 in color. Hardcover
139.95 €
ISBN 978-3-642-04332-1

1000 Solved Problems in Modern Physics

This book basically caters to the needs of undergraduates and graduates physics students in the area of modern physics, specially particle and nuclear physics. Lecturers/tutors may use it as a resource book. The contents of the book are based on the syllabi currently used in the undergraduate courses in USA, U.K., and other countries. The book is divided into 10 chapters, each chapter beginning with a brief but adequate summary and necessary formulæ, tables and line diagrams followed by a variety of typical problems useful for assignments and exams. Detailed solutions are provided at the end of each chapter.

Features
This book basically caters to the needs of undergraduates and graduates physics students in the area of modern physics, specially particle and nuclear physics. Lecturers/tutors may use it as a resource book. The contents of the book are based on the syllabi currently used in the undergraduate courses in USA, U.K., and other countries. The book is divided into 10 chapters, each chapter beginning with a brief...[

Contents

Fields of interest
Physics (general); Particle and Nuclear Physics; Atomic, Molecular, Optical and Plasma Physics; Quantum Physics; Condensed Matter Physics; Engineering (general)

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010, XXIV, 544 p. (Theoretical and Mathematical Physics) Hardcover
99.95 €
Laser Florence 2009

A Gallery Through the Laser Medicine World

Laser Florence 2009 would like to be a bridge between scientists under the umbrella of the International Academy of Laser Medicine and Surgery, www.ialms.com. The enthusiasm of young researchers and doctors could be driven towards new data selected by some pioneers of this matter and immediately available for practical use.

Features
Laser Florence 2009 would like to be a bridge between scientists under the umbrella of the International Academy of Laser Medicine and Surgery, www.ialms.com. The enthusiasm of young researchers and doctors could be driven towards new data selected by some pioneers of this matter and immediately available for practical use.

Fields of interest
Laser Technology and Physics, Photonics, Minimally Invasive Surgery

Target groups
Research

Type of publication
Proceedings

Available

89,95 €
ISBN 978-0-7354-0770-1

High Power Laser-Matter Interaction

A self-contained introduction to the main aspects of high-power laser-matter interaction in the intensity range 10^10-10^22 W/cm^2 from plasma formation to highly relativistic interactions of the laser field with matter is presented. It is intended as a guide for scientists and students who have just discovered the field as a new and attractive area of research, and for scientists who have worked in another field and want to join now the subject of laser plasmas. In the first chapter the plasma dynamics is described phenomenologically by a two fluid model and similarity relations from dimensional analysis. Chapter 2 is devoted to plasma optics and collisional absorption in the dielectric and ballistic model. Linear resonance absorption at the plasma frequency and its mild nonlinearities as well as the self-quenching of high amplitude electron plasma waves by wave breaking are discussed in Chapter 3. With increasing laser intensity the plasma dynamics is dominated by radiation pressure, at resonance[...]

Contents

Fields of interest
Condensed Matter Physics; Quantum Optics, Quantum Electronics, Nonlinear Optics; Engineering (general); Applied Optics, Optoelectronics, Optical Devices; Plasma Physics, Spectroscopy and Microscopy

Target groups
Research

Type of publication
Monograph

Available
2010. XII, 410 p. (Springer Tracts in Modern Physics, Vol. 238) Hardcover

149,95 €
ISBN 978-3-540-50669-0

Rare-Earth Doped III-Nitrides for Optoelectronic and Spintronic Applications

This book summarises recent progress in the science and technology of rare-earth doped nitrides, providing a snapshot of the field at a critical point in its development. Improved theoretical understanding of the behaviour of f-electrons in solids, driven by accelerating computational capability, has coincided with an improved ability of crystal growers to incorporate rare earth elements reproducibly in wide bandgap semiconductor hosts that are favoured for optoelectronic and spintronic applications. The device possibilities of these advanced materials are promising but by no means well-developed. Following a review of the theoretical background, this book explores the preparation of materials, either through in-situ growth or ion implantation/annealing, the characterisation of these materials and their incorporation in existing and prospective devices. Featuring contributions from leading researchers in Europe, the USA and Japan, the book will be a valuable resource for academics, advanced[...]

Features
This book provides a snapshot of recent progress in the field of rare-earth doped group III nitride semiconductors, especially GaN, but extending to AlN and the alloys AlGaN, AlInN and InGaN. This material class is currently enjoying an upsurge in interest due to its ideal suitability for both optoelectronic and spintronic applications. The text first introduces the reader to the historical background and[...]

Fields of interest
Applied Optics, Optoelectronics, Optical Devices; Quantum Optics, Quantum Electronics, Nonlinear Optics

Target groups
Research

Type of publication
Monograph

Available

169,95 €
Mechanik der Gase

D. Richter, Helmholtz Zentrum Berlin


Features
Kenntnisse über die Bewegung von Gasteilchen, deren Geschwindigkeit und Energie sind eine wichtige Voraussetzung zum Verständnis moderner Technologien, z. B. der Vakuumtechnik, und eng damit verknüpft der Vakuumphysik oder der Handhabung von Gasen. Mit dem vorliegenden Buch wird eine gut verständliche Darstellung der Mechanik der Gase gegeben. Dabei ist der mathematische Apparat nicht [..]

Contents
Maxwell'sche Geschwindigkeitsverteilung.- Zustandsgleichungen.- Gaskinetische Kenngrößen.- Experimentelle Messmethoden.- Formelzusammenstellung und mathematische Hilfsmittel.

Fields of interest
Fluid- and Aerodynamics; Engineering Thermodynamics; Heat and Mass Transfer; Applied and Technical Physics; Mechanics

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. XII, 114 S. 70 Abb., 35 in Farbe. (Springer-Lehrbuch) Softcover
27,99 €
ISBN 978-3-642-12722-9

Astronomers Anonymous

S. Ringwood, Essex, UK

Astronomers Anonymous
Getting Help with the Puzzles and Pitfalls of Practical Astronomy

This collection of “typical” astronomy questions and hilarious answers, compiled from Ringwood’s own experiences in the world of astronomy, has been written to entertain and amuse amateur (and professional) astronomers as well as armchair astronauts. In this parody of a typical “Lonely Hearts column”, specifically for troubled astronomers, readers will easily recognize the difficulties they face and enjoy the laughs being directed at them and their science. There is also plenty of background material provided to make the book accessible to non-astronomers, as a humorous and informative work about (mostly amateur) astronomy.

Features
In this entertaining parody of letters to a typical “lonely hearts” columnist, real-life expert and long-time astronomy columnist Steve Ringwood presents a sweeping overview of common questions and problems practical and amateur astronomers face, compiled from Ringwood’s own experiences in the world of astronomy. His screamingly funny comments will keep you laughing out loud throughout, so be careful of [..]

Contents

Fields of interest
Astronomy, Astrophysics and Cosmology; Popular Science in Astronomy

Target groups
Popular/general

Type of publication
Popular science

Available
2010. XV, 222 p. 52 illus., 26 in color. Softcover
29,95 €

Theoretical Molecular Biophysics

S. Ringwood, Essen, UK

Theoretical Molecular Biophysics
Getting Help with the Puzzles and Pitfalls of Practical Astronomy

This collection of “typical” astronomy questions and hilarious answers, compiled from Ringwood’s own experiences in the world of astronomy, has been written to entertain and amuse amateur (and professional) astronomers as well as armchair astronauts. In this parody of a typical “Lonely Hearts column”, specifically for troubled astronomers, readers will easily recognize the difficulties they face and enjoy the laughs being directed at them and their science. There is also plenty of background material provided to make the book accessible to non-astronomers, as a humorous and informative work about (mostly amateur) astronomy.

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Contents

Fields of interest
Astronomy, Astrophysics and Cosmology; Popular Science in Astronomy

Target groups
Popular/general

Type of publication
Popular science

Available
2010. XV, 222 p. 52 illus., 26 in color. Softcover
29,95 €

Theoretical Molecular Biophysics

P. Scherer, Technische Universität, München, Germany; S.F. Fischer, Technische Universität, München, Germany

Theoretical Molecular Biophysics

“Theoretical Molecular Biophysics” is an advanced study book for students, shortly before or after completing undergraduate studies, in physics, chemistry or biology. It provides the tools for an understanding of elementary processes in biology, such as photosynthesis on a molecular level. A basic knowledge in mechanics, electostatics, quantum theory and statistical physics is desirable. The reader will be exposed to basic concepts in modern biophysics such as entropic forces, phase separation, potentials of mean force, proton and electron transfer, heterogeneous reactions coherent and incoherent energy transfer as well as molecular motors. Basic concepts such as phase transitions of biopolymers, electrostatics, protonation equilibria, ion transport, radiationless transitions as well as energy- and electron transfer are discussed within the frame of simple models.

Features
In this entertaining parody of letters to a typical “lonely hearts” columnist, real-life expert and long-time astronomy columnist Steve Ringwood presents a sweeping overview of common questions and problems practical and amateur astronomers face, compiled from Ringwood’s own experiences in the world of astronomy. His screamingly funny comments will keep you laughing out loud throughout, so be careful of [..]

Contents

Fields of interest
Biophysics and Biological Physics; Biomedical Engineering; Mathematical Methods in Physics; Quantum Physics; Quantum Information Technology; Spintronics; Engineering (general)

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2010. XIII, 371 p. 494 illus., 247 in color. (Biological and Medical Physics, Biomedical Engineering) Hardcover
79,95 €
A.A. Ungar, North Dakota State University, Fargo, ND, USA

Hyperbolic Triangle Centers
The Special Relativistic Approach

After A. Ungar had introduced vector algebra and Cartesian coordinates into hyperbolic geometry in his earlier books, along with novel applications in Einstein’s special theory of relativity, the purpose of his new book is to introduce hyperbolic barycentric coordinates, another important concept to embed Euclidean geometry into hyperbolic geometry. It will be demonstrated that, in full analogy to classical mechanics where barycentric coordinates are related to the Newtonian mass, barycentric coordinates are related to the Einsteinian relativistic mass in hyperbolic geometry. Contrary to general belief, Einstein’s relativistic mass hence meshes up extraordinarily well with Minkowski’s four-vector formalism of special relativity. In Euclidean geometry, barycentric coordinates can be used to determine various triangle centers. While there are many known Euclidean triangle centers, only few hyperbolic triangle centers are known, and none of the known hyperbolic triangle centers has been determined.[…]

Features
After A. Ungar had introduced vector algebra and Cartesian coordinates into hyperbolic geometry in his earlier books, along with novel applications in Einstein’s special theory of relativity, the purpose of his new book is to introduce hyperbolic barycentric coordinates, another important concept to embed Euclidean geometry into hyperbolic geometry. It will be demonstrated that, in full analogy to classical […]

Contents

Fields of interest
Classical and Quantum Gravitation, Relativity Theory; Applications of Mathematics; Theoretical, Mathematical and Computational Physics; Astronomy, Astrophysics and Cosmology

Target groups
Research

Type of publication
Monograph

Available
2010. XVI, 319 p. (Fundamental Theories of Physics, Vol. 166) Hardcover

3690,00 €
ISBN 978-3-642-02701-7
Ein Löffelchen voll Biotechnologie


Features

Contents
Assessment-Center. Entwicklung und Anwendung - mit 57 AC-Übungen und Checklisten zum Downloaden und Bearbeiten im Internet


Features
Das Assessment Center ist eine der bekanntesten Methoden der Personaldiagnostik, die hauptsächlich zur Personalauswahl, aber auch im Rahmen der Personalentwicklung eingesetzt wird. Häufig wird das AC allerdings unprofessionell durchgeführt - nicht zuletzt durch eine Orientierung an oberflächlicher Ratgeberliteratur. Bei hohem Zeit- und Kostenaufwand kann es so sein Potenzial nicht entfalten. In diesem Buch [...]
Lonely Children and Adolescents
Self-Perceptions, Social Exclusion, and Hope

From texting and social networking sites to after-school activities, young people have many opportunities to interact with one another, and yet loneliness and isolation trouble today’s youth in increasing numbers. Many children and teens report feeling lonely even in the midst of family and friends, and childhood loneliness is a prime risk factor for adult alienation. Lonely Children and Adolescents: Self-Perceptions, Social Exclusion, and Hope illuminates seldom-explored experiences of social isolation among young people as well as the frustrations of the parents and teachers who wish to help. This groundbreaking book conceptualizes loneliness not simply as the absence of social connections, but as a continuum of developmental experience, often growing out of the conflict between opposite needs: to be like one’s peers yet be one’s unique self. The author draws clear distinctions between loneliness and solitude and identifies genetic and environmental characteristics (i.e., social, psychological,...)

Features
From texting and social networking sites to after-school activities, young people have many opportunities to interact with one another, and yet loneliness and isolation trouble today’s youth in increasing numbers. Many children and teens report feeling lonely even in the midst of family and friends, and childhood loneliness is a prime risk factor for adult alienation. Lonely Children and Adolescents...

Contents

Fields of interest
Child and School Psychology

Target groups
Research

Type of publication
Monograph

Available
2010. XIV, 303 p. 4 illus. Hardcover
119,95 €
ISBN 978-1-4419-6283-6

Identifying, Assessing, and Treating Self-Injury at School

Nonsuicidal self-injury (NSSI) among young people—most notably in the form of forearm- or wrist-cutting—occurs across cultural groups, social strata, and developmental stages, puzzle and repelling adults. Youth engaging in NSSI behaviors are at a higher risk for suicidality as well as other mental health and academic problems. And because NSSI is often first noticed in the school setting (as is the case with many children’s disorders), school professionals are being encouraged to take a more proactive role in intervention. The first book specifically geared toward education personnel, Identifying, Assessing, and Treating Self-Injury at School clearly defines NSSI, differentiating it from suicidal, borderline, and other behaviors and analyzing the psychological contexts in which it occurs. This school-based perspective gives readers a practical framework for earlier, more accurate diagnosis; relevant consulting with parents, teachers, and colleagues; and effective, science-based...

Features
Nonsuicidal self-injury (NSSI) among young people—most notably in the form of forearm- or wrist-cutting—occurs across cultural groups, social strata, and developmental stages, puzzle and repelling adults. Youth engaging in NSSI behaviors are at a higher risk for suicidality as well as other mental health and academic problems. And because NSSI is often first noticed in the school setting (as is the case...)

Contents
Introduction and Overview.- Causes.- Prevalence and Associated Conditions.- Case Finding, Screening, and Referral.- Diagnostic Assessment.- Psycho-Educational Assessment.- Treatment.- Appendix.- References

Fields of interest
Child and School Psychology; Education (general); Psychotherapy and Counseling; Developmental Psychology; Social Work

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XI, 127 p. (Developmental Psychopathology at School) Hardcover
89,95 €

Angewandte Psychologie für die Personalentwicklung.
Konzepte und Methoden für Bildungsmanagement, betriebliche Aus- und Weiterbildung

In Zeiten rasanter organisationaler Veränderungen und wirtschaftlicher Umbrüche stehen auch Bildungsfachleute und Personalentwickler vor der Herausforderung, ihre Kernaufgaben neu zu definieren, das Aufgabenspektrum zu erweitern, unternehmerisch mitzudenken und ihre Rollen im eigenen Unternehmen zu stärken. Doch woran können sie sich dabei orientieren? Modetrends von heute werden vielleicht schon morgen durch andere wieder abgelöst - was davon hat Bestand und Substanz? Die angewandte Psychologie bietet hierzu einen Orientierungsrahmen, denn viele Aufgaben der modernen betrieblichen Bildungsarbeit sind psychologischer Natur: Lernprozesse von Erwachsenen in Einzel- und Gruppensettings gestalten, Führungskräfte beraten und weiterentwickeln, Veränderungsprozesse begleiten, mit verschiedenen Anspruchskategorien in Verhandlung treten. Das vorliegende Buch enthält alles, was die Psychologie für eine moderne, nachhaltige betriebliche Bildungsarbeit und Personalentwicklung zu bieten hat. Dabei werden auch...

Features
In Zeiten rasanter organisationaler Veränderungen und wirtschaftlicher Umbrüche stehen auch Bildungsfachleute und Personalentwickler vor der Herausforderung, ihre Kernaufgaben neu zu definieren, das Aufgabenspektrum zu erweitern, unternehmerisch mitzudenken und ihre Rollen im eigenen Unternehmen zu stärken. Doch woran können sie sich dabei orientieren? Modetrends von heute werden vielleicht schon morgen durch...

Contents

Fields of interest
Industrial and organisational psychology; Personnel Management; Management/Business for Professionals

Target groups
Professional/practitioner

Type of publication
Professional book

Available
51,36 €
Der Riss in der Tafel
Amoklauf und schwere Gewalt in der Schule


Features

Contents
1. Taten (Was sind "School Shootings"? Beispiel: Moses Lake, Ausmaß von School Shooting.)
2. Täter (Lebensphase Jugend, Beispiel: West Paducah.)
3. Lebensumfeld (Beispiel: Red Lake, Kontrolltheorien: Beziehungen, die von Taten abhängen)
5. Phantasiewelten (Beispiel: Littleton, Phantasie als Schlüssel zur Wahrnehmung, Phantasie im Kontext jugendlicher Amokläuter, Übereinkünfte)
6. Nachahmungstäter und Trittbrettfahrer, Lehren aus den Fällen.)

Fields of interest
Psychology and Law; Criminal Law; Child and School Psychology; Pedagogic Psychology; Humanities

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010 XI, 250 S. 43 Abb. Hardcover
27,99 €
ISBN 978-3-642-11309-3

Angewandte Psychologie für das Human Resource Management. Konzepte und Instrumente für ein wirkungsvolles Personalmanagement


Features

Contents
I. Grundlagen, Rollen und Kompetenzen im HRM.
II. Organisationsverständnis und Rollen im Human Resources Management.
III. HRM-Kernfunktionen: Analyse, Gestaltung und Entwicklung.
IV. Wandel in Organisationen – Grundlagen und Prinzipien des Change Managements
V. Perspektiven im Human Resources Management.

Fields of interest
Industrial and organisational psychology; Personnel Management; Management/Business for Professionals

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010 XXV, 478 S. 67 Abb. in Farbe. Hardcover
27,99 €
ISBN 978-3-642-11309-3
Social Sciences

M. Ajzenstadt, Hebrew University of Jerusalem, Paul Baerwald School of Social Work & Social Welfare; J. Gal, Hebrew University of Jerusalem, Paul Baerwald School of Social Work & Social Welfare (Eds.)

Children, Gender and Families in Mediterranean Welfare States

The study of welfare states and social policy has enjoyed growing popularity in the last three decades. This field has been characterized by a growing level of theorization, richer case study analyses, inclusion of additional sources of welfare provision (non-profit, market-based, informal, family) and fields of study (globalization, gender, ethnicity, immigration, children), and increasingly complex, accurate and up-to-date cross-national comparative analyses. One of the subjects that have been the focus of much interest has been that of families, women and children – their social well being and their legal and economic status in the welfare state. The common assumption is that there is a clear relationship and interaction between the structuring of the welfare state and the well-being and social status of these subs groups. Cross-national comparative analyses have shown that this interaction differs significantly from country to country, depending on the culture, religion as well as on its welfare [...]

Features
Recent decades have seen a growing sophistication in the study of welfare states and social policy in general. This greater depth has come about as a result of more complex theorization; richer case study analyses; and the inclusion of additional sources of provision such as not-for-profit, market-based, informal and family welfare. The fields of study open to social scientists in this arena have also [...]

Contents

Fields of interest
Quality of Life Research; Gender Studies; Psychotherapy and Counseling; Social Policy

Target groups
Research

Type of publication
Contributed volume

Available

99,95 €

Approaches to Improving the Quality of Life

A.L. Ferriss, Emory University, Atlanta, GA, USA

How to Enhance the Quality of Life

After measuring the Quality of Life and identifying the deficiencies in your community, what steps should you take to improve the Quality of Life? This volume reviews methods for improving the Quality of Life that are based upon improving each of the ten domains of the Quality of Life. Steps to improve health, means of reducing environmental toxins, orientation to bring about better self-concept and mental health, and so forth. In each such area, steps are set forth for eliminating undesirable and debilitating features of the domain. Social change comes about by the application of devised steps. The process has been called "telesis". It is the application of intelligent, well-tested interventions to bring about improvement. In some cases it may effect change quickly and others may require a continuing process of adjustment and change. As a handbook for community workers, the volume provides a framework for intervention that could lead to a better tomorrow.

Features
After measuring the Quality of Life and identifying the deficiencies in your community, what steps should you take to improve the Quality of Life? This volume reviews methods for improving the Quality of Life that are based upon improving each of the ten domains of the Quality of Life; steps to improve health, means of reducing environmental toxins, orientation to bring about better self-concept and mental [...]

Contents

Fields of interest
Quality of Life Research

Target groups
Research

Type of publication
Monograph

Available

99,95 €
SIKU: Knowing Our Ice
Documenting Inuit Sea Ice Knowledge and Use

By exploring indigenous people’s knowledge and use of sea ice, the SIKU project has demonstrated the power of multiple perspectives and introduced a new field of interdisciplinary research, the study of social (socio-cultural) aspects of the natural world, or what we call the social life of sea ice. It incorporates local terminologies and classifications, place names, personal stories, teachings, safety rules, historical narratives, and explanations of the empirical and spiritual connections that people create with the natural world. In opening the social life of sea ice and the value of indigenous perspectives we make a novel contribution to IPY, to science, and to the public.

**Features**

By exploring indigenous people’s knowledge and use of sea ice, the SIKU project has demonstrated the power of multiple perspectives and introduced a new field of interdisciplinary research, the study of social (socio-cultural) aspects of the natural world, or what we call the social life of sea ice. It incorporates local terminologies and classifications, place names, personal stories, teachings, safety rules, ...

**Contents**


**Fields of interest**

Anthropology; Human Geography; Climate Change; Geography (general); Linguistic Anthropology

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**

2010. XXXI, 300 p. Softcover

49.95 €

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Spatial Planning and Urban Development: Critical Perspectives

Urban planning is a complex field of knowledge and practice. Through the decades, theoretical debate has formed an eclectic set of possible perspectives, without finding, in our opinion, a coherent paradigmatic framework which can adequately guide the interpretation and action in urban planning. The hypothesis of this book is that the attempts of founding an autonomous planning theory are inadequate if they do not explore two interconnected fields: architecture and public policies. The book critically reviews a selected set of current practices and theoretical founding works of modern and contemporary urban planning by highlighting the continuous search for the epistemic legitimization of a large variety of experiences. The distinctive contribution of this book is a documented critique to the eclecticism and abstraction of the main international trends in current planning theory. The dialogic relationship with the traditions of architecture and public policy is proposed here in order to critically ...

**Features**

Urban planning is a complex field of knowledge and practice. Through the decades, theoretical debate has formed an eclectic set of possible perspectives, without finding, in our opinion, a coherent paradigmatic framework which can adequately guide the interpretation and action in urban planning. The hypothesis of this book is that the attempts of founding an autonomous planning theory are inadequate if they ...

**Contents**


**Fields of interest**

Human Geography; Landscape, Regional and Urban Planning; Regional and Cultural Studies

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. XII, 159 p. (Urban and Landscape Perspectives, Vol. 10) Hardcover

99.95 €

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The Indirect Estimation of Migration: Methods for Dealing with Irregular, Inadequate, and Missing Data

This unique book introduces an essential element in applied demographic analysis: a tool-kit for describing, smoothing, repairing and - in instances of totally missing data - inferring directional migration flows. Migration rates combine with fertility and mortality rates to shape the evolution of human populations. Demographers have found that all three generally exhibit persistent regularities in their age and spatial patterns, when changing levels are controlled for. Drawing on statistical descriptions of such regularities, it is often possible to improve the quality of the available data by smoothing irregular data, imposing the structures of borrowed and related data on unreliable data, and estimating missing data by indirect methods. Model migration schedules and log-linear models are presented as powerful methods for helping population researchers, historical demographers, geographers, and migration analysts work with the data available to them.

**Features**

This unique book introduces an essential element in applied demographic analysis: a tool-kit for describing, smoothing, repairing and - in instances of totally missing data - inferring directional migration flows. Migration rates combine with fertility and mortality rates to shape the evolution of human populations. Demographers have found that all three generally exhibit persistent regularities in their ...

**Contents**

Chapter 1: Introduction.- Chapter 2: Describing age structures of migration.- Chapter 3: Describing Spatial Structures of Migration.- Chapter 4: Smoothing age and spatial patterns.- Chapter 5: Imposing age and spatial structures.- Chapter 6: Inferring age and spatial patterns.- Chapter 7: Conclusion

**Fields of interest**

Migration; Demography; Quantitative Geography; Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law; Sociology

**Target groups**

Research

**Type of publication**

Monograph

**Available**


99.95 €
Financial and Insurance Formulas

This survey contains more than 3,000 formulas and methods from the field of finance and insurance mathematics (as well as related formulas in mathematics, probability theory, statistics, econometrics, index numbers, demography, stochastic processes and time series). The formulas are mostly applicable in financial and actuarial practice. Their mathematical level ranges from simple ones based on arithmetic to very sophisticated matters of higher mathematics (e.g. stochastic calculus), but they are usually presented in the form most frequently used in applications. Explanations and references to related parts of the survey are given so that one can easily browse and look them up in the text; the detailed Index is also helpful for this purpose. The survey will be of benefit for students, researchers and practitioners in finance and insurance.

Features
This survey contains more than 3,000 formulas and methods from the field of finance and insurance mathematics (as well as related formulas in mathematics, probability theory, statistics, econometrics, index numbers, demography, stochastic processes and time series). The formulas are mostly applicable in financial and actuarial practice. Their mathematical level ranges from simple ones based on arithmetic to [...]
Logistic Regression
A Self-Learning Text

This very popular textbook is now in its third edition. Whether students or working professionals, readers appreciate its unique "lecture book" format. They often say the book reads like they are listening to an outstanding lecturer. This edition includes three new chapters, an updated computer appendix, and an expanded section about modeling guidelines that consider causal diagrams. Like previous editions, this textbook provides a highly readable description of fundamental and more advanced concepts and methods of logistic regression. It is suitable for researchers and statisticians in medical and other life sciences as well as academicians teaching second-level regression methods courses. The new chapters are: Additional Modeling Strategy Issues, including strategy with several exposures, screening variables, collinearity, influential observations and multiple-testing, assessing Goodness to Fit for Logistic Regression, assessing Discriminatory Performance of a Binary Logistic Model: ROC Curves.[…]

Features
This very popular textbook is now in its third edition. Whether students or working professionals, readers appreciate its unique "lecture book" format. They often say the book reads like they are listening to an outstanding lecturer. This edition includes three new chapters, an updated computer appendix, and an expanded section about modeling guidelines that consider causal diagrams. Like previous […]

Contents

Fields of interest
Statistics for Life Sciences, Medicine, Health Sciences, Epidemiology, Statistics for Social Sciences, Behavioral Science, Education, Public Policy, and Law

Target groups
Research

Type of publication
Graduate/advanced undergraduate textbook

Available
2010. XIV, 616 p. (Statistics for Biology and Health) Hardcover
89.95 €
ISBN 978-1-4419-1741-6

F.J. Samaniego, University of California, Davis, CA, USA

A Comparison of the Bayesian and Frequentist Approaches to Estimation

This monograph contributes to the area of comparative statistical inference. Attention is restricted to the important subfield of statistical estimation. The book is intended for an audience having a solid grounding in probability and statistics at the level of the year-long undergraduate course taken by statistics and mathematics majors. The necessary background on Decision Theory and the frequentist and Bayesian approaches to estimation is presented and carefully discussed in Chapters 1–3. The "threshold problem" - identifying the boundary between Bayes estimators which tend to outperform standard frequentist estimators and Bayes estimators which don’t - is formulated in an analytically tractable way in Chapter 4. The formulation includes a specific (decision-theory-based) criterion for comparing estimators. The centerpiece of the monograph is Chapter 5 in which, under quite general conditions, an explicit solution to the threshold is obtained for the problem of estimating a scalar parameter under[…]

Features
This monograph contributes to the area of comparative statistical inference. Attention is restricted to the important subfield of statistical estimation. The book is intended for an audience having a solid grounding in probability and statistics at the level of the year-long undergraduate course taken by statistics and mathematics majors. The necessary background on Decision Theory and the frequentist and […]

Contents
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