Just Released New Books June 2010
All Titles

Sorted by author and title within the main subject.
Nitric Oxide (NO) and Cancer

Prognosis, Prevention, and Therapy

Nitric Oxide (NO) is a pleotropic, ubiquitous modulator of cellular functions. Atrial nitrates and glycyl trinitrate, representative intravasculatidors, were introduced as therapeutic agents more than a century ago for relief from acute attacks of angina. The vasodilator action is mediated by the release of NO following treatment. NO has important therapeutic applications in several diseases such as inflammatory diseases, erectile dysfunction, inflammation, pain and neural protective activity. However, the role of NO in cancer and its application in therapy has received little attention. This monograph will be the first to focus on studies that investigate the role of NO in tumor cell pathogenesis, growth, angiogenesis, response to cytotoxic therapies and NO translational applications in cancer therapy, alone or in conjunction with other therapies.

Features
The Nobel Prize in Physiology and Medicine was awarded in 1998 to Doctors Furchgott, Ignarro, and Murad for their discoveries concerning "Nitric oxide (NO) as a signaling molecule in the cardiovascular system." NO-induced cell signaling events within the cell producing it and the diffusibility to NO in other cells have led to the discovery of many other physiological functions in many different types of [...]?

Contents

Fields of interest
Cancer Research; Oncology; Pharmacology / Toxicology

Target groups
Research

Type of publication
Monograph

Available

2010. X, 250 p. 42 illus., 21 in color. (Cancer Drug Discovery and Development) Hardcover

169.95 €
ISBN 978-1-4419-1431-6

Molecular Basis for Therapy of AIDS-Defining Cancers

Cancer incidences increase in people living with HIV/AIDS. Over 2 million people currently live with HIV/AIDS in the US. This number will increase as HAART prolongs the average lifespan and as (at least in some states) the number of new HIV infections increase again. As this population ages their incidence rates for cancer will increase, as well. Recently, new rational targets for cancer therapy have emerged. But their application to the care of HIV+ patients is slow, because of concerns about the weakened immune status of the patients, because of possible drug interactions with HAART and because some of the AIDS defining cancers are rare.

Features
An increased risk for various cancers is a characteristic of people living with HIV infection. Although only three cancers – Kaposi’s sarcoma, high-grade B-cell lymphomas, and invasive cervical cancer – are considered to be “AIDS-defining” conditions, are associated with oncogenic viruses, and occur with increased frequency as immune function declines, other cancer types also occur significantly more [...]?

Contents

Fields of interest
Cancer Research; Pharmacology / Toxicology; Infectious Diseases

Target groups
Research

Type of publication
Contributed volume

Available

2010. CCLVI, 200 p. 14 illus., 7 in color. Hardcover

129.95 €

Melanocortins

Multiple Actions and Therapeutic Potential

This book represents the joint effort of an international group of scientists who are at the forefront of research in the field. The volume spans information on chemistry, pharmacology, distribution, and therapeutic potential of melanocortins. A recurrent theme of this volume is the role played by distinct melanocortin receptors in mediating melanocortin effects. Although these receptors have been identified and well-characterized, information in the book indicates that definite categorization of their expression and function in different conditions still needs major work.

Features
This book represents the joint effort of an international group of scientists who are at the forefront of research in the field. The volume spans information on chemistry, pharmacology, distribution, and therapeutic potential of melanocortins. A recurrent theme of this volume is the role played by distinct melanocortin receptors in mediating melanocortin effects. Although these receptors have been identified[...]

Contents
Structure Activity Relationships (SAR) of Melanocortin and AgoutiRelated (AGRP) Peptides.- Melanocortin Signalling Mechanisms.- Distribution and Function of Melanocortin Receptors within the Brain.- Drugs, Exercise, and the Melanocortin4 Receptor—Different Means, Same Ends: Treating Obesity.- Melanocortins in Brain Inflammation: The Role of Melanocortin Receptor Subtypes.- Melanocortins and the Cholinergic Antinflammatory Pathway.- Melanocortin Control of Cell Trafficking in Vascular Inflammation.- Terminal Signal: Antinflammatory Effects of #MelanocyteStimulating Hormone Related[...]

Fields of interest
Biomedicine (general)

Target groups
Research

Type of publication
Contributed volume

Available


99.95 €
MIPs and Their Roles in the Exchange of Metalloids

This book is dedicated to the metalloids, a recently discovered group of substrates for a number of specific MIPs in a diverse spectrum of organisms. Particular focus is given to the essential boron, the beneficial silicon and the highly toxic arsenic. The respective MIP isoforms that facilitate the transport of these metalloids include members from several clades of the phylogenetic tree, suggesting that metalloid transport is an ancient function within this family of channel proteins.

Features
This book is dedicated to the metalloids, a recently discovered group of substrates for a number of specific MIPs in a diverse spectrum of organisms. Particular focus is given to the essential boron, the beneficial silicon and the highly toxic arsenic. The respective MIP isoforms that facilitate the transport of these metalloids include members from several clades of the phylogenetic tree, suggesting that metalloid transport is an ancient function within this family of channel proteins.

Contents

Fields of interest
Biomedicine (general)

Target groups
Research

Type of publication
Contributed volume

Available
2010. XVI, 146 p. 36 illus., 16 in color. (Advances in Experimental Medicine and Biology, Vol. 679) Hardcover

99,95 €

Muscle Pain: Understanding the Mechanisms

The two books Muscle Pain: Understanding the Mechanisms and Muscle Pain: Diagnosis and Treatment will help the practitioner to understand why the patients feel pain, what to do about it and why the treatment works. In contrast to proceedings of scientific meetings on muscle pain, they center on practical aspects and can be used by the practitioner in his or her daily work. The two books together provide a unique combination of broad basic knowledge with comprehensive clinical information on the management of patients.

Features
As one half of a comprehensive two-volume publication that covers every angle of muscle pain and is edited by two of the leading figures in the field, this volume details the basic mechanisms of chronic muscle pain syndromes. It provides the practitioner with a deeper understanding of the physical processes involved in these often misunderstood conditions, and in clarifying the nature of muscle pain enables

Contents

Fields of interest
Neurosciences; Human Physiology; Neurology; Pharmacology / Toxicology; Anesthesiology; Rheumatology

Target groups
Research

Type of publication
Monograph

Available
2010. XIII, 323 p. Hardcover

149,95 €
ISBN 978-3-642-05467-9

Muscle Pain: Diagnosis and Treatment

Features
The companion volume to Muscle Pain: Understanding the Mechanisms, this text shifts the emphasis from concepts to practical advice. It facilitates the diagnosis and management of the often enigmatic symptoms of chronic muscle pain and includes the combined expertise of leaders in the field who have contributed cutting-edge material on the major syndromes. As a set, this volume and its partner are

Contents

Fields of interest
Neurosciences; Human Physiology; Neurology; Pharmacology / Toxicology; Anesthesiology; Rheumatology
Modelling Parasite Transmission and Control

It is clear that many fascinating problems still remain to be addressed in parasite transmission modelling, from better understanding of transmission processes and natural history of infection to investigating the impact of ecological and spatial scales, climate change, host immunity and social behaviour, parasite-host evolutionary dynamics and parasite community ecology on parasite transmission. This book captures some of the advances made in recent years and provides indications of ways forward for addressing these questions by shedding light on developments in conceptual frameworks and modelling tools as well as the emergence of new data forms for aiding model construction, testing and analysis. Another important advance has been the parallel development of robust computationally-intensive statistical methods to allow model testing and parameterization by aiding the fitting of models to complex data. This is an exciting area of work, which we believe will broaden the scope of mathematical [...]"
Inflammatory Cardiomyopathy (DCMi) - Pathogenesis and Therapy

Cardiomyopathy is one of the most frequent causes of heart failure. It is often associated with inadequate heart pumping or other heart function abnormalities. There are many different causes of the disease, e.g. other diseases, alcoholism, high blood pressure, viral infections; therefore many different kinds of cardiomyopathies exist, belonging to five main types of CM: Dilated CM, Hypertrophic CM, Restrictive CM, Right Ventricular CM, Nonclassifiable CM. This volume focuses on inflammatory CM, belonging to the Dilated Cardiomyopathies (DCMi). It covers epidemiology/prognosis, pathology, immunology, diagnosis and treatment strategies.

Contents
- Epidemiology and Prognosis of Myocarditis and Dilated Cardiomyopathy: Predictive Value of Clinical Parameters and Bypass Findings.
- Autoimmune Myocarditis and Immunomodulatory Interventions.
- Coxsackievirus Induced Myocarditis and Immunomodulatory Interventions.
- Remodeling of the Extracellular Matrix in Coxsackievirus Induced Myocarditis and Therapeutic Interventions.
- Molecular Genetics of Myocarditis and Dilated Cardiomyopathy.
- Pathogenic Relevance of Autoantibodies.
- Role of Cytokines in Myocarditis and Heart Failure.
- Histopathological Characterization of Human Myocarditis and.

Fields of interest
- Immunology; Cardiology; Virology; Infectious Diseases; Pharmacology / Toxicology; Internal Medicine

Target groups
- Research

Type of publication
- Monograph

Available
- 2010. 294 p. (Progress in Inflammation Research) Hardcover
- 139.95 €
- ISBN 978-3-7643-8351-0

The Challenge of Highly Pathogenic Microorganisms

Mechanisms of Virulence and Novel Medical Countermeasures

This book addresses the unique features of four microorganisms that constitute the top bioterror threat agents: Bacillus anthracis; Yersinia pestis, Francisella tularensis and Orthopoxviruses. Side-by-side updated information about their pathogenesis, virulence and epidemiology is provided in a single volume, allowing for evaluation of common features as well as common strategies for defense. Classical microbiological as well as genomic, proteomic & transcriptomic approaches towards development of strategies of novel prophylactic and post-exposure treatment and related aspects of diagnostics and bioinformatics are covered. Written by top scientists, this book will be of major interest to all researchers interested in the intricate biology of highly pathogenic microorganisms, to scientists and clinicians interested in microbial pathogenesis and prevention, and to a wide range of professionals dealing with the various aspects of bio-defense.

Features
- This book addresses the unique features of four microorganisms that constitute the top bioterror threat agents: Bacillus anthracis; Yersinia pestis, Francisella tularensis and Orthopoxviruses. Side-by-side updated information about their pathogenesis, virulence and epidemiology is provided in a single volume, allowing for evaluation of common features as well as common strategies for defense. Classical microbiological as well as genomic, proteomic & transcriptomic approaches towards development of strategies of novel prophylactic and post-exposure treatment and related aspects of diagnostics and bioinformatics are covered. Written by top scientists, this book will be of major interest to all researchers interested in the intricate biology of highly pathogenic microorganisms, to scientists and clinicians interested in microbial pathogenesis and prevention, and to a wide range of professionals dealing with the various aspects of bio-defense.

Contents
- 1. The Anthrax Capsule: Role in Pathogenesis and Target for Vaccines and Therapeutics.
- 3. Dynamics of Bacillus anthracis Infection and Control Mechanisms.
- 4. The Inverse Relationship between Cytotoxicity of Y. pestis and Its Virulence.
- 5. The Inverse Relationship between Cytotoxicity of Y. pestis and Its Virulence.
- 6. The Nipah Lipoprotein of Yersinia pestis is Essential for Cell Separation and Virulence.
- 7. Dissection of the Functions...

Fields of interest
- Neurosciences; Psychiatry; Pharmacology / Toxicology

Target groups
- Research

Type of publication
- Contributed volume

Available
- 2010. 350 p. (Current Topics in Behavioral Neurosciences, Vol. 2) Hardcover
- 149.95 €
- ISBN 978-3-642-02911-0

Behavioral Neurobiology of Anxiety and Its Treatment

The book aims to cover a broad range of topics related to anxiety disorders, including symptomatology, etiology, epidemiology, diagnostic features, comorbidity, clinical neuroscience, genetics, neuroanatomy, neuroendocrinology, neurochemistry, animal models, translational science, functional neuroimaging, and preclinical and clinical psychopharmacology. The book aims at bringing these disciplines together to provide an update of the field and outlook to the future. Therefore, it will be of use to both the non-clinical and clinical expert, who may use it as a detailed reference book, and the novice to the field, to whom it may serve as an introductory text, providing an overview.

Features
- The book aims to cover a broad range of topics related to anxiety disorders, including symptomatology, etiology, epidemiology, diagnostic features, comorbidity, clinical neuroscience, genetics, neuroanatomy, neuroendocrinology, neurochemistry, animal models, translational science, functional neuroimaging, and preclinical and clinical psychopharmacology. The book aims at bringing these disciplines together...

Contents
- From the contents: Preface.
- Part I: Anxiety disorders - clinical.
- Part II: Anxiety disorders - clinical neurosciences.
- Part III: Animal models.
- Part IV: Translational science.
- Part V: Preclinical and clinical psychopharmacology.

Fields of interest
- Neurosciences; Psychiatry; Pharmacology / Toxicology

Target groups
- Research

Type of publication
- Contributed volume

Available
- 2010. 350 p. (Current Topics in Behavioral Neurosciences, Vol. 2) Hardcover
- 149.95 €
- ISBN 978-3-642-02911-0
Chemistry

B.K. Banik, The University of Texas Pan American, Edinburg, TX, USA (Ed.)

Heterocyclic Scaffolds I

B-Lactams


Features


Contents


Fields of interest

Organic Chemistry; Medicinal Chemistry; Pharmacy; Cancer Research

Target groups

Research

Type of publication

Reviews

Available


299,00 €

ISBN 978-3-642-12844-8

A. Berthod, University of Lyon, CNRS, France (Ed.)

Chiral Recognition in Separation Methods

Mechanisms and Applications

The importance of chiral interactions for both preparative and analytical separations, particularly for pharmaceutical applications, is underlined by numerous publications in this field. Here, for the first time, a team of experienced analysts from industry and academia presents a comprehensive review of the various mechanisms that result in enantiomer separations. A better understanding of these processes is crucial for setting as well as improving chiral separation procedures and also for developing new applications. The coverage in this book includes a range of separation methods, such as gas, liquid, or countercurrent chromatography, and capillary electrophoresis. The special case of chiral ionic liquids is examined in detail. Most modern chiral selectors are discussed, including derivatized polysaccharide- and cycloextrin-based selectors, along with a newly introduced class of carbohydrates: the cyclofructose selectors. This publication will be required reading not only for research and development but also in education.

Features

The importance of chiral interactions for both preparative and analytical separations, particularly for pharmaceutical applications, is underlined by numerous publications in this field. Here, for the first time, a team of experienced analysts from industry and academia presents a comprehensive review of the various mechanisms that result in enantiomer separations. A better understanding of these processes is presented in this book.

Contents

Chiral recognition mechanisms in enantiomer separations: a general view.- Preparation and chiral recognition of polysaccharide-based Selectors.- Description and evaluation of chiral interactive sites on bonded cyclodextrin stationary phases for liquid chromatography.- Cyclofructans, a new class of chiral stationary phases.- Chiral recognition and enantioseparation mechanisms in capillary electrokinetic chromatography.- Chiral recognition mechanism: practical considerations for pharmaceutical analysis of chiral compounds.- Chiral recognition with macrocyclic glycopeptides: mechanisms

Fields of interest

Chromatography; Pharmacy; Pharmacology / Toxicology; Food Science; Monitoring / Environmental Analysis

Target groups

Research

Type of publication

Monograph

Available

2010. XV, 337 p. 280 illus., 140 in color. Hardcover

139,95 €

ISBN 978-3-642-12444-0

E. Gusev, Qualcomm MEMS Technologies San José, CA, USA; E. Garfunktel, Rutgers University Piscataway, NJ, USA; A. Diderkin, Ioffe Physical-Technical Institute St. Petersburg, Russia (Eds.)

Advanced Materials and Technologies for Micro/Nano-Devices, Sensors and Actuators

The main goal of this book is to review recent progress and current status of MEMS/NEMS technologies and devices. Several important areas are discussed: history of research in the field, device physics, examples of successful applications, sensors, materials and processing aspects. The authors who have contributed to the book represent a diverse group of leading scientists from academic, industrial and governmental labs worldwide who bring a broad array of backgrounds such as device physics, technologists, electrical and mechanical engineering, surface chemistry and materials science. The contributions to this book are accessible to both expert scientists and engineers who need to keep up with leading edge research, and newcomers to the field who wish to learn more about the exciting basic and applied research issues relevant to micro/mechanical devices and technologies.

Features

The main goal of this book is to review recent progress and current status of MEMS/NEMS technologies and devices. Several important areas are discussed: history of research in the field, device physics, examples of successful applications, sensors, materials and processing aspects. The authors who have contributed to the book represent a diverse group of leading scientists from academic, industrial and governmental labs worldwide who bring a broad array of backgrounds such as device physics, technologists, electrical and mechanical engineering, surface chemistry and materials science. The contributions to this book are accessible to both expert scientists and engineers who need to keep up with leading edge research, and newcomers to the field who wish to learn more about the exciting basic and applied research issues relevant to micro/mechanical devices and technologies.

Contents


Fields of interest

Microengineering; Nanotechnology and Microengineering; Mechanics; Mechanical Engineering; Microwaves, RF and Optical Engineering

Target groups

Research

Type of publication

Proceedings

Available


89,95 €

### Shape-Memory Polymers

**Table of Contents**
- Shape-Memory Polymers and Shape-Changing Polymers By M. Behl, J. Zottmann, and A. Lendlein
- Shape-Memory Polymer Composites By Samy A. Madbouly and Andreas Lendlein
- Characterization Methods for Shape-Memory Polymers By W. Wagermaier, K. Kratz, M. Heuchel, and A. Lendlein
- Shape-Memory Polymers for Biomedical Applications By Christopher M. Yakacki and Ken Gall
- Controlled Drug Release from Biodegradable Shape-Memory Polymers By Christian Wischke, Axel T. Neffe, and Andreas Lendlein

**Features**
- Shape-Memory Polymers and Shape-Changing Polymers By M. Behl, J. Zottmann, and A. Lendlein
- Shape-Memory Polymer Composites By Samy A. Madbouly and Andreas Lendlein
- Characterization Methods for Shape-Memory Polymers By W. Wagermaier, K. Kratz, M. Heuchel, and A. Lendlein
- Shape-Memory Polymers for Biomedical Applications By Christopher M. Yakacki and Ken Gall

**Fields of interest**
- Polymer Sciences, Medicinal Chemistry, Pharmacy, Biochemistry

**Type of publication**
- Reviews

**Available**
- 2010. XII, 224 p. (Advances in Polymer Science, Vol. 226) Hardcover
- 189.95 €
- ISBN 978-3-642-12358-0

### Steroid Analysis

**This comprehensive and up-to-date 2nd edition of the Steroid Analysis handbook, written by a team of distinguished experts from around the world concentrates on the analysis of steroids in biological fluids. This edition is based on the same format as the first, primarily dealing with analysis of low levels of steroid analytes in biological fluids, but including an extra chapter on pharmaceutical aspects of steroid analysis. Spectroscopic and other methods, including UV and IR absorption spectroscopy, NMR spectroscopy, mass spectrometry, X-ray diffraction, chromatography and immunosassay of steroids are treated in detail. Extraction, purification and quantitation is followed by analysis of specific steroid groups, such as progestagens, estrogens, corticosteroids and androsteroids. The editors have made a conscious decision to leave the first edition to stand on its own with regards to steroid analysis prior to 1995 and authors therefore were asked to review the modern post-1995 steroid analysis.**

**Features**
- This comprehensive and up-to-date 2nd edition of the Steroid Analysis handbook, written by a team of distinguished experts from around the world concentrates on the analysis of steroids in biological fluids. This edition is based on the same format as the first, primarily dealing with analysis of low levels of steroid analytes in biological fluids, but including an extra chapter on pharmaceutical aspects of steroid analysis.

**Contents**
1. Structure and Nomenclature of Steroids
2. Spectroscopic Methods of Steroid Analysis
4. Immunoassay of Steroids
5. Analysis of Corticosteroids
6. Analysis of Androgens their Derivatives
7. Analysis of Progestagens
8. The Measurement of Estrogens
9. Anabolic steroids: Metabolism, doping and detection in human and equine sports
10. Analysis of Bile Acids
11. Analysis of Vitamins D, Structural Analogs and their Metabolites
12. Industrial and Compendial

**Fields of interest**
- Analytical Chemistry, Medicinal Chemistry, Pathology, Biochemistry, Pharmaceutical Sciences / Technology

**Target groups**
- Research

**Type of publication**
- Handbook

**Available**
- 2010. XII, 1224 p. Hardcover
- 239.00 €
- ISBN 978-1-4419-6230-0

### Biotechnology for Fuels and Chemicals

**The Thirty-First Symposium**

In Biotechnology for Fuels and Chemicals: The Thirty-First Symposium, leading researchers from academia, industry, and government offer surveys and reviews of their cutting-edge research and latest applications in the production of fuels and chemicals through biotechnology. The book’s focus is on how best to improve and optimize these technologies and their economics to produce the fuels and chemicals so vital to many industrial sectors.

**Features**
- In Biotechnology for Fuels and Chemicals: The Thirty-First Symposium, leading US and international researchers from academia, industry, and government exchange cutting-edge technical information and update current trends in the development and application of biotechnology for sustainable production of fuels and chemicals. This symposium emphasizes advances in biotechnology to produce high-volume...

**Contents**

**Fields of interest**
- Biotechnology, Biochemical Engineering

**Target groups**
- Professional/practitioner

**Type of publication**
- Contributed volume

**Available**
- 2010. 984 p. (ABAB Symposium, Vol. 16) Hardcover
- 199.95 €
- ISBN 978-1-4419-6230-0
Biochemie der Ernährung


Features

Contents

Fields of interest
Chemistry (general); Biochemistry; Food Science; Nutrition

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. XXVI, 605 S. 295 Abb. in Farbe. Hardcover

46,68 €
ISBN 978-3-8274-2041-1

Fortschritte der Chemie organischer Naturstoffe / Progress in the Chemistry of Organic Natural Products, Vol. 93

The volumes of this classic series, now referred to simply as "Zechmeister" after its founder, L. Zechmeister, have appeared under the Springer Imprint ever since the series’ inauguration in 1938. The volumes contain contributions on various topics related to the origin, distribution, chemistry, synthesis, biochemistry, function or use of various classes of naturally occurring substances ranging from small molecules to biopolymers. Each contribution is written by a recognized authority in his field and provides a comprehensive and up-to-date review of the topic in question. Addressed to biologists, technologists, and chemists alike, the series can be used by the expert as a source of information and literature citations and by the non-expert as a means of orientation in a rapidly developing discipline.

Features
The volumes of this classic series, now referred to simply as "Zechmeister" after its founder, L. Zechmeister, have appeared under the Springer Imprint ever since the series’ inauguration in 1938. The volumes contain contributions on various topics related to the origin, distribution, chemistry, synthesis, biochemistry, function or use of various classes of naturally occurring substances ranging from small molecules to biopolymers. Each contribution is written by a recognized authority in his field and provides a comprehensive and up-to-date review of the topic in question. Addressed to biologists, technologists, and chemists alike, the series can be used by the expert as a source of information and literature citations and by the non-expert as a means of orientation in a rapidly developing discipline.

Contents

Features

Fields of interest
Organic Chemistry

Target groups
Professional/practitioner

Type of publication
Reviews

Available

229,00 €
ISBN 978-3-642-12355-9
Networked Services and Applications - Engineering, Control and Management

16th EUNICE/IFIP WG 6.6 Workshop, EUNICE 2010, Trondheim, Norway, June 28-30, 2010, Proceedings

This book constitutes the refereed proceedings of the 16th EUNICE/IFIP TC 6.6 Workshop on Networked Services and Applications, EUNICE 2010, held in Trondheim, Norway, in June 2010. The 24 revised full papers presented together with 6 posters were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on admission control and networking; service mobility; peer-to-peer and virtualization; security; congestion control; monitoring and filtering; dependability; and adaptation and reconfiguration.

Features
This book constitutes the refereed proceedings of the 16th EUNICE/IFIP TC 6.6 Workshop on Networked Services and Applications, EUNICE 2010, held in Trondheim, Norway, in June 2010. The 24 revised full papers presented together with 6 posters were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on admission control and networking; service mobility; peer-to-peer and virtualization; security; congestion control; monitoring and filtering; dependability; and adaptation and reconfiguration.

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
60,00 €
ISBN 978-3-642-13970-3

Trust and Trustworthy Computing


This book constitutes the refereed proceedings of the Third International Conference on Trust and Trustworthy Computing, TRUST 2010, held in Berlin, Germany, in June 2010. The 25 revised full papers and 6 short papers presented were carefully selected from numerous submissions. The papers are organized in a technical strand and a socio-economic strand and cover a broad range of concepts including trustworthy infrastructures, services, hardware, software, and protocols as well as social and economic aspects of the design, application, and usage of trusted computing.

Features
This book constitutes the refereed proceedings of the Third International Conference on Trust and Trustworthy Computing, TRUST 2010, held in Berlin, Germany, in June 2010. The 25 revised full papers and 6 short papers presented were carefully selected from numerous submissions. The papers are organized in a technical strand and a socio-economic strand and cover a broad range of concepts including trustworthy [...]
Developing Multi-Database Mining Applications

Multi-database mining has been recognized recently as an important and strategically essential area of research in data mining. In this book, we discuss various issues regarding the systematic and efficient development of multi-database mining applications. It explains how systematically one could prepare data warehouses at different branches. As appropriate multi-database mining technique is essential to develop better applications. Also, the efficiency of a multi-database mining application could be improved by processing more patterns in the application. A faster algorithm could also play an important role in developing a better application. Thus the efficiency of a multi-database mining application could be enhanced by choosing an appropriate multi-database mining model, an appropriate pattern synthesizing technique, a better pattern representation technique, and an efficient algorithm for solving the problem. This book illustrates each of these issues either in the context of a specific [...] Features

Multi-database mining is recognized as an important and strategic area of research in data mining. The authors discuss the essential issues relating to the systematic and efficient development of multi-database mining applications, and present approaches to the development of data warehouses at different branches, demonstrating how carefully selected multi-database mining techniques contribute to successful [...] Contents

Introduction.- An Extended Model of Local Pattern Analysis.- Mining Multiple Large Databases.- Mining Patterns of Select Items in Multiple Databases.- Enhancing Quality of Knowledge Synthesized from Multi-database Mining.- Efficient Clustering of Databases Induced by Local Patterns.- A Framework for Developing Effective Multi-database Mining Applications.

Fields of interest
Data Mining and Knowledge Discovery; Information Systems Applications (incl.Internet)

Target groups
Research

Type of publication
Monograph

Available

2010 X, 130 p. 24 illus. (Advanced Information and Knowledge Processing) Hardcover

79,95 €
ISBN 978-1-84996-043-4

Analytical and Stochastic Modeling Techniques and Applications


This book constitutes the refereed proceedings of the 17th International Conference on Analytical and Stochastic Modeling Techniques and Applications, ASMTA 2010, held in Cardiff, UK, in June 2010. The 28 revised full papers presented were carefully reviewed and selected from numerous submissions for inclusion in the book. The papers are organized in topical sections on queueing theory, specification languages and tools, telecommunication systems, estimation, prediction, and stochastic modelling.

Features
This book constitutes the refereed proceedings of the 17th International Conference on Analytical and Stochastic Modeling Techniques and Applications, ASMTA 2010, held in Cardiff, UK, in June 2010. The 28 revised full papers presented were carefully reviewed and selected from numerous submissions for inclusion in the book. The papers are organized in topical sections on queueing theory, [...] Fields of interest
Software Engineering; Computer Communication Networks; System Performance and Evaluation; Information Systems Applications (incl.Internet); Probability and Statistics in Computer Science; Algorithm Analysis and Problem Complexity

Target groups
Professional/practitioner

Type of publication
Proceedings

Available


62,00 €
ISBN 978-3-642-13567-5

Formal Methods for Quantitative Aspects of Programming Languages


This book presents a set of 4 papers accompanying the lectures of leading researchers given at the 10th edition of the International School on Formal Methods for the Design of Computer, Communication and Software Systems, SFM 2010, held in Bertinoro, Italy, in June 2010. SFM 2010 was devoted to formal methods for quantitative aspects of programming languages and covered several topics including probabilistic and timed models, model checking, static analysis, quantum computing, real-time and embedded systems, and security.

Features
This book presents a set of 4 papers accompanying the lectures of leading researchers given at the 10th edition of the International School on Formal Methods for the Design of Computer, Communication and Software Systems, SFM 2010, held in Bertinoro, Italy, in June 2010. SFM 2010 was devoted to formal methods for quantitative aspects of programming languages and covered several topics including [...] Fields of interest
Software Engineering; Software Engineering / Programming and Operating Systems; Antibodies; Mathematical Logic and Formal Languages; Programming Languages, Compilers, Interpreters; Information Systems Applications (incl.Internet)

Target groups
Professional/practitioner

Type of publication
Proceedings

Available


46,00 €
ISBN 978-3-642-13677-1
Intelligent Tutoring Systems


The books (LNCS 6094 and 6095) constitute the refereed proceedings of the 10th International Conference on Intelligent Tutoring Systems, ITS 2010, held in Pittsburgh, PA, USA, in June 2010. The 61 revised full papers, 5 invited talks, and 58 short papers presented were carefully viewed and selected from 186 submissions. The papers are organized in topical sections on educational data mining, natural language interaction; ITS in ill-defined domains; inquiry learning, collaborative and group learning; intelligent games; gaming the system; pedagogical strategies; affect; games and augmented reality; pedagogical agents, learning companions, and teachable agents; intelligent tutoring and scaffolding; metacognition; and authoring tools and theoretical synthesis.

Features
The books (LNCS 6094 and 6095) constitute the refereed proceedings of the 10th International Conference on Intelligent Tutoring Systems, ITS 2010, held in Pittsburgh, PA, USA, in June 2010. The 61 revised full papers, 5 invited talks, and 58 short papers presented were carefully viewed and selected from 186 submissions. The papers are organized in topical sections on educational data mining, natural language interaction; ITS in ill-defined domains; inquiry learning, collaborative and group learning; intelligent games; gaming the system; pedagogical strategies; affect; games and augmented reality; pedagogical agents, learning companions, and teachable agents; intelligent tutoring and scaffolding; metacognition; and authoring tools and theoretical synthesis.

Fields of interest
Computers and Education; User Interfaces and Human Computer Interaction; Multimedia Information Systems; Computer Appl. in Social and Behavioral Sciences; Document Preparation and Text Processing; Artificial Intelligence (incl. Robotics)

Target groups
Professional/practitioner

Type of publication
Proceedings

Available


62.00 €
ISBN 978-3-642-13387-9

Intelligent Tutoring Systems

10th International Conference, ITS 2010, Pittsburgh, PA, USA, June 14-18, 2010, Proceedings, Part II

The books (LNCS 6094 and 6095) constitute the refereed proceedings of the 10th International Conference on Intelligent Tutoring Systems, ITS 2010, held in Pittsburgh, PA, USA, in June 2010. The 61 revised full papers, 5 invited talks, and 58 short papers presented were carefully reviewed and selected from 186 submissions. The papers are organized in topical sections on educational data mining, natural language interaction; ITS in ill-defined domains; inquiry learning, collaborative and group learning; intelligent games; gaming the system; pedagogical strategies; affect; games and augmented reality; pedagogical agents, learning companions, and teachable agents; intelligent tutoring and scaffolding; metacognition; and authoring tools and theoretical synthesis.

Features
The books (LNCS 6094 and 6095) constitute the refereed proceedings of the 10th International Conference on Intelligent Tutoring Systems, ITS 2010, held in Pittsburgh, PA, USA, in June 2010. The 61 revised full papers, 5 invited talks, and 58 short papers presented were carefully reviewed and selected from 186 submissions. The papers are organized in topical sections on educational data mining, natural language interaction; ITS in ill-defined domains; inquiry learning, collaborative and group learning; intelligent games; gaming the system; pedagogical strategies; affect; games and augmented reality; pedagogical agents, learning companions, and teachable agents; intelligent tutoring and scaffolding; metacognition; and authoring tools and theoretical synthesis.

Fields of interest
Computers and Education; User Interfaces and Human Computer Interaction; Multimedia Information Systems; Computer Appl. in Social and Behavioral Sciences; Document Preparation and Text Processing; Artificial Intelligence (incl. Robotics)

Target groups
Professional/practitioner

Type of publication
Proceedings

Available


62.00 €
ISBN 978-3-642-13436-4

Product-Focused Software Process Improvement


This book constitutes the refereed proceedings of the 11th International Conference on Product-Focused Software Process Improvement, PROFES 2010, held in Limerick, Ireland, in June 2010. The 28 revised full papers presented together with the abstracts of 2 keynote addresses were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on software quality assurance; agile software development; software business; software systems; process quality; software measurement; and software process improvement.

Features
This book constitutes the refereed proceedings of the 11th International Conference on Product-Focused Software Process Improvement, PROFES 2010, held in Limerick, Ireland, in June 2010. The 28 revised full papers presented together with the abstracts of 2 keynote addresses were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on software quality assurance; agile software development; software business; software systems; process quality; software measurement; and software process improvement.

Fields of interest
Software Engineering; Management of Computing and Information Systems; Computers and Society; Computer Appl. in Administrative Data Processing; Simulation and Modeling; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

Available


62.00 €
ISBN 978-3-642-13791-4
Combinatorial Pattern Matching
21st Annual Symposium, CPM 2010, New York, NY, USA, June 21-23, 2010, Proceedings,

This book constitutes the refereed proceedings of the 21st Annual Symposium on Combinatorial Pattern Matching, CPM 2010, held in New York, USA, in June 2010. The 28 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 53 submissions. The papers address all areas related to combinatorial pattern matching and its applications, such as searching and matching strings and more complicated patterns such as trees, regular expressions, graphs, point sets, and arrays with special focus on coding and data compression, computational biology, data mining, information retrieval, natural language processing, pattern recognition, string algorithms, string processing in databases, symbolic computing and text searching.

Features
This book constitutes the refereed proceedings of the 21st Annual Symposium on Combinatorial Pattern Matching, CPM 2010, held in New York, USA, in June 2010. The 28 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 53 submissions. The papers address all areas related to combinatorial pattern matching and its applications, such as searching and matching [...]
Software Composition
9th International Conference, SC 2010, Malaga, Spain, July 1-2, 2010. Proceedings

The book constitutes the refereed proceedings of the 9th International Symposium on Software Composition, SC 2010, held in Malaga, Spain, in July 2010. The 10 revised full papers were carefully reviewed and selected from 33 submissions and reflect topics such as Model Composition, Context-Oriented and Domain-Specific Composition, Composing Services as well as Languages.

Features
The book constitutes the refereed proceedings of the 9th International Symposium on Software Composition, SC 2010, held in Malaga, Spain, in July 2010. The 10 revised full papers were carefully reviewed and selected from 33 submissions and reflect topics such as Model Composition, Context-Oriented and Domain-Specific Composition, Composing Services as well as Languages.

Fields of interest
Software Engineering; Computer Communication Networks; Logics and Meanings of Programs; Programming Languages, Compilers, Interpreters; Programming Techniques; Software Engineering / Programming and Operating Systems

Target groups
Professional/practitioner

Type of publication
Proceedings

Privacy and Identity Management for Life
5th IFIP WG 9.2, 9.6/11.4, 11.6, 11.7/PrimeLife International Summer School, Nice, France, September 7-11, 2009, Revised Selected Papers

This book constitutes the refereed postconference proceedings of the 5th IFIP WG 9.2, 9.6, 11.6, 11.7/PrimeLife International Summer School, held in Brno, Czech Republic, in September 2008. The 20 revised papers were carefully selected from numerous submissions during two rounds of reviewing. They are grouped in topical sections on information, ethics, identifiers; privacy issues; wireless security and privacy; challenges of emerging technologies; privacy-enhanced and anonymous applications; business and organizational perspectives; privacy awareness and individual control; and anonymity attacks and analysis. These interdisciplinary contributions target researchers and practitioners interested in the technical, social, ethical or legal perspectives of increasing diversity of information and communication technologies.

Features
This book constitutes the refereed postconference proceedings of the 5th IFIP WG 9.2, 9.6, 11.6, 11.7/PrimeLife International Summer School, held in Brno, Czech Republic, in September 2008. The 20 revised papers were carefully selected from numerous submissions during two rounds of reviewing. They are grouped in topical sections on information, ethics, identifiers; privacy issues; wireless security and privacy; [...]
<table>
<thead>
<tr>
<th>Mathematics of Program Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10th International Conference, MPC 2010, Quebec City, Canada, June 21-23, 2010, Proceedings</strong></td>
</tr>
</tbody>
</table>

This book constitutes the refereed proceedings of the 10th International Conference on Mathematics of Program Construction, MPC 2010, held in Quebec City, Canada in June 2010. The 19 revised full papers presented together with 1 invited talk and the abstracts of 2 invited talks were carefully reviewed and selected from 37 submissions. The focus is on techniques that combine precision with conciseness, enabling programs to be constructed by formal calculation. Within this theme, the scope of the series is very diverse, including programming methodology, program specification and transformation, program analysis, programming paradigms, programming calculi, programming language semantics, security and program logics.

**Features**

- This book constitutes the refereed proceedings of the 10th International Conference on Mathematics of Program Construction, MPC 2010, held in Quebec City, Canada in June 2010. The 19 revised full papers presented together with 1 invited talk and the abstracts of 2 invited talks were carefully reviewed and selected from 37 submissions. The focus is on techniques that combine precision with conciseness.

**Fields of interest**

- Logics and Meanings of Programs; Mathematical Logic and Formal Languages; Software Engineering; Programming Languages, Compilers, Interpreters; Antibodies, Artificial Intelligence (incl. Robotics)

**Target groups**

- Professional/practitioner

**Type of publication**

- Proceedings

**Available**


62,00 €

ISBN 978-3-642-13320-6

---

<table>
<thead>
<tr>
<th>Anwendungsorientierte Mikroprozessoren</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H. Bähring, FernUniversität Hagen</strong></td>
</tr>
</tbody>
</table>

**Anwendungsorientierte Mikroprozessoren**

Mikrocontroller und Digitale Signalprozessoren

Anwendungsorientierten Mikroprozessoren, also Mikroprozessoren, die für den Einsatz in einem weiten Spektrum von Anwendungen konstruiert wurden, haben die Realisierung vieler moderner elektronischer Anwendungen vereinfacht oder erst ermöglicht. Zu den anwendungsorientierten Mikroprozessoren gehören zum einen die Mikrocontroller, die vollständige Mikrocomputer auf einem einzigen Chip darstellen, sowie die digitalen Signalprozessoren, die insbesondere zur digitalen Verarbeitung analoger Signale konzipiert sind. Das bestens zum Selbststudium geeignete Buch bietet eine ausführliche Darstellung der anwendungsorientierten Mikroprozessoren. Reichhaltige Beibehildung und ein in sich geschlossene und autonome Darstellung unterstützen den Leser, die komplexe Materie umfassend zu erlernen.

**Contents**

- Einführung
- Mikrocontroller
- Digitale Signalprozessoren
- Mischformen aus Mikrocontrollern und DSPs
- Der Prozessorkern
- Die Hardware/Software-Schnittstelle
- Der Arbeitsspeicher
- Bussysteme
- Systemsteuer- und Schnittstellenbausteine
- Beispiele für Digitale Signalprozessoren
- Anhang
- Literatur
- Index

**Fields of interest**

- Processor Architectures; Control Structures and Microprogramming; Memory Structures; Arithmetic and Logic Structures; Input/Output and Data Communications; Electronics and Microelectronics, Instrumentation

**Target groups**

- Upper undergraduate

**Type of publication**

- German textbook

**Available**

2010. XII, 496 s. (eXamen.press) Softcover

27,99 €

ISBN 978-3-642-13522-4

---

<table>
<thead>
<tr>
<th>Unconventional Computation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9th International Conference, UC 2010, Tokyo, Japan, June 21-25, 2010, Proceedings</strong></td>
</tr>
</tbody>
</table>

This book constitutes the refereed proceedings of the 9th International Conference on Unconventional Computation, UC 2010, held in Tokyo, Japan, in June 2010. The 15 revised full papers presented together with 4 extended abstracts of invited talks, and 8 abstracts of posters were carefully reviewed and selected from numerous submissions. The papers are devoted to all aspects of unconventional computation --- theory as well as experiments and applications. Typical topics are: natural computing including quantum, cellular, molecular, membrane, neural, and evolutionary computing, as well as chaos and dynamical system-based computing, and various proposals for computational mechanisms that go beyond the Turing model.

**Features**

- This book constitutes the refereed proceedings of the 9th International Conference on Unconventional Computation, UC 2010, held in Tokyo, Japan, in June 2010. The 15 revised full papers presented together with 4 extended abstracts of invited talks, and 8 abstracts of posters were carefully reviewed and selected from numerous submissions. The papers are devoted to all aspects of unconventional computation.

**Fields of interest**

- Computation by Abstract Devices; Algorithm Analysis and Problem Complexity; Mathematical Logic and Formal Languages; Artificial Intelligence (incl. Robotics); Logics and Meanings of Programs; Computational Biology / Bioinformatics

**Target groups**

- Professional/practitioner

**Type of publication**

- Proceedings

**Available**


46,00 €

ISBN 978-3-642-13522-4
Image Analysis and Recognition

This book constitutes the thoroughly refereed proceedings of the 7th International Conference, ICIAR 2010, held in Póvoa de Varzim, Portugal in June 2010. The 88 revised full papers were selected from 164 submissions. The papers are organized in topical sections on Image Morphology, Enhancement and Restoration, Image Segmentation, Feature Extraction and Pattern Recognition, Computer Vision, Shape, Texture and Motion Analysis, Coding, Indexing, and Retrieval, Face Detection and Recognition, Biomedical Image Analysis, Biometrics and Applications.

Features
This book constitutes the thoroughly refereed proceedings of the 7th International Conference, ICIAR 2010, held in Póvoa de Varzim, Portugal in June 2010. The 88 revised full papers were selected from 164 submissions. The papers are organized in topical sections on Image Morphology, Enhancement and Restoration, Image Segmentation, Feature Extraction and Pattern Recognition, Computer Vision, Shape, Texture and Motion Analysis, Coding, Indexing, and Retrieval, Face Detection and Recognition, Biomedical Image Analysis, Biometrics and Applications.

Fields of interest
Image Processing and Computer Vision; Artificial Intelligence (incl. Robotics); Pattern Recognition; Computer Graphics; Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet)

Target groups
Professional/practitioner

Type of publication
Proceedings

Available

62,00 €
ISBN 978-3-642-13774-7

Image Analysis and Recognition

This book constitutes the thoroughly refereed proceedings of the 7th International Conference, ICIAR 2010, held in Póvoa de Varzim, Portugal in June 2010. The 88 revised full papers were selected from 164 submissions. The papers are organized in topical sections on Image Morphology, Enhancement and Restoration, Image Segmentation, Feature Extraction and Pattern Recognition, Computer Vision, Shape, Texture and Motion Analysis, Coding, Indexing, and Retrieval, Face Detection and Recognition, Biomedical Image Analysis, Biometrics and Applications.

Features
This book constitutes the thoroughly refereed proceedings of the 7th International Conference, ICIAR 2010, held in Póvoa de Varzim, Portugal in June 2010. The 88 revised full papers were selected from 164 submissions. The papers are organized in topical sections on Image Morphology, Enhancement and Restoration, Image Segmentation, Feature Extraction and Pattern Recognition, Computer Vision, Shape, Texture and Motion Analysis, Coding, Indexing, and Retrieval, Face Detection and Recognition, Biomedical Image Analysis, Biometrics and Applications.

Fields of interest
Image Processing and Computer Vision; Artificial Intelligence (incl. Robotics); Pattern Recognition; Computer Graphics; Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet)

Target groups
Professional/practitioner

Type of publication
Proceedings

Available

62,00 €
ISBN 978-3-642-13771-6

Advanced Communication and Networking

This volume constitutes the refereed proceedings of the 2nd International Conference on Advanced Communication and Networking, ACN 2010, held in Miyazaki, Japan, in June 2010. The 15 revised full papers presented in this volume were carefully reviewed and selected from 190 submissions. The papers focus on the various aspects of progress in Advanced Communication and Networking with computational sciences, mathematics and information technology and address all current issues of communication basic and infrastructure, networks basic and management, multimedia application, image, video, signal and information processing.

Features
This volume constitutes the refereed proceedings of the 2nd International Conference on Advanced Communication and Networking, ACN 2010, held in Miyazaki, Japan, in June 2010. The 15 revised full papers presented in this volume were carefully reviewed and selected from 190 submissions. The papers focus on the various aspects of progress in Advanced Communication and Networking with computational sciences, [...]
Towards Trustworthy Elections
New Directions in Electronic Voting

For many years now, cryptography has been keeping messages secure for senders, irrespective of the routing to the destination. This same technology can be used to keep votes secure for voters, from the casting of the vote all the way through to the inclusion of the vote in the final tally. This state-of-the-art survey addresses the challenges faced in establishing a trustworthy electronic voting system. The 24 contributions included in the volume were carefully reviewed and selected from the presentations given during a series of workshops on trustworthy elections held over the last decade. Topics addresses range from foundational and theoretical aspects to algorithms and systems issues, as well as applications in various fields.

Features
For many years now, cryptography has been keeping messages secure for senders, irrespective of the routing to the destination. This same technology can be used to keep votes secure for voters, from the casting of the vote all the way through to the inclusion of the vote in the final tally. This state-of-the-art survey addresses the challenges faced in establishing a trustworthy electronic voting system. The [...]
Coordination Models and Languages
12th International Conference, COORDINATION 2010, Amsterdam, The Netherlands, June 7-9, 2010, Proceedings

This book constitutes the refereed proceedings of the 12th International Conference on Coordination Models and Languages, COORDINATION 2010, held in Amsterdam, The Netherlands, in June 2010, as one of the federated conferences on Distributed Computing Techniques, DisCoTec 2010. The 12 revised full papers presented were carefully reviewed and selected from 28 submissions. The papers cover a wide range of topics including the application of coordination in wireless systems; multicore scheduling; sensor networks; event processing; data flow networks; and railway interlocking.

Features
This book constitutes the refereed proceedings of the 12th International Conference on Coordination Models and Languages, COORDINATION 2010, held in Amsterdam, The Netherlands, in June 2010, as one of the federated conferences on Distributed Computing Techniques, DisCoTec 2010. The 12 revised full papers presented were carefully reviewed and selected from 28 submissions. The papers cover a wide range of topics. [...]
Logic, Language, Information and Computation
17th International Workshop, WoLLIC 2010, Brasilia, Brazil, July 6-9, 2010, Proceedings

This book is edited in collaboration with FoLLI, the Association of Logic, Language and Information. It constitutes the proceedings of the 17th International Workshop on Logic, Language, Information and Computation, WoLLIC 2010, held in Brasilia, Brazil, in July 2010. The book presents 7 invited talks together with 13 papers which were carefully reviewed and selected from 32 submissions. The papers cover some of the most active areas of research on the frontiers between computation, logic, and linguistics, with particular interest in cross-disciplinary topics. Typical areas of interest are: foundations of computing and programming, novel computation models and paradigms; broad notions of proof and belief; formal methods in software and hardware development; logical approach to natural language and reasoning; logics of programs, actions and resources; foundational aspects of information organization, search, flow, sharing, and protection.

Features
This book is edited in collaboration with FoLLI, the Association of Logic, Language and Information. It constitutes the proceedings of the 17th International Workshop on Logic, Language, Information and Computation, WoLLIC 2010, held in Brasilia, Brazil, in July 2010. The book presents 7 invited talks together with 13 papers which were carefully reviewed and selected from 32 submissions. The papers cover some of the most active areas of research on the frontiers between computation, logic, and linguistics, with particular interest in cross-disciplinary topics. Typical areas of interest are: foundations of computing and programming, novel computation models and paradigms; broad notions of proof and belief; formal methods in software and hardware development; logical approach to natural language and reasoning; logics of programs, actions and resources; foundational aspects of information organization, search, flow, sharing, and protection.

Fields of interest
Mathematical Logic and Formal Languages; Logics and Meanings of Programs; Algorithm Analysis and Problem Complexity; Computation by Abstract Devices; Discrete Mathematics in Computer Science; Symbolic and Algebraic Manipulation

Target groups
Research

Type of publication
Proceedings

Available
46,00 € ISBN 978-3-642-13337-4

User Modeling, Adaptation, and Personalization
18th International Conference, UMAP 2010, Big Island, HI, USA, June 20-24, 2010, Proceedings

This book constitutes the proceedings of the Second International Conference on User Modeling, Adaptation, and Personalization, held on Big Island, HI, USA, in June 2010. This annual conference was merged from the biennial conference series User Modeling, UM, and the conference on Adaptive Hypermedia and Adaptive Web-Based Systems, AH. The 26 long papers and 6 short papers presented together with 7 doctoral consortium papers, 2 invited talks, and 4 industry panel papers were carefully reviewed and selected from 161 submissions. The tutorials and workshops were organized in topical sections on intelligent techniques for web personalization and recommender systems; pervasive user modeling and personalization; user models for motivational systems; adaptive collaboration support; architectures and building blocks of web-based user adaptive systems; adaptation and personalization in e-learning using pedagogic conversational agents; and user modeling and adaptation for daily routines.

Features
This book constitutes the proceedings of the Second International Conference on User Modeling, Adaptation, and Personalization, held on Big Island, HI, USA, in June 2010. This annual conference was merged from the biennial conference series User Modeling, UM, and the conference on Adaptive Hypermedia and Adaptive Web-Based Systems, AH. The 26 long papers and 6 short papers presented together with 7 doctoral consortium papers, 2 invited talks, and 4 industry panel papers were carefully reviewed and selected from 161 submissions. The tutorials and workshops were organized in topical sections on intelligent techniques for web personalization and recommender systems; pervasive user modeling and personalization; user models for motivational systems; adaptive collaboration support; architectures and building blocks of web-based user adaptive systems; adaptation and personalization in e-learning using pedagogic conversational agents; and user modeling and adaptation for daily routines.

Fields of interest
Data Mining and Knowledge Discovery; Information Systems Applications (incl. Internet); Information Storage and Retrieval; Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction; Pattern Recognition

Target groups
Research

Type of publication
Proceedings

Available
62,00 € ISBN 978-3-642-13469-2
Multi-Agent-Based Simulation X

This volume contains a selection of the papers presented at the 10th International Workshop on Multi-Agent-Based Simulation (MABS 2009), a workshop co-located with the 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009), which was held on May 10-15, 2009 in Budapest, Hungary.

Features
This volume contains a selection of the papers presented at the 10th International Workshop on Multi-Agent-Based Simulation (MABS 2009), a workshop co-located with the 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009), which was held on May 10-15, 2009 in Budapest, Hungary.

Fields of interest
Artificial Intelligence (incl. Robotics); Computer Communication Networks; Software Engineering; Information Systems Applications (incl. Internet); Simulation and Modeling; User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Proceedings

Available

46,00 €
ISBN 978-3-642-13552-1

Agile Software Development
Current Research and Future Directions

Agile software development has become an umbrella term for a number of changes in how software developers plan and coordinate their work, how they communicate with customers and external stakeholders, and how software development is organized in small, medium, and large companies, from the telecom and healthcare sectors to games and interactive media. Still, after a decade of research, agile software development is the source of continued debate due to its multifaceted nature and insufficient synthesis of research results. Dingsoyr, Dybå, and Moe now present a comprehensive snapshot of the knowledge gained over many years of research by those working closely with or in the industry. They show the current state of research on agile software development through an introduction and ten invited contributions on the main research fields, each written by renowned experts. These chapters cover three main issues: foundations and background of agile development, agile methods in practice, and principles.

Features
Agile software development has become an umbrella term for a number of changes in how software developers plan and coordinate their work, how they communicate with customers and external stakeholders, and how software development is organized in small, medium, and large companies, from the telecom and healthcare sectors to games and interactive media. Still, after a decade of research, agile software development is the source of continued debate due to its multifaceted nature and insufficient synthesis of research results. Dingsoyr, Dybå, and Moe now present a comprehensive snapshot of the knowledge gained over many years of research by those working closely with or in the industry. They show the current state of research on agile software development through an introduction and ten invited contributions on the main research fields, each written by renowned experts. These chapters cover three main issues: foundations and background of agile development, agile methods in practice, and principles.

Contents
Distributed Applications and Interoperable Systems

10th IFIP WG 6.1 International Conference, DAIS 2010, Amsterdam, The Netherlands, June 7-9, 2010, Proceedings

This book constitutes the refereed proceedings of the 10th IFIP WG 6.1 International Conference on Distributed Applications and Interoperable Systems, DAIS 2010, held in Amsterdam, The Netherlands, in June 2009. The DAIS conference was held as part of the federated event on Distributed Computing Techniques (DisCoTec), together with the 12th International Conference on Coordination Models and Languages (Coordination 2010), the 12th Formal Methods for Open Object-Based Distributed Systems and the 30th Formal Techniques for Networked and Distributed Systems (FMOODS/FORTE 2010). The 17 revised full papers presented were carefully reviewed and selected from 53 submissions. The papers are organized in topical sections on ubiquitous services and applications, grid computing, sensor networks, context awareness, service orientation, distributed fault tolerant controllers, cloud and cluster computing, adaptive and (re)configurable systems, and collaborative systems.

Features
This book constitutes the refereed proceedings of the 10th IFIP WG 6.1 International Conference on Distributed Applications and Interoperable Systems, DAIS 2010, held in Amsterdam, The Netherlands, in June 2009. The DAIS conference was held as part of the federated event on Distributed Computing Techniques (DisCoTec), together with the 12th International Conference on Coordination Models and Languages (Coordination 2010), the 12th Formal Methods for Open Object-Based Distributed Systems and the 30th Formal Techniques for Networked and Distributed Systems (FMOODS/FORTE 2010). The 17 revised full papers presented were carefully reviewed and selected from 53 submissions. The papers are organized in topical sections on ubiquitous services and applications, grid computing, sensor networks, context awareness, service orientation, distributed fault tolerant controllers, cloud and cluster computing, adaptive and (re)configurable systems, and collaborative systems.

Fields of interest
Computer Communication Networks; Software Engineering; Information Systems Applications (incl.Internet); User Interfaces and Human Computer Interaction; Information Storage and Retrieval; Performance and Reliability

Target groups
Professional/practitioner

Type of publication
Proceedings

Image and Signal Processing

4th International Conference, ICISP 2010, Québec, Canada, June 30 - July 2, 2010. Proceedings

This book constitutes the refereed proceedings of the 4th International Conference on Image and Signal Processing, ICISP 2010, held in Québec, Canada June 30 - July 2, 2010. The 69 revised full papers were carefully selected from 165 submissions. The papers presented are organized in topical sections on Image Filtering and Coding, Pattern Recognition, Biometry, Signal Processing, Video Coding and Processing, Watermarking and Document Processing, Computer Vision and Biomedical Applications.

Features
This book constitutes the refereed proceedings of the 4th International Conference on Image and Signal Processing, ICISP 2010, held in Québec, Canada June 30 - July 2, 2010. The 69 revised full papers were carefully selected from 165 submissions. The papers presented are organized in topical sections on Image Filtering and Coding, Pattern Recognition, Biometry, Signal Processing, Video Coding and Processing. [...]
This book constitutes the refereed proceedings of the 6th Conference on Computability in Europe, CiE 2010, held in Ponta Delgada, Azores, Portugal, in June/July 2010. The 28 revised papers presented together with 20 invited lectures were carefully reviewed and selected from 90 submissions. The papers address not only the more established lines of research of computational complexity and the interplay between proofs and computation, but also novel views that rely on physical and biological processes and models to find new ways of tackling computations and improving their efficiency.

**Features**
This book constitutes the refereed proceedings of the 6th Conference on Computability in Europe, CiE 2010, held in Ponta Delgada, Azores, Portugal, in June/July 2010. The 28 revised papers presented together with 20 invited lectures were carefully reviewed and selected from 90 submissions. The papers address not only the more established lines of research of computational complexity and the interplay between proofs and computation, but also novel views that rely on physical and biological processes and models to find new ways of tackling computations and improving their efficiency.

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

**Target groups**
Research

**Type of publication**
Proceedings

**Available**
62.00 €
ISBN 978-3-642-13961-1

---

This book constitutes the proceedings of the 24th Annual IFIP WG 11.3 Working Conference on Data and Applications Security, held in Rome Italy in June 2010. The 18 full and 11 short papers presented in this volume were carefully reviewed and selected from 61 submissions. The topics covered are query and data privacy; data protection; access control; data confidentiality and query verification; policy definition and enforcement; and trust and identity management.

**Features**
This book constitutes the proceedings of the 24th Annual IFIP WG 11.3 Working Conference on Data and Applications Security, held in Rome Italy in June 2010. The 18 full and 11 short papers presented in this volume were carefully reviewed and selected from 61 submissions. The topics covered are query and data privacy; data protection; access control; data confidentiality and query verification; policy definition and enforcement; and trust and identity management.

**Fields of interest**
Computer Communication Networks; Data Encryption; Management of Computing and Information Systems; Information Systems Applications (incl.Internet); Algorithm Analysis and Problem Complexity; Information Storage and Retrieval

**Target groups**
Research

**Type of publication**
Proceedings

**Available**
71.00 €
ISBN 978-3-642-13738-9
Structural Bioinformatics of Membrane Proteins

This book is the first one specifically dedicated to the structural bioinformatics of membrane proteins. With a focus on membrane proteins from the perspective of bioinformatics, the present work covers a broad spectrum of topics in evolution, structure, function, and bioinformatics of membrane proteins focusing on the most recent experimental results. Leaders in the field who have recently reported breakthrough advances cover algorithms, databases and their applications to the subject. The increasing number of recently solved membrane protein structures makes the expert coverage presented here very timely. Structural bioinformatics of membrane proteins has been an active area of research over the last three decades and proves to be a growing field of interest.

Features
This book is the first one specifically dedicated to the structural bioinformatics of membrane proteins. With a focus on membrane proteins from the perspective of bioinformatics, the present work covers a broad spectrum of topics in evolution, structure, function, and bioinformatics of membrane proteins focusing on the most recent experimental results. Leaders in the field who have recently reported [...]
Arithmetic of Finite Fields
Third International Workshop, WAIFI 2010, Istanbul, Turkey,
June 27-30, 2010, Proceedings

This book constitutes the refereed proceedings of the Third International Workshop on the Arithmetic of Finite Fields, WAIFI 2010, held in Istanbul, Turkey, in June 2010. The 15 revised full papers presented were carefully reviewed and selected from 33 submissions. The papers are organized in topical sections on efficient finite field arithmetic, pseudorandom numbers and sequences, Boolean functions, functions, Equations and modular multiplication, finite field arithmetic for pairing based cryptography, and finite field, cryptography and coding.

Features
This book constitutes the refereed proceedings of the Third International Workshop on the Arithmetic of Finite Fields, WAIFI 2010, held in Istanbul, Turkey, in June 2010. The 15 revised full papers presented were carefully reviewed and selected from 33 submissions. The papers are organized in topical sections on efficient finite field arithmetic, pseudorandom numbers and sequences, Boolean functions, [..]

Fields of interest
Symbolic and Algebraic Manipulation; Discrete Mathematics in Computer Science; Algorithm Analysis and Problem Complexity; Data Encryption; Computer Communication Networks; Data Structures, Cryptology and Information Theory

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
46,00 €
ISBN 978-3-642-13463-0

Formal Techniques for Distributed Systems
Joint 12th IFIP WG 6.1 International Conference, FMOODS 2010 and 30th IFIP WG 6.1 International Conference, FORTE 2010, Amsterdam, The Netherlands, June 7-9, 2010, Proceedings

This book constitutes the refereed proceedings of the 12th IFIP WG 6.1 International Conference on Formal Methods for Open Object-Based Distributed Systems, FMOODS 2010, and the 30th IFIP WG 6.1 Formal Techniques for Networked and Distributed Systems, FORTE 2010, held in Amsterdam, The Netherlands, in June 2010. The 13 revised full papers presented together with 6 short papers and the abstract of one invited talk were carefully reviewed and selected from 38 submissions. The papers are organized in topical sections on formal UML modeling: components and architecture; timed process algebra; timed and hybrid automata; program logics and analysis; and reasoning about distributed systems.

Features
This book constitutes the refereed proceedings of the 12th IFIP WG 6.1 International Conference on Formal Methods for Open Object-Based Distributed Systems, FMOODS 2010, and the 30th IFIP WG 6.1 Formal Techniques for Networked and Distributed Systems, FORTE 2010, held in Amsterdam, The Netherlands, in June 2010. The 13 revised full papers presented together with 6 short papers and the abstract of one invited [..]

Fields of interest
Computer Communication Networks; Programming Techniques; Software Engineering; Programming Languages, Compilers, Interpreters; Logics and Meanings of Programs; Mathematical Logic and Formal Languages

Target groups
Research

Type of publication
Proceedings

Available
60,00 €
ISBN 978-3-642-13463-0

Digitele Hardware/Software-Systeme
Spezifikation und Verifikation


Features

Contents

Fields of interest
Control Structures and Microprogramming; Computer Systems Organization and Communication Networks; Software Engineering; Complexity

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. X, 601 S. (eXam en press, 0) Softcover
27,99 €
ISBN 978-3-642-05355-9
<table>
<thead>
<tr>
<th>Computer Science 25</th>
</tr>
</thead>
</table>

### Research into Practice - Reality and Gaps

**6th International Conference on the Quality of Software Architectures, QoSA 2010, Prague, Czech Republic, June 23-25, 2010, Proceedings**

This book constitutes the thoroughly refereed proceedings of the 6th International Conference, QoSA 2010, held in Prague, Czech Republic in June 2010. The 11 revised long papers were selected from 32 submissions and are organized in topical sections on Model-Driven Analysis, Quality of Service Adaption as well as Case Studies and Experience Reports.

**Features**
- This book constitutes the thoroughly refereed proceedings of the 6th International Conference, QoSA 2010, held in Prague, Czech Republic in June 2010. The 11 revised long papers were selected from 32 submissions and are organized in topical sections on Model-Driven Analysis, Quality of Service Adaption as well as Case Studies and Experience Reports.

**Fields of interest**
- Software Engineering; Computer Communication Networks; Logics and Meanings of Programs; Information Systems Applications (incl.Internet); Programming Languages, Compilers, Interpreters; Management of Computing and Information Systems

**Target groups**
- Professional/practitioner

**Type of publication**
- Proceedings

**Available**
- 46.00 €
- ISBN 978-3-642-13820-1

### Simulating Complex Systems by Cellular Automata

**A.G. Hoekstra, J. Kroc, P.M.A. Sloot (Eds.)**

Deepest rooted in fundamental research in Mathematics and Computer Science, Cellular Automata (CA) are recognized as an intuitive modeling paradigm for Complex Systems. Already very basic CA, with extremely simple micro dynamics such as the Game of Life, show an almost endless display of complex emergent behavior. Conversely, CA can also be designed to produce a desired emergent behavior, using either theoretical methodologies or evolutionary techniques. Meanwhile, beyond the original realm of applications - Physics, Computer Science, and Mathematics – CA have also become work horses in very different disciplines such as epidemiology, immunology, sociology, and finance. In this context of fast and impressive progress, spurred further by the enormous attraction these topics have on students, this book emerges as a welcome overview of the field for its practitioners, as well as a good starting point for detailed study on the graduate and post-graduate level. The book contains three parts, two...[]

**Contents**
- Theory of Cellular Automata
- Applications
- Cellular Automata Software

**Fields of interest**
- Simulation and Modeling; Statistical Physics, Dynamical Systems and Complexity; Computational Science and Engineering; Computational Intelligence

**Target groups**
- Research

**Type of publication**
- Monograph

**Available**
- 2010. XXI, 384 p. (Understanding Complex Systems) Hardcover
- 119.95 €
- ISBN 978-3-642-12202-6
Information Processing and Management of Uncertainty in Knowledge-Based Systems

This book constitutes the proceedings of the 13th conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, held in Dortmund, Germany, in June 2010.

Features
This book constitutes the proceedings of the 13th conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, held in Dortmund, Germany, in June 2010.

Fields of interest
Artificial Intelligence (incl. Robotics); Database Management; Information Systems Applications (incl. Internet); Computation by Abstract Devices; Mathematical Logic and Formal Languages; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

Available
2010. XXIII, 764 p. (Communications in Computer and Information Science, Vol. 80) Softcover
97,00 €
ISBN 978-3-642-14054-9

Information Processing and Management of Uncertainty in Knowledge-Based Systems

This book constitutes the proceedings of the 13th conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, held in Dortmund, Germany, in June 2010.

Features
This book constitutes the proceedings of the 13th conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, held in Dortmund, Germany, in June 2010.

Fields of interest
Artificial Intelligence (incl. Robotics); Database Management; Information Systems Applications (incl. Internet); Computation by Abstract Devices; Mathematical Logic and Formal Languages; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

Available
2010. XXIII, 762 p. (Communications in Computer and Information Science, Vol. 81) Softcover
97,00 €
ISBN 978-3-642-14057-0

Computational Intelligence for Knowledge-Based System Design
13th IPMU Conference, Dortmund, Germany, June 28 - July 2, 2010. Proceedings

The book constitutes the refereed proceedings of the 13th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2010, held in Dortmund, Germany from June 28 - July 2, 2010. The 77 revised full papers were carefully reviewed and selected from 320 submissions and reflect the richness of research in the field of Computational Intelligence and represent developments on topics as: machine learning, data mining, pattern recognition, uncertainty handling, aggregation and fusion of information as well as logic and knowledge processing.

Features
The book constitutes the refereed proceedings of the 13th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, IPMU 2010, held in Dortmund, Germany from June 28 - July 2, 2010. The 77 revised full papers were carefully reviewed and selected from 320 submissions and reflect the richness of research in the field of Computational Intelligence and represent [...]

Fields of interest
Artificial Intelligence (incl. Robotics); Database Management; Information Systems Applications (incl. Internet); Computation by Abstract Devices; Mathematical Logic and Formal Languages; Information Storage and Retrieval

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
87,00 €
ISBN 978-3-642-14048-8
Systems Practice: How to Act in a Climate Change World

Systems Practice: How to Act in a Climate Change World is a Reader that shows how to do systems thinking and to translate thinking into action (i.e. praxis). The Open University has been teaching Systems for nearly forty years and although it has developed an effective approach to teaching students, there is still a major deficiency in the market about the doing of systems. This book aims to fill this gap and meet an important need by building the case for a systems praxiology. Praxiology is that branch of knowledge dealing with practical activity and human conduct. One of the main findings to emerge from the activities of the EPSRC-funded Systems Practice for Managing Complexity (SPMC) Network was the idea that systems practice is highly valued by those who do it and know about it but most use it as a silent practice. A consequence of this is that many people have not heard of it, they do not know how to talk about it and they also do not know what is involved in doing it, i.e. there is little [...] Features

It is now accepted that humans are changing the climate of the Earth and this is the most compelling amongst a long litany of reasons as to why, collectively, we have to change our ways of thinking and acting. Most people now recognise that we have to be capable of adapting quickly as new and uncertain circumstances emerge: this capability will need to exist at personal, group, community, regional, national [...] Contents


Computer Appl. in Social and Behavioral Sciences; Computers and Society; Management of Computing and Information Systems; Computer Science (general)

Target groups

Professional/practitioner

Type of publication

Graduate/advanced undergraduate textbook

Available

2010. X, 324 p. 34 illus., 17 in color. Softcover

69.95 €

ISBN 978-1-84996-124-0

Agent and Multi-Agent Systems: Technologies and Applications


This book constitutes the proceedings of the 4th KES International Symposium on Agent and Multi-Agent Systems, KES-AMSTA 2010, held in June 2010 in Gdynia, Poland. The discussed field is concerned with the development and analysis of AI-based problem-solving and control architectures for both single-agent and multiple-agent systems. Only 83 papers were selected for publication in both volumes which focus on topics such as: Multi-Agent Systems Design and Implementation, Negotiations and Social Issues, Web Services and Semantic Web, Cooperation, Coordination and Teamwork, Agent-Based Modeling, Simulation and Decision Making, Multi-Agent Applications, Management and e-Business, Mobile Agents and Robotics, and Machine Learning. Features

This book constitutes the proceedings of the 4th KES International Symposium on Agent and Multi-Agent Systems, KES-AMSTA 2010, held in June 2010 in Gdynia, Poland. The discussed field is concerned with the development and analysis of AI-based problem-solving and control architectures for both single-agent and multiple-agent systems. Only 83 papers were selected for publication in both volumes which focus on topics such as: Multi-Agent Systems Design and Implementation, Negotiations and Social Issues, Web Services and Semantic Web, Cooperation, Coordination and Teamwork, Agent-Based Modeling, Simulation and Decision Making, Multi-Agent Applications, Management and e-Business, Mobile Agents and Robotics, and Machine Learning. Features

This book constitutes the proceedings of the 4th KES International Symposium on Agent and Multi-Agent Systems, KES-AMSTA 2010, held in June 2010 in Gdynia, Poland. The discussed field is concerned with the development and analysis of AI-based problem-solving and control architectures for both single-agent and multiple-agent systems. Only 83 papers were selected for publication in both volumes which focus on topics such as: Multi-Agent Systems Design and Implementation, Negotiations and Social Issues, Web Services and Semantic Web, Cooperation, Coordination and Teamwork, Agent-Based Modeling, Simulation and Decision Making, Multi-Agent Applications, Management and e-Business, Mobile Agents and Robotics, and Machine Learning. Features

Fields of interest

Artificial Intelligence (incl. Robotics); Information Systems Applications (incl.Internet); Computers and Society; Computer Appl. in Administrative Data Processing; Data Mining and Knowledge Discovery; Information Storage and Retrieval

Target groups

Professional/practitioner

Type of publication

Proceedings

Available


62.00 €

ISBN 978-3-642-13479-1

Agent and Multi-Agent Systems: Technologies and Applications


This book constitutes the proceedings of the 4th KES International Symposium on Agent and Multi-Agent Systems, KES-AMSTA 2010, held in June 2010 in Gdynia, Poland. The discussed field is concerned with the development and analysis of AI-based problem-solving and control architectures for both single-agent and multiple-agent systems. Only 83 papers were selected for publication in both volumes which focus on topics such as: Multi-Agent Systems Design and Implementation, Negotiations and Social Issues, Web Services and Semantic Web, Cooperation, Coordination and Teamwork, Agent-Based Modeling, Simulation and Decision Making, Multi-Agent Applications, Management and e-Business, Mobile Agents and Robotics, and Machine Learning. Features

This book constitutes the proceedings of the 4th KES International Symposium on Agent and Multi-Agent Systems, KES-AMSTA 2010, held in June 2010 in Gdynia, Poland. The discussed field is concerned with the development and analysis of AI-based problem-solving and control architectures for both single-agent and multiple-agent systems. Only 83 papers were selected for publication in both volumes which focus on topics such as: Multi-Agent Systems Design and Implementation, Negotiations and Social Issues, Web Services and Semantic Web, Cooperation, Coordination and Teamwork, Agent-Based Modeling, Simulation and Decision Making, Multi-Agent Applications, Management and e-Business, Mobile Agents and Robotics, and Machine Learning. Features

Fields of interest

Artificial Intelligence (incl. Robotics); Information Systems Applications (incl.Internet); Computers and Society; Computer Appl. in Administrative Data Processing; Data Mining and Knowledge Discovery; Information Storage and Retrieval

Target groups

Professional/practitioner

Type of publication

Proceedings

Available

2010. XVIII, 443 p. (Lecture Notes in Artificial Intelligence, Vol. 6071) Softcover

62.00 €

ISBN 978-3-642-13540-8


62.00 €

ISBN 978-3-642-13540-8
### Algorithm Theory - SWAT 2010

H. Kaplan, Tel-Aviv University, Tel-Aviv, Israel (Ed.)


This book constitutes the proceedings of the 12th International Scandinavian Workshop on Algorithm Theory, held in Bergen, Norway in June 2010.

**Features**

This book constitutes the proceedings of the 12th International Scandinavian Workshop on Algorithm Theory, held in Bergen, Norway in June 2010.

**Fields of interest**

Algorithm Analysis and Problem Complexity; Discrete Mathematics in Computer Science; Computer Graphics; Data Structures; Computation by Abstract Devices; Mathematical Logic and Formal Languages

**Target groups**

Research

**Type of publication**

Proceedings

**Available**


62,00 €

ISBN 978-3-642-13730-3

### Digital Signatures

J. Katz, University of Maryland, College Park, MD, USA

**Features**

Digital Signatures is the first comprehensive account of the theoretical principles and techniques used in the design of provably secure signature schemes. In addition to providing the reader with a better understanding of the security guarantees provided by digital signatures, the book also contains full descriptions and detailed proofs for essentially all known secure signature schemes in the cryptographic...

**Contents**

Part I Setting the Stage.
- Digital Signatures: Background and Definitions.
- Cryptographic Hardness Assumptions.
- Part II Digital Signature Schemes without Random Oracles.
- Constructions Based on General Assumptions.
- Signature Schemes Based on the (Strong) RSA Assumption.
- Constructions Based on Bilinear Maps.
- Part III Digital Signature Schemes in the Random Oracle Model.
- The Random Oracle Model.
- Full-Domain Hash (and Related) Signature Schemes.
- Signature Schemes from Identification Schemes.
- References.

**Fields of interest**

Data Encryption; Data Structures, Cryptology and Information Theory; Computer Communication Networks; Computer Systems Organization and Communication Networks; Coding and Information Theory; Communications Engineering, Networks

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2010. XIV, 183 p. 16 illus., 8 in color. Hardcover

79,95 €

ISBN 978-0-387-27711-0

### Interactive Theorem Proving

M. Kaufmann, University of Texas at Austin, TX, USA; L.C. Paulson, University of Cambridge, UK (Eds.)

**Interactive Theorem Proving**


This book constitutes the refereed proceedings of the First International Conference on Interactive Theorem proving, ITP 2010, held in Edinburgh, UK, in July 2010. The 33 revised full papers presented were carefully reviewed and selected from 74 submissions. The papers are organized in topics such as counterexample generation, hybrid system verification, translations from one formalism to another, and cooperation between tools. Several verification case studies were presented, with applications to computational geometry, unification, real analysis, etc.

**Features**

This book constitutes the refereed proceedings of the First International Conference on Interactive Theorem proving, ITP 2010, held in Edinburgh, UK, in July 2010. The 33 revised full papers presented were carefully reviewed and selected from 74 submissions. The papers are organized in topics such as counterexample generation, hybrid system verification, translations from one formalism to another, and...

**Fields of interest**

Logics and Meanings of Programs; Software Engineering; Mathematical Logic and Formal Languages; Programming Languages, Compilers, Interpreters; Artificial Intelligence (incl. Robotics); Antibodies

**Target groups**

Professional/practitioner

**Type of publication**

Proceedings

**Available**


70,00 €

ISBN 978-3-642-14051-8
This book constitutes the refereed joint proceedings of four co-located international conferences, concertedly held in Miyazaki, Japan, in June 2010. The papers in this volume were selected based on their scores obtained from the independent reviewing processes at particular conferences, and their relevance to the idea of constructing hybrid solution to address the real-world challenges of IT. It provides a chance for academic and industry professionals to catch up on recent progress in the related areas. The 49 revised full papers presented were carefully reviewed and selected during two rounds of reviewing and improvement from more than 1000 initial submissions. The papers emanate from the following four international conferences: Information Security and Assurance (ISA 2010), Advanced Communication and Networking (ACN 2010), Advanced Science and Technology (AST 2010), and Ubiquitous Computing and Multimedia Applications (UCMA 2010). This volume focuses on various aspects of advance

Features
This book constitutes the refereed joint proceedings of four co-located international conferences, concertedly held in Miyazaki, Japan, in June 2010. The papers in this volume were selected based on their scores obtained from the independent reviewing processes at particular conferences, and their relevance to the idea of constructing hybrid solution to address the real-world challenges of IT. It provides [...]
Aging Friendly Technology for Health and Independence

8th International Conference on Smart Homes and Health Telematics, ICOST 2010, Seoul, Korea, June 22-24, 2010, Proceedings

This book constitutes the refereed proceedings of the 8th International Conference on Smart Homes and Health Telematics, ICOST 2010, held in Seoul, Korea, in June 2010. The 26 revised full papers and 15 short papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on smart home and village; health telematics and healthcare technology; aging friendly and enabling technologies; and aging friendly and enabling technology.

Fields of interest
Special Purpose and Application-Based Systems; User Interfaces and Human Computer Interaction; Information Systems Applications (incl. Internet); Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision; Pattern Recognition

Target groups
Research

Type of publication
Proceedings

Available

46,00 €
ISBN 978-3-642-13777-8

Proceedings of COOP 2010

COOP 2010 is the 9th edition of the International Conference on Designing Cooperative Systems, being the second European conference in the field of Computer Supported Cooperative Work after ECSCW. The conference brings together researchers who contribute to the analysis and design of cooperative systems and their integration in organizational community, public and other settings, and their implications for policy and decision making.

Cooperative systems design requires a deep understanding of collective activities, involving both artifacts and social practices. Contributions are solicited from a wide range of domains contributing to the fields of cooperative systems design and evaluation: CSCW, HCI, Information Systems, Knowledge Engineering, Multi-agents, organizational and management sciences, sociology, psychology, anthropology, ergonomics, linguistics.

Features
This book constitutes the refereed proceedings of the 9th International Conference on Designing Cooperative Systems, being the second European conference in the field of Computer Supported Cooperative Work. The conference brings together researchers who contribute to the analysis and design of cooperative systems and their integration in organizational community, public and other settings, and their implications for policy and decision making.

Fields of interest
Computer Systems Organization and Communication Networks; Information Systems and Communication Service; User Interfaces and Human Computer Interaction; Computers and Society; Management of Computing and Information Systems; Media Design

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
2010, XV, 351 p. 130 illus., 65 in color. Hardcover

99,95 €
ISBN 978-1-84996-210-0
Managed Grids and Cloud Systems in the Asia-Pacific Research Community

ISGC 2009, The International Symposium on Grid Computing was held at Academia Sinica, Taipei, Taiwan in April 2009 bringing together prestigious scientists and engineers worldwide to exchange ideas, present challenges/solutions and introduce future development in the field of Grid Computing. Managed Grids and Cloud Systems in the Asia-Pacific Research Community presents the latest achievements in grid technology including Cloud Computing. This volume also covers international projects in Grid Operation, Grid Middleware, E-Science applications, technical developments in grid operations and management, Security and Networking, Digital Library and more. The resources used to support these advances, such as volunteer grids, production managed grids, and cloud systems are discussed in detail. This book is designed for a professional audience composed of grid users, developers and researchers working in the grid computing. Advanced-level students focusing on computer science and engineering will find this […]

Fields of interest
Information Systems Applications (incl.Internet); Computer Systems Organization and Communication Networks; Computer Communication Networks; Computer Applications; Database Management; Software Engineering / Programming and Operating Systems

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
2010. XIV, 359 p. Hardcover
139,95 €

ISBN 978-1-4419-6468-7
Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems

7th International Conference, CPAIOR 2010, Bologna, Italy, June 16-18, 2010. Proceedings

This book constitutes the refereed proceedings of the 7th International Conference on Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems, CPAIOR 2010, held in Bologna, Italy, in June 2010. The 18 revised full papers and 17 revised short papers presented together with the extended abstracts of 3 invited talks were carefully reviewed and selected from 72 submissions. The papers are focused on both theoretical and practical, application-oriented issues and present current research with a special focus on the integration and hybridization of the approaches of constraint programming, artificial intelligence, and operations research technologies for solving large scale and complex real life combinatorial optimization problems.

Features
This book constitutes the refereed proceedings of the 7th International Conference on Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems, CPAIOR 2010, held in Bologna, Italy, in June 2010. The 18 revised full papers and 17 revised short papers presented together with the extended abstracts of 3 invited talks were carefully reviewed and selected from 72 [...]
This book constitutes the refereed proceedings of the 6th International Conference on Geometric Modeling and Processing, GMP 2010, held in Castro Urdiales, Spain, in June 2010. The 20 revised full papers presented were carefully reviewed and selected from a total of 30 submissions. The papers cover a wide spectrum in the area of geometric modeling and processing and address topics such as solutions of transcendental equations; volume parameterization; smooth curves and surfaces; isogeometric analysis; implicit surfaces; and computational geometry.

Features
This book constitutes the refereed proceedings of the 6th International Conference on Geometric Modeling and Processing, GMP 2010, held in Castro Urdiales, Spain, in June 2010. The 20 revised full papers presented were carefully reviewed and selected from a total of 30 submissions. The papers cover a wide spectrum in the area of geometric modeling and processing and address topics such as solutions of transcendental equations; volume parameterization; smooth curves and surfaces; isogeometric analysis; implicit surfaces; and computational geometry.

Fields of interest
Computer Graphics; Discrete Mathematics in Computer Science; Algorithm Analysis and Problem Complexity; Pattern Recognition; Image Processing and Computer Vision; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups
Research

Type of publication
Proceedings

Available

54.00 €
ISBN 978-3-642-11260-7

Information Processing in Computer-Assisted Interventions


This book constitutes the proceedings of the First International Conference on Information Processing in Computer-Assisted Interventions, IPCAI 2010, held in Geneva, Switzerland, in June 2010. The 18 papers presented were carefully reviewed and selected from 40 submissions. The contributions are grouped in topical sections on CAI: imaging, modeling and visualization; clinical applications and validation; medical robotics, instrumentation, and modeling; cardiovascualar modeling and navigation; and planning, simulation, and guidance.

Features
This book constitutes the proceedings of the First International Conference on Information Processing in Computer-Assisted Interventions, IPCAI 2010, held in Geneva, Switzerland, in June 2010. The 18 papers presented were carefully reviewed and selected from 40 submissions. The contributions are grouped in topical sections on CAI: imaging, modeling and visualization; clinical applications and validation; medical robotics, instrumentation, and modeling; cardiovascualar modeling and navigation; and planning, simulation, and guidance.

Fields of interest
User Interfaces and Human Computer Interaction; Image Processing and Computer Vision; Computer Graphics; Pattern Recognition; Computer Imaging, Vision, Pattern Recognition and Graphics; Special Purpose and Application-Based Systems

Target groups
Research

Type of publication
Proceedings

Available

46.00 €
ISBN 978-3-642-13710-5

Tools for High Performance Computing 2009


As more and more hardware platforms support parallelism, parallel programming is gaining momentum. Applications can only leverage the performance of multi-core processors or graphics processing units if they are able to split a problem into smaller ones that can be solved in parallel. The challenges emerging from the development of parallel applications have led to the development of a great number of tools for debugging, performance analysis and other tasks. The proceedings of the 3rd International Workshop on Parallel Tools for High Performance Computing provide a technical overview in order to help engineers, developers and computer scientists decide which tools are best suited to enhancing their current development processes.

Features
As more and more hardware platforms support parallelism, parallel programming is gaining momentum. Applications can only leverage the performance of multi-core processors or graphics processing units if they are able to split a problem into smaller ones that can be solved in parallel. The challenges emerging from the development of parallel applications have led to the development of a great number of tools [...]
Software Engineering Approaches for Offshore and Outsourced Development

This book constitutes the proceedings of the Fourth International Conference on Software Engineering Approaches for Offshore and Outsourced Development, SEAFOOD 2010, held in St. Petersburg, Russia, June 17-18, 2010. The four long plus the four short papers presented together with two keynote speeches were carefully reviewed and selected from 25 submissions for inclusion in the book. The areas covered include industry challenges and best practices in offshore software development, distributed software development, risk management, and global software project management.

Features
This book constitutes the proceedings of the Fourth International Conference on Software Engineering Approaches for Offshore and Outsourced Development, SEAFOOD 2010, held in St. Petersburg, Russia, June 17-18, 2010. The four long plus the four short papers presented together with two keynote speeches were carefully reviewed and selected from 25 submissions for inclusion in the book. The areas covered include industry challenges and best practices in offshore software development, distributed software development, risk management, and global software project management.

Fields of interest
Management of Computing and Information Systems; Software Engineering; Organization / Planning

Type of publication
Proceedings

Available
2010. IX, 97 p. (Lecture Notes in Business Information Processing, Vol. 54) Softcover
46,00 €
ISBN 978-3-642-13783-9

Graphics Recognition: Achievements, Challenges, and Evolution

This book constitutes the Selected Papers of the 8th International Workshop on Graphics Recognition, Achievements, Challenges and Evolution, held in La Rochelle, France, in July 2009

Features
This book constitutes the Selected Papers of the 8th International Workshop on Graphics Recognition, Achievements, Challenges and Evolution, held in La Rochelle, France, in July 2009

Fields of interest
Data Mining and Knowledge Discovery; Information Systems Applications (incl.Internet); Pattern Recognition; Information Storage and Retrieval; Image Processing and Computer Vision; Computer Imaging, Vision, Pattern Recognition and Graphics

Type of publication
Proceedings

Available
46,00 €
ISBN 978-3-642-13727-3

Balanced Automation Systems for Future Manufacturing Networks

This book constitutes the refereed proceedings of the 9th IFIP WG 5.5 International Conference on Information Technology for Balanced Automation Systems, BASYS 2010, held in Valencia, Spain, in July 2010. The 35 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers cover a broad range of topics that may help gaining a deeper understanding about next generation systems for innovation and manufacturing. They are organized in topical sections on co-innovation networks in industry; industry ecosystems and emergent business models; advanced production engineering; new trends in digital factories; and agent-based simulation and management of complex systems.

Features
This book constitutes the refereed proceedings of the 9th IFIP WG 5.5 International Conference on Information Technology for Balanced Automation Systems, BASYS 2010, held in Valencia, Spain, in July 2010. The 35 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers cover a broad range of topics that may help gaining a deeper understanding about next generation systems for innovation and manufacturing. They are organized in topical sections on co-innovation networks in industry; industry ecosystems and emergent business models; advanced production engineering; new trends in digital factories; and agent-based simulation and management of complex systems.

Fields of interest
Simulation and Modeling; e-commerce / e-business; Computer Communication Networks; Information Systems Applications (incl.Internet); Information Storage and Retrieval; Artificial Intelligence (incl. Robotics)

Type of publication
Proceedings

Available
2010. XIX, 310 p. (IFIP Advances in Information and Communication Technology, Vol. 322) Hardcover
92,00 €
ISBN 978-3-642-14340-3
Persuasive Technology

5th International Conference, PERSUASIVE 2010, Copenhagen, Denmark, June 7-10, 2010, Proceedings

This book constitutes the proceedings of the 5th International Conference on Persuasive Technology, PERSUASIVE 2010, held in Copenhagen Denmark in June 2010. The 25 papers presented were carefully reviewed and selected from 80 submissions. In addition three keynote papers are included in this volume. The topics covered are emotions and user experience, ambient persuasive systems, persuasive design, persuasion profiles, designing for health, psychology of persuasion, embodied and conversational agents, economic incentives, and future directions for persuasive technology.

Features
This book constitutes the proceedings of the 5th International Conference on Persuasive Technology, PERSUASIVE 2010, held in Copenhagen Denmark in June 2010. The 25 papers presented were carefully reviewed and selected from 80 submissions. In addition three keynote papers are included in this volume. The topics covered are emotions and user experience, ambient persuasive systems, persuasive design, persuasion profiles, designing for health, psychology of persuasion, embodied and conversational agents, economic incentives, and future directions for persuasive technology.

Fields of interest
Computers and Education; Information Systems Applications (incl.Internet); User Interfaces and Human Computer Interaction; Information Storage and Retrieval; Artificial Intelligence (incl. Robotics); Computer Appl. in Social and Behavioral Sciences

Target groups
Research

Type of publication
Proceedings

Available

46,00 €
ISBN 978-3-642-13225-4

Distributed Computing in Sensor Systems


The book constitutes the refereed proceedings of the 6th International Conference on Distributed Computing in Sensor Systems, DCOSS 2010, held in Santa Barbara, CA, USA, in June 2010. The 28 revised full papers presented were carefully reviewed and selected from 76 submissions. The research contributions in this proceedings span important aspects of sensor systems, including energy management; communication; coverage and tracking; time synchronization and scheduling; key establishment and authentication; compression; medium access control; code update; and mobility.

Features
The book constitutes the refereed proceedings of the 6th International Conference on Distributed Computing in Sensor Systems, DCOSS 2010, held in Santa Barbara, CA, USA, in June 2010. The 28 revised full papers presented were carefully reviewed and selected from 76 submissions. The research contributions in this proceedings span important aspects of sensor systems, including energy management; communication; coverage and tracking; time synchronization and scheduling; key establishment and authentication; compression; medium access control; code update; and mobility.

Fields of interest
Computer Communication Networks; Information Systems Applications (incl.Internet); Algorithm Analysis and Problem Complexity; Software Engineering; Information Storage and Retrieval; Operating Systems

Target groups
Research

Type of publication
Proceedings

Available

62,00 €
ISBN 978-3-642-13650-4

Reliable Software Technologies - Ada-Europe 2010


This book constitutes the proceedings of the 15th Ada-Europe International Conference on Reliable Software Technologies, Ada-Europe 2010, held in Valencia, Spain, on June 14-18, 2010. The 17 papers presented were carefully reviewed and selected from 40 submissions. Topics of interest to the conference are software dependability, critical, real-time and distributed systems, and language technology, all under the more general heading of Reliable Software Technologies.

Features
This book constitutes the proceedings of the 15th Ada-Europe International Conference on Reliable Software Technologies, Ada-Europe 2010, held in Valencia, Spain, on June 14-18, 2010. The 17 papers presented were carefully reviewed and selected from 40 submissions. Topics of interest to the conference are software dependability, critical, real-time and distributed systems, and language technology, all under [...]
Hybrid Artificial Intelligent Systems, Part II

This book constitutes the proceedings of the 5th International Conference on Hybrid Artificial Intelligent Systems, held in San Sebastian, Spain, in June 2010.

Features
This book constitutes the proceedings of the 5th International Conference on Hybrid Artificial Intelligent Systems, held in San Sebastian, Spain, in June 2010.

Fields of interest
Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; Information Systems Applications (incl. Internet); Computation by Abstract Devices; Database Management; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

Available
70,00 €
ISBN 978-3-642-13802-7

Hybrid Artificial Intelligent Systems, Part I

This book constitutes the proceedings of the 5th International Conference on Hybrid Artificial Intelligent Systems, held in San Sebastian, Spain, in June 2010.

Features
This book constitutes the proceedings of the 5th International Conference on Hybrid Artificial Intelligent Systems, held in San Sebastian, Spain, in June 2010.

Fields of interest
Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; Information Systems Applications (incl. Internet); Computation by Abstract Devices; Database Management; Information Storage and Retrieval

Target groups
Research

Type of publication
Proceedings

Available
2010. (Lecture Notes in Artificial Intelligence, Vol. 6076) Softcover
79,00 €
ISBN 978-3-642-13768-6

Symbol Spotting in Digital Libraries
Focused Retrieval over Graphic-rich Document Collections

The specific problem of symbol recognition in graphical documents requires additional techniques to those developed for character recognition. The most well-known obstacle is the so-called Sayre paradox: Correct recognition requires good segmentation, yet improvement in segmentation is achieved using information provided by the recognition process. This dilemma can be avoided by techniques that identify sets of regions containing useful information. Such symbol-spotting methods allow the detection of symbols in maps or technical drawings without having to fully segment or fully recognize the entire content. This unique text/reference provides a complete, integrated and large-scale solution to the challenge of designing a robust symbol-spotting method for collections of graphic-rich documents. The book examines a number of features and descriptors, from basic photometric descriptors commonly used in computer vision techniques to those specific to graphical shapes, presenting a methodology which can...

Contents

Fields of interest
Pattern Recognition

Target groups
Research

Type of publication
Monograph

Available
2010. XIV, 188 p. 140 illus., 70 in color. Hardcover
79,95 €
ISBN 978-1-84996-207-0
Intentional Perspectives on Information Systems Engineering

Requirements engineering has long acknowledged the importance of the notion that system requirements are stakeholder goals—rather than system functions—and ought to be elicited, modeled, and analyzed accordingly. In this book, Nurcan and her co-editors collected twenty contributions from leading researchers in requirements engineering, presenting a comprehensive overview of today’s perspectives.

Features
Requirements engineering has long acknowledged the importance of the notion that system requirements are stakeholder goals—rather than system functions—and ought to be elicited, modeled, and analyzed accordingly. In this book, Nurcan and her co-editors collected twenty contributions from leading researchers in requirements engineering, presenting a comprehensive overview of today’s perspectives.

Contents

Fields of interest
Software Engineering; Business Information Systems; Information Systems Applications (incl.Internet); Simulation and Modeling; Computer Applied in Administrative Data Processing
Beyond Loop Level Parallelism in OpenMP: Accelerators, Tasking and More

This book constitutes the refereed proceedings of the 6th International Workshop on OpenMP, IWOMP 2010, held in Tsukuba City, Japan, in June 2010. The papers are organized in topical sections on Runtime and Optimization, Proposed Extensions to OpenMP, Scheduling and Performance, as well as Hybrid Programming and Accelerators with OpenMP.

Features
This book constitutes the refereed proceedings of the 6th International Workshop on OpenMP, IWOMP 2010, held in Tsukuba City, Japan, in June 2010. The papers are organized in topical sections on Runtime and Optimization, Proposed Extensions to OpenMP, Scheduling and Performance, as well as Hybrid Programming and Accelerators with OpenMP.

Fields of interest
Processor Architectures; Algorithm Analysis and Problem Complexity; Computer Communication Networks; Software Engineering; Computation by Abstract Devices; Programming Techniques

Target groups
Research

Type of publication
Proceedings

Available
46,00 €
ISBN 978-3-642-13216-2

Statistical Methods for Performance Evaluation

Biometrics, the science of using physical traits to identify individuals, is playing an increasing role in our security-conscious society and across the globe. Biometric authentication, or bioauthentication, systems are being used to secure everything from amusement parks to bank accounts to military installations. Yet developments in this field have not been matched by an equivalent improvement in the statistical methods for evaluating these systems. Compensating for this need, this unique book/reference provides a basic statistical methodology for practitioners and testers of bioauthentication devices, supplying a set of rigorous statistical methods for evaluating biometric authentication systems. This framework of methods can be extended and generalized for a wide range of applications and tests. This is the first single resource on statistical methods for estimation and comparison of the performance of biometric authentication systems. The book focuses on six common performance metrics: for [...] Features
Biometrics, the science of using physical traits to identify individuals, is playing an increasing role in our security-conscious society and across the globe. Biometric authentication, or bioauthentication, systems are being used to secure everything from amusement parks to bank accounts to military installations. Yet developments in this field have not been matched by an equivalent improvement in the [...] Contents
Part I: Introduction - Introduction - Statistical Background - Part II: Primary Matching and Classification Measures - False Non-Match Rate - False Match Rate - Receiver Operating Characteristic Curve and Equal Error Rate - Part III: Biometric Specific Measures - Failure to Enrol - Failure to Acquire - Part IV: Additional Topics and Appendices - Additional Topics and Discussion - Tables.

Fields of interest
Biometrics; Mathematical Applications in Computer Science; Computational Mathematics and Numerical Analysis

Target groups
Research

Type of publication
Monograph

Available
2010. XII, 81 p. Lecture Notes in Bioinformatics, Vol. 6004 Hardcover
99,95 €
ISBN 978-3-642-13130-1

Statistical Methods for Performance Evaluation

Biometrics, the science of using physical traits to identify individuals, is playing an increasing role in our security-conscious society and across the globe. Biometric authentication, or bioauthentication, systems are being used to secure everything from amusement parks to bank accounts to military installations. Yet developments in this field have not been matched by an equivalent improvement in the statistical methods for evaluating these systems. Compensating for this need, this unique book/reference provides a basic statistical methodology for practitioners and testers of bioauthentication devices, supplying a set of rigorous statistical methods for evaluating biometric authentication systems. This framework of methods can be extended and generalized for a wide range of applications and tests. This is the first single resource on statistical methods for estimation and comparison of the performance of biometric authentication systems. The book focuses on six common performance metrics: for [...] Features
Biometrics, the science of using physical traits to identify individuals, is playing an increasing role in our security-conscious society and across the globe. Biometric authentication, or bioauthentication, systems are being used to secure everything from amusement parks to bank accounts to military installations. Yet developments in this field have not been matched by an equivalent improvement in the [...] Contents
Part I: Introduction - Introduction - Statistical Background - Part II: Primary Matching and Classification Measures - False Non-Match Rate - False Match Rate - Receiver Operating Characteristic Curve and Equal Error Rate - Part III: Biometric Specific Measures - Failure to Enrol - Failure to Acquire - Part IV: Additional Topics and Appendices - Additional Topics and Discussion - Tables.

Fields of interest
Biometrics; Mathematical Applications in Computer Science; Computational Mathematics and Numerical Analysis

Target groups
Research

Type of publication
Monograph

Available
2010. XII, 81 p. Lecture Notes in Bioinformatics, Vol. 6004 Hardcover
99,95 €
ISBN 978-3-642-13130-1
Personal Satellite Services

This book constitutes the thoroughly refereed post-conference proceedings of the Second International ICST Conference on Personal Satellite Services, PSATS 2010, held in Rome, Italy, February 2010. The conference included a keynote speech, 4 regular technical tracks and 4 special sessions consisting of 33 high-quality scientific papers. These cover various topics such as Satellite Communications: Coding and Modulations, Multimedia Integration, Satellite Network: Quality of Service and Architectures and Applications and Services, as well as Delay-Tolerant Networks, Quantum Satellite Communications, Access Quality Processing and Applications of Satellite Imagery.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the Second International ICST Conference on Personal Satellite Services, PSATS 2010, held in Rome, Italy, February 2010. The conference included a keynote speech, 4 regular technical tracks and 4 special sessions consisting of 33 high-quality scientific papers. These cover various topics such as Satellite Communications: Coding and Modulations, Multimedia Integration, Satellite Network: Quality of Service and Architectures and Applications and Services, as well as Delay-Tolerant Networks, Quantum Satellite Communications, Access Quality Processing and Applications of Satellite Imagery.

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

Target groups
Professional/practitioner

Type of publication
Proceedings

Available

62,00 €
ISBN 978-3-642-13617-7

Information Security and Privacy

This book constitutes the refereed proceedings of the 15th Australasian Conference on Information Security and Privacy, ACISP 2010, held in Sydney, Australia, in July 2010. The 24 revised full papers presented were carefully reviewed and selected from 97 submissions. The papers are organized in topical sections on symmetric key encryption; hash functions; public key cryptography; protocols; and network security.

Features
This book constitutes the refereed proceedings of the 15th Australasian Conference on Information Security and Privacy, ACISP 2010, held in Sydney, Australia, in July 2010. The 24 revised full papers presented were carefully reviewed and selected from 97 submissions. The papers are organized in topical sections on symmetric key encryption; hash functions; public key cryptography; protocols; and network security.

Fields of interest
Data Encryption; Computer Communication Networks; 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
2010. XII, 403 p. (Security and Cryptology, Vol. 6168) Softcover

62,00 €
ISBN 978-3-642-14080-8

Mechanisms for Autonomous Management of Networks and Services

This book constitutes the refereed proceedings of the 4th International Conference on Autonomous Infrastructure, Management and Security, AIMS 2010, held in Zurich, Switzerland, in June 2010. The 9 revised full papers and 5 short papers presented together with 11 papers of the AIMS Ph.D. workshop were carefully reviewed and selected from 28 submissions to the main conference and 22 submissions to the Ph.D. workshop. The papers are organized in topical sections on P2P-based systems; autonomous management; overlays and non-conventional network infrastructures; management mechanisms; and security, network monitoring, and analysis.

Features
This book constitutes the refereed proceedings of the 4th International Conference on Autonomous Infrastructure, Management and Security, AIMS 2010, held in Zurich, Switzerland, in June 2010. The 9 revised full papers and 5 short papers presented together with 11 papers of the AIMS Ph.D. workshop were carefully reviewed and selected from 28 submissions to the main conference and 22 submissions to the Ph.D. workshop.

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

Target groups
Research

Type of publication
Proceedings

Available
2010. XII, 179 p. (Computer Communication Networks and Telecommunications, Vol. 6155) Softcover

60,00 €
ISBN 978-3-642-13985-7
Brain-Computer Interfaces
Applying our Minds to Human-Computer Interaction

For generations, humans have fantasized about the ability to create devices that can see into a person’s mind and thoughts, or to communicate and interact with machines through thought alone. Such ideas have long captured the imagination of humankind in the form of ancient myths and modern science fiction stories. Recent advances in cognitive neuroscience and brain imaging technologies have started to turn these myths into a reality, and are providing us with the ability to interface directly with the human brain. This ability is made possible through the use of sensors that monitor physical processes within the brain which correspond with certain forms of thought. Brain-Computer Interfaces: Applying our Minds to Human-Computer Interaction broadly surveys research in the Brain-Computer Interface domain. More specifically, each chapter articulates some of the challenges and opportunities for using brain sensing in Human-Computer Interaction work, as well as applying Human-Computer Interaction [...]
Advances in Swarm Intelligence
First International Conference, ICSI 2010, Beijing, China, June 12-15, 2010, Proceedings, Part II

The books (LNCS 6145 and 6146) constitute the refereed proceedings of the International Conference on Swarm Intelligence, ICSI 2010, held in Beijing, China, in June 2010. The 185 revised full papers presented were carefully reviewed and selected from 394 submissions. The papers are organized in topical sections on theoretical analysis of swarm intelligence algorithms, PSO algorithms, applications of PSO algorithms, ACO algorithms, artificial immune system, novel swarm-based optimization algorithms, genetic algorithms, evolutionary computation, hybrid algorithms, multi-objective optimization algorithms, multi-robot systems, multi-agent based complex systems (part I) and fuzzy methods, applications of computational intelligence algorithms, signal processing and information security, information processing system, intelligent control, classifier systems, machine learning methods, other optimization algorithms, data mining methods, intelligent computing methods and [...]

Features
The books (LNCS 6145 and 6146) constitute the refereed proceedings of the International Conference on Swarm Intelligence, ICSI 2010, held in Beijing, China, in June 2010. The 185 revised full papers presented were carefully reviewed and selected from 394 submissions. The papers are organized in topical sections on theoretical analysis of swarm intelligence algorithms, PSO algorithms, applications of PSO [...] of interest
Algorithm Analysis and Problem Complexity; Information Systems Applications (incl. Internet); Artificial Intelligence (incl. Robotics); Computation by Abstract Devices; Computer Communication Networks; Information Storage and Retrieval

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
87,00 €
ISBN 978-3-642-13497-5

Smart Graphics
10th International Symposium on Smart Graphics, Banff, Canada, June 24-26 Proceedings

This book constitutes the refereed proceedings of the 10th International Symposium on Smart Graphics, SG 2010, held in Banff, Canada, in June 2010. The 31 revised full papers presented were carefully reviewed and selected from numerous submissions with a wide range of topics including virtual reality and simulation, sketch-based interfaces, visual analytics, and camera planning. The papers are organized in topical sections on sketching, physics and simulation, camera planning, imaging, visual analytics, and art.

Features
This book constitutes the refereed proceedings of the 10th International Symposium on Smart Graphics, SG 2010, held in Banff, Canada, in June 2010. The 31 revised full papers presented were carefully reviewed and selected from numerous submissions with a wide range of topics including virtual reality and simulation, sketch-based interfaces, visual analytics, and camera planning. The papers are organized in [...] of interest
User Interfaces and Human Computer Interaction; Computer Appl. in Arts and Humanities; Computer Imaging, Vision, Pattern Recognition and Graphics; Information Systems Applications (incl. Internet); Simulation and Modeling; Arts

Target groups
Research

Type of publication
Proceedings

Available
46,00 €
ISBN 978-3-642-13543-9

Advanced Computer Science and Information Technology

This volume constitutes the refereed proceedings of the 2nd International Conference on Advanced Science and Technology, AST 2010, held in Miyazaki, Japan, in June 2010. The 16 revised full papers presented in this volume were carefully reviewed and selected from 220 submissions. The papers address current issues in computer science and its applications, software engineering and its applications, bio-science and bio-technology, w- and e-service, science and technology, database theory and application, control and automation, signal processing, image processing and pattern recognition, as well as grid and distributed computing.

Features
This volume constitutes the refereed proceedings of the 2nd International Conference on Advanced Science and Technology, AST 2010, held in Miyazaki, Japan, in June 2010. The 16 revised full papers presented in this volume were carefully reviewed and selected from 220 submissions. The papers address current issues in computer science and its applications, software engineering and its applications, bio-science [...] of interest
Algorithm Analysis and Problem Complexity; Computer Communication Networks; Software Engineering; Information Systems Applications (incl. Internet); Artificial Intelligence (incl. Robotics); Computation by Abstract Devices

Target groups
Research

Type of publication
Proceedings

Available
2010. Xi. 195 p. (Communications in Computer and Information Science, Vol. 74) Softcover
56,00 €
ISBN 978-3-642-13345-9
Software Business


This book contains the refereed proceedings of the First International Conference on Software Business (ICSOB) in Jyväskylä, Finland, in June 2010. This inaugural conference brought together a strong international community from 17 countries from the Americas, Europe, India and Australia with research disciplines from various fields of business and technology or software management on a topic, which had until now, received only little attention from the academic community. The 13 full and 9 short papers accepted for ICSOB were selected from 35 submissions and were organized under eight themes: business models, business management, ecosystems, education and research, internationalization, open source software and social media, product management, and software as a service. The volume is completed by a short summary of each of the three keynotes, the two workshops and the three tutorials given at the conference, as well as the industrial session.

Features
This book contains the refereed proceedings of the First International Conference on Software Business (ICSOB) in Jyväskylä, Finland, in June 2010. This inaugural conference brought together a strong international community from 17 countries from the Americas, Europe, India and Australia with research disciplines from various fields of business and technology or software management on a topic, which had until now, received only little attention from the academic community. The 13 full and 9 short papers accepted for ICSOB were selected from 35 submissions and were organized under eight themes: business models, business management, ecosystems, education and research, internationalization, open source software and social media, product management, and software as a service. The volume is completed by a short summary of each of the three keynotes, the two workshops and the three tutorials given at the conference, as well as the industrial session.

Fields of interest
Management of Computing and Information Systems; Organization / Planning; Technology Management; Software Engineering

Target groups
Research

Type of publication
Proceedings

Available

46,00 €
ISBN 978-3-642-13632-0
**Objects, Models, Components, Patterns**

48th International Conference, TOOLS 2010, Málaga, Spain, June 28 - July 2, 2010, Proceedings

This book constitutes the proceedings of the 48th International Conference on Objects, Models, Components, Patterns, held in Málaga, Spain, in June/July 2010.

**Features**
This book constitutes the proceedings of the 48th International Conference on Objects, Models, Components, Patterns, held in Málaga, Spain, in June/July 2010.

**Fields of interest**
Software Engineering; Logics and Meanings of Programs; Programming Languages, Compilers, Interpreters; Programming Techniques; Mathematical Logic and Formal Languages; Computer Communication Networks

**Target groups**
Research

**Type of publication**
Proceedings

**Available**

54,00 €
ISBN 978-3-642-13952-9

---

**Modeling and Tools for Network Simulation**

A crucial step during the design and engineering of communication systems is the estimation of their performance and behavior, especially for mathematically complex or highly dynamic systems network simulation is particularly useful. This book focuses on tools, modeling principles and state-of-the-art models for discrete-event based network simulations, the standard method applied today in academia and industry for performance evaluation of new network designs and architectures. The focus of the tools part is on two distinct simulations engines: OmNet++ and ns-3, while it also deals with issues like parallelization, software integration and hardware simulations. The parts dealing with modeling and models for network simulations are split into a wireless section and a section dealing with higher layers. The wireless section covers all essential modeling principles for dealing with physical layer, link layer and wireless channel behavior. In addition, detailed models for prominent wireless systems are presented.

**Features**
A crucial step during the design and engineering of communication systems is the estimation of their performance and behavior, especially for mathematically complex or highly dynamic systems network simulation is particularly useful. This book focuses on tools, modeling principles and state-of-the-art models for discrete-event based network simulations, the standard method applied today in academia and industry for performance evaluation of new network designs and architectures. The focus of the tools part is on two distinct simulations engines: OmNet++ and ns-3, while it also deals with issues like parallelization, software integration and hardware simulations. The parts dealing with modeling and models for network simulations are split into a wireless section and a section dealing with higher layers. The wireless section covers all essential modeling principles for dealing with physical layer, link layer and wireless channel behavior. In addition, detailed models for prominent wireless systems are presented.

**Contents**

**Fields of interest**
Computer Communication Networks; Simulation and Modeling; Computer Systems Organization and Communication Networks; System Performance and Evaluation

**Target groups**
Graduate

**Type of publication**
Graduate/advanced undergraduate textbook

**Available**
2010. 256 p. Hardcover

59,95 €
ISBN 978-3-642-12330-6

---

**Fundamentals of Predictive Text Mining**

One consequence of the pervasive use of computers is that most documents originate in digital form. Widespread use of the Internet makes them readily available. Text mining – the process of analyzing unstructured natural-language text – is concerned with how to extract information from these documents. Developed from the authors’ highly successful Springer reference on text mining, Fundamentals of Predictive Text Mining is an introductory textbook and guide to this rapidly evolving field. Integrating topics spanning the varied disciplines of data mining, machine learning, databases, and computational linguistics, this uniquely useful book also provides practical advice for text mining. In-depth discussions are presented on issues of document classification, information retrieval, clustering and organizing documents, information extraction, web-based data-sourcing, and prediction and evaluation. Background on data mining is beneficial, but not essential. Where advanced concepts are discussed that...

**Features**
One consequence of the pervasive use of computers is that most documents originate in digital form. Widespread use of the Internet makes them readily available. Text mining – the process of analyzing unstructured natural-language text – is concerned with how to extract information from these documents. Developed from the authors’ highly successful Springer reference on text mining.

**Contents**
Overview of Text Mining - From Textual Information to Numerical Vectors - Using Text for Prediction - Information Retrieval and Text Mining - Finding Structure in a Document Collection - Look for Information in Documents - Data Sources for Prediction - Databases, Hybrid Data and the Web - Case Studies - Emerging Directions

**Fields of interest**
Data Mining and Knowledge Discovery; Document Preparation and Text Processing; Computer Appl. in Administrative Data Processing; Information Storage and Retrieval; Database Management

**Target groups**
Research

**Type of publication**
Graduate/advanced undergraduate textbook

**Available**
2010. X VI, 283 p. 300 illus., 150 in color. (Texts in Computer Science, Vol. 43) Hardcover

54,95 €
ISBN 978-1-84996-225-4
Architecture-Based Design of Multi-Agent Systems

Multi-agent systems are claimed to be especially suited to the development of software systems that are decentralized, can deal flexibly with dynamic conditions, and are open to system components that come and go. This is why they are used in domains such as manufacturing control, automated vehicles, and e-commerce markets. Danny Weyns’ book is organized according to the postulate that “developing multi-agent systems is 95% software engineering and 5% multi-agent systems theory.” He presents a software engineering approach for multi-agent systems that is heavily based on software architecture - with, for example, tailored patterns such as “situated agent”, “virtual environment”, and “selective perception” - and on middleware for distributed coordination - with programming abstractions such as “views” and “roles.” Next he shows the feasibility and applicability of this approach with the development of an automated transportation system consisting of a number of automatic guided vehicles transporting [...]
K. Wolter, Humboldt-Universität, Berlin, Germany

**Stochastic Models for Fault Tolerance**

**Restart, Rejuvenation and Checkpointing**

As modern society relies on the fault-free operation of complex computing systems, system fault-tolerance has become an indispensable requirement. Therefore, we need mechanisms that guarantee correct service in cases where system components fail, be they software or hardware elements. Redundancy patterns are commonly used, for either redundancy in space or redundancy in time. Wolter’s book details methods of redundancy in time that need to be issued at the right moment. In particular, she addresses the so-called ‘timeout selection problem’, i.e., the question of choosing the right time for different fault-tolerance mechanisms like restart, rejuvenation and checkpointing. Restart indicates the pure system restart, rejuvenation denotes the restart of the operating environment of a task, and checkpointing includes saving the system state periodically and reinitializing the system at the most recent checkpoint upon failure of the system. Her presentation includes a brief introduction to the methods.

**Contents**


**Fields of interest**

System Performance and Evaluation; Probability and Statistics in Computer Science; Simulation and Modeling

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. XVI, 269 p. Hardcover

79,95 €

ISBN 978-3-642-11256-0
Future Multimedia Networking

This book constitutes the refereed proceedings of the Future Multimedia Networking Workshop, FMN 2010, held in Krakow, Poland, in June 2010. The 16 revised full papers presented were carefully reviewed and selected from 45 submissions. The papers are organized in topical sections on quality of service (QoS) and quality of experience (QoE) management in content centric networks, video quality assessment in future multimedia networking, video distribution in future multimedia networking, and demonstration on future multimedia networking.

Features
This book constitutes the refereed proceedings of the Future Multimedia Networking Workshop, FMN 2010, held in Krakow, Poland, in June 2010. The 16 revised full papers presented were carefully reviewed and selected from 45 submissions. The papers are organized in topical sections on quality of service (QoS) and quality of experience (QoE) management in content centric networks, video quality assessment in future multimedia networking, video distribution in future multimedia networking, and demonstration on future multimedia networking.

Fields of interest
Computer Communication Networks; Multimedia Information Systems; Special Purpose and Application-Based Systems; Information Systems Applications (incl.Internet); Data Structures, Cryptology and Information Theory; Computer Graphics

Target groups
Research

Type of publication
Proceedings

Available

46,00 €
ISBN 978-3-642-13788-4

Quantum Private Communication

Quantum Private Communication covers the fundamentals of the areas of secure communication, quantum cryptography, quantum communication, and their physical implementation with applications. The book appears in a timely manner for an emerging field at the crossroad of classic private communication and quantum physics. Graduate students and scientists alike in communication engineering, computer science, electronic engineering, physics and mathematics will benefit from the book. Professor Guihua Zeng teaches and conducts research at the Department of Electronic Engineering of Shanghai Jiao Tong University and spent an Alexander von Humboldt Fellowship at the University of Freiburg, Germany.

Features
Quantum Private Communication covers the fundamentals of the areas of secure communication, quantum cryptography, quantum communication, and their physical implementation with applications. The book appears in a timely manner for an emerging field at the crossroad of classic private communication and quantum physics. Graduate students and scientists alike in communication engineering, computer [...]
Web Service Mining: Application to Discoveries of Biological Pathways

Web Service Mining: For Biological Pathways presents the major issues and solutions to mining services on the Web. This book will focus specifically on a reference framework for web service mining, that is inspired by molecular recognition and the drug discovery process; known as a molecular based approach. Web Service Mining: For Biological Pathways will apply the service mining framework and techniques back to biological processes for the discovery of biological pathways. It will link various processes that are involved in an interaction network, as well as providing performance benchmarks for assessing web service mining techniques and algorithms. Web Service and Mining: For Biological Pathways is designed for researchers and practitioners working in the web service oriented computing industry. This book is also suitable for advanced-level students in computer science and biology as a secondary text or reference book.

Features
Web Service Mining: Application to Discoveries of Biological Pathways presents the major issues and solutions to mining services on the Web. This book focuses specifically on a reference framework for web service mining that is inspired by molecular recognition and the drug discovery process; known as a molecular-based approach. Web Service Mining: Application to Discoveries of Biological Pathways applies the [...]
Earth Sciences

New Aspects of Mesozoic Biodiversity

The proposed book is an edited volume which contains a thematic set of seven novel papers on contemporary issues of fossil vertebrates that includes new insights of tetrapod evolution during Palaeozoic and Mesozoic eras, discovery of new vertebrate fossils including dinosaur from different continents, new information on palaeo-osteohistology and palaeobiogeography of the Indian plate during the end Mesozoic. All the seven papers of the proposed book are extremely significant in the present milieu of interdisciplinary research in areas covering vertebrate palaeontology, palaeobiology, palaeoecology and palaeobiogeography. This book will give a glimpse of the present day state of the art knowledge of these branches of science. The papers of the proposed book are the results of pioneering researches of the concerned scientists who have excellently presented their ideas/views and new discoveries in their contributions making this book intellectually attractive to the researchers in these fields all over.[…]

Contents

Features
The proposed book is an edited volume which contains a thematic set of seven novel papers on contemporary issues of fossil vertebrates that includes new insights of tetrapod evolution during Palaeozoic and Mesozoic eras, discovery of new vertebrate fossils including dinosaur from different continents, new information on palaeo-osteohistology and palaeobiogeography of the Indian plate during the end Mesozoic.[…]

Recent Advances in Nuclear Explosion Monitoring

This topical volume focuses on the most recent advances that have been achieved in relevant fields of research of nuclear test ban monitoring, including seismology, infrasound- and hydro-acoustics, as well as nuclear physics and atmospheric backtracking. This research has been presented during the special sessions on “Research and Development in Nuclear Explosion Monitoring” convened during the 2007 and 2008 General Assemblies of the European Geosciences Union (EGU). The special sessions were introduced after the Preparatory Commission for the Comprehensive Nuclear Test-Ban Treaty Organization (CTBTO Prepcom) had convened a scientific symposium in 2006 on “CTBT: Synergies with Science 1996–2006 and beyond” marking the tenth anniversary of the United Nations General Assembly’s adoption of the CTBT Treaty. With regard to the seismo-acoustic fields several papers provide important updates on advances made in these fields since publication of ‘Monitoring the Comprehensive Nuclear-Test-Ban Treaty’ (see[…])

Features
This topical volume focuses on the most recent advances that have been achieved in relevant fields of research of nuclear test ban monitoring, including seismology, infrasound- and hydro-acoustics, as well as nuclear physics and atmospheric backtracking. This research has been presented during the special sessions on “Research and Development in Nuclear Explosion Monitoring” convened during the 2007 and […]

Contents
Considerations in phase estimation and event location using small-aperture regional seismic arrays.- Analysis of signals from a unique ground-truth infrasound source observed at IMS Station IS26 in Southern Germany.- Detection and analysis of near-surface explosions on the Kola Peninsula.- The temporal morphology of infrasound propagation.- Underground nuclear explosions and release of radioactive noble gases.- Genesis and equilibrium of natural Lithospheric radioxenon and its influence on submarine noble gas samples for CTBT on-site inspections.- Ten years of development of equipment[…]

Fields of interest
Geology; Geophysics / Geodesy; Geotechnical Engineering; Applied Earth Sciences

Available
129.95 €
ISBN 978-3-540-95852-9

Morphometrics for Nonmorphometricians

Morphometrics is concerned with the study of variations and change in the form (size and shape) of organisms or objects adding a quantitative element to descriptions and thereby facilitating the comparison of different objects and organisms. This volume provides an introduction to morphometrics in a clear and simple way without recourse to complex mathematics and statistics. This introduction is followed by a series of case studies describing the variety of applications of morphometrics from paleontology and evolutionary ecology to archaeological artifacts analysis. This is followed by a presentation of future applications of morphometrics and state of the art software for analyzing and comparing shape.

Features
Morphometrics is concerned with the study of variations and change in the form (size and shape) of organisms or objects adding a quantitative element to descriptions and thereby facilitating the comparison of different objects and organisms. This volume provides an introduction to morphometrics in a clear and simple way without recourse to complex mathematics and statistics. This introduction is followed by […]

Fields of interest
Paleontology; Animal Anatomy / Morphology / Histology; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Applications of Mathematics; Computer Imaging, Vision, Pattern Recognition and Graphics

Target groups
Professional/practitioner

Type of publication
Monograph

Available
129.95 €
ISBN 978-3-540-95852-9

Morphometrics for Nonmorphometricians

A.M.T. Elewa, Minia University, Egypt (Ed.)

Morphometrics is concerned with the study of variations and change in the form (size and shape) of organisms or objects adding a quantitative element to descriptions and thereby facilitating the comparison of different objects and organisms. This volume provides an introduction to morphometrics in a clear and simple way without recourse to complex mathematics and statistics. This introduction is followed by a series of case studies describing the variety of applications of morphometrics from paleontology and evolutionary ecology to archaeological artifacts analysis. This is followed by a presentation of future applications of morphometrics and state of the art software for analyzing and comparing shape.

Features
Morphometrics is concerned with the study of variations and change in the form (size and shape) of organisms or objects adding a quantitative element to descriptions and thereby facilitating the comparison of different objects and organisms. This volume provides an introduction to morphometrics in a clear and simple way without recourse to complex mathematics and statistics. This introduction is followed by […]
Fronts, Waves and Vortices in Geophysical Flows

Most well known structures in planetary atmospheres and the Earth’s oceans are jets or fronts interacting with vortices on a wide range of scales. The transition from one state to another, such as in unbalanced or adjustment flows, involves the generation of waves as well as the interaction of coherent structures with these waves. This book presents a fluid mechanics perspective to the dynamics of fronts and vortices and their interaction with waves in geophysical flows. It provides a basic physical background for modeling coherent structures in a geophysical context, and it gives essential information on advanced topics such as spontaneous wave emission and wave-momentum transfer in geophysical flows. Based on a set of lectures by leading specialists, this text is targeted at graduate students, researchers and engineers in geophysics and environmental fluid mechanics.

Features
Most well known structures in planetary atmospheres and the Earth’s oceans are jets or fronts interacting with vortices on a wide range of scales. The transition from one state to another, such as in unbalanced or adjustment flows, involves the generation of waves as well as the interaction of coherent structures with these waves. This book presents a fluid mechanics perspective to the dynamics of [...] Contents
Dynamics of Cortices in Rotating and Stratified Fluids.- Stability of Quasi of Two-Dimensional Vortices.- Oceanic Vortices.- Lagrangian Dynamics of Fronts, Vortices and Waves: Understanding the (Semi-)Geostrophic Adjustment.- Wave-Vortex Interactions.- Index.

Fields of interest
Geophysics / Geodesy; Fluid- and Aerodynamics; Engineering Fluid Dynamics; Oceanography; Environmental Physics; Meteorology / Climatology

Target groups
Research

Type of publication
Monograph

Available
2010. IX, 192 p. (Lecture Notes in Physics, Vol. 805) Softcover

99.95 €
ISBN 978-3-642-11586-8

Advanced Ocean Modelling
Using Open-Source Software

This book introduces the reader to advanced methods used in the computer-based modelling of fluid processes. This includes nonhydrostatic processes such as breaking internal waves and density-driven convection, but the model code is also used to simulate an El-Niño event! The book contains 25 practical exercises, using freely available Open-Source software suites, which are widely used by the scientific community. In this book, the art of hydrodynamic modelling is made available and transparent to a wider readership. An attractive byproduct of the book is that results are animations rather than still images. Model codes and animation scripts for all exercises are supplied on a website. The reader can adopt model codes for own independent studies.

Features
This book introduces the reader to advanced methods used in the computer-based modelling of fluid processes. This includes nonhydrostatic processes such as breaking internal waves and density-driven convection, but the model code is also used to simulate an El-Niño event! The book contains 25 practical exercises, using freely available Open-Source software suites, which are widely used by the scientific [...] Fields of interest
Oceanography: Computer Application in Earth Sciences; Meteorology / Climatology; Math. Appli.

Target groups
Research

Type of publication
Monograph

Available
2010. XII, 176 p. 140 illus., 90 in color. With online files/update. Hardcover

99.95 €
ISBN 978-3-642-10609-5

Geological Methods in Mineral Exploration and Mining

This practical step-by-step guide describes the key geological field techniques needed by today’s exploration geologists involved in the search for metallic deposits. The techniques described are fundamental to the collection, storage and presentation of geological data and their use to locate ore. This book explains the various tasks which the exploration geologist is asked to perform in the sequence in which they might be employed in an actual exploration project. Hints and tips are give. The steps are illustrated with numerous examples drawn from real projects on which the author has worked. The book emphasises traditional skills and shows how they can be combined effectively with modern technological approaches.

Features
This practical step-by-step guide describes the key geological field techniques needed by today’s exploration geologists involved in the search for metallic deposits. The techniques described are fundamental to the collection, storage and presentation of geological data and their use to locate ore. This book explains the various tasks which the exploration geologist is asked to perform in the sequence in which [...] Contents

Fields of interest
Economic Geology; Mineral Resources; Geotechnical Engineering; Environmental Management

Target groups
Research

Type of publication
Monograph

Available
2010. XV, 238 p. Hardcover

99.95 €
This book describes microbially induced sedimentary structures as new group in the classification of Primary Sedimentary Structures. Those structures rise from the interaction of benthic microorganisms with physical sediment dynamics caused by waves and currents. We can observe the formation of those features today in modern coastal settings, where the structures are much more common than stromatolites. However, fossil structures occur since the earliest Archean, and are abundant throughout Earth history. The structures constitute a significant archive for the understanding of Earth’s earliest worlds, and are important biosignatures for the detection of life on other planets. This book is for sedimentologists, palaeontologists, microbiologists, and geobiologists likewise.

**Features**

This book describes microbially induced sedimentary structures as new group in the Classification of Primary Sedimentary Structures. Those structures rise from the interaction of benthic microorganisms with physical sediment dynamics caused by waves and currents. We can observe the formation of those features today in modern coastal settings, where the structures are much more common than stromatolites. [...] 

**Contents**

Introduction. - Cyanobacteria: Taxonomic groups, physiology, photosynthesis, significance for Earth history. - Biofilms and Microbial Mats. - Microbial Interactions with Physical Sediment Dynamics in Modern Tidal Settings. - Microbially Induced sedimentary Structures. - Distribution of Microbially Induced Sedimentary Structures in the Fossil Record. - Field Trip Sites: Modern and Ancient. - Significance of Structures as Biosignatures for the Detection of Life on other Planets.

**Fields of interest**

Sedimentology; Astrobiology; Microbiology; Biogeosciences

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2010. XI, 194 p. Hardcover

99.95 €

ISBN 978-3-642-12771-7

---

T. Rashed, Geospatial Applied Research Expert House (GSAREH), Austin, TX, USA; C. Jürgens, Ruhr-University Bochum, Germany (Eds.)

**Remote Sensing of Urban and Suburban Areas**

"Remote Sensing of Urban and Suburban Areas" provides instructors with a text reference that has a logical and easy-to-follow flow of topics around which they can structure the syllabi of their urban remote sensing courses. Topics have been chosen to bridge the gap between remote sensing and urban studies through a better understanding of the science that underlies both fields. In so doing, the book includes 17 chapters written by leading international experts in respected fields to provide a balanced coverage of fundamental issues in both remote sensing and urban studies. Emphasis is placed on: theoretical and practical issues in contemporary urban studies and remote sensing; the spectral, spatial and temporal requirements of remotely sensed data in relation to various urban phenomena; methods and techniques for analyzing and integrating remotely sensed data and image processing with geographic information systems to address urban problems; and examples of applications in which applying remote...[...]

**Features**

"Remote Sensing of Urban and Suburban Areas" provides instructors with a text reference that has a logical and easy-to-follow flow of topics around which they can structure the syllabi of their urban remote sensing courses. Topics have been chosen to bridge the gap between remote sensing and urban studies through a better understanding of the science that underlies both fields. In so doing, the book includes [...]

**Contents**


**Fields of interest**

Remote Sensing / Photogrammetry; Landscape, Regional and Urban Planning; Geographical Information Systems / Cartography

**Target groups**

Research

**Type of publication**

Graduate/advanced undergraduate textbook

**Available**


69.95 €

ISBN 978-1-4020-4371-0

---

W.U. Reimold, Natural History Museum, Berlin, Germany; R.L. Gibson, University of Witwatersrand, Johannesburg, South Africa

**Meteorite Impact!**

The impact of large extraterrestrial bodies (asteroids and comets) with Earth is an ever-present danger that humanity has only recently begun to recognise. Of the 175 impact craters found thus far on Earth, three giants stand out – Chicxulub in Mexico, Sudbury in Canada, and the Vredefort Impact Structure in South Africa. Each of these impact events catastrophically altered the global environment and was strong enough to drastically change life on our planet. The Vredefort Structure is the oldest and largest of these three giants and at about 300 km diameter it is nearly twice the size of the Chicxulub crater that was formed by an impact that wiped out approximately 75% of all known life on Earth 65 million years ago. In the more than 2000 million years since its formation, water, wind and ice have slowly eroded away the original Vredefort crater, exposing its roots in a series of spectacular rocks. The outcrops in the region around the towns of Vredefort and Parys, known as the Vredefort Dome,[...]

**Features**

When geologists first wandered the spectacular ring of hills straddling the Vaal River north of Vredefort nearly 150 years ago, they immediately recognised that the unusually shattered and upthilted rocks bore witness to an exceptionally violent event in the distant past. However, it took more than a century of painstaking work before the accumulated evidence revealed the cause — the impact with Earth of a [...] 

**Contents**


**Fields of interest**

Planetology

**Target groups**

Research

**Type of publication**

Monograph

**Available**


69.95 €

ISBN 978-3-642-10463-3
Monitoring Induced Seismicity

Stress re-distribution as a result of exploitation of mineral, hydrocarbon, geothermal, and water resources cannot be eliminated. The effort must be directed to a better understanding of the underlying processes for the management of the hazard and risk associated with these operations. The study of induced seismicity has continually evolved over the past couple of decades, as underlined by both the number and complexity of applied studies required to satisfy the increased economic demands, assure the safety of the workforce and equipment, and protect the environment. A considerable effort has been put into the development of passive monitoring technology, specialized products and services being available for a wide range of applications. The recording of substantial high quality seismic data has stimulated the work on theoretical and practical aspects related to these applications, involving not only seismological knowledge, but also elements of rock mechanics, and an understanding of mining.[...]

Features
Stress re-distribution as a result of exploitation of mineral, hydrocarbon, geothermal, and water resources cannot be eliminated. The effort must be directed to a better understanding of the underlying processes for the management of the hazard and risk associated with these operations. The study of induced seismicity has continually evolved over the past couple of decades, as underlined by both the number [...]

Contents
Induced seismicity monitoring of an underground salt cavern prone to collapse. - Microseismic monitoring of a controlled collapse in solution mining field II at Oceane Mari, Romania. - Management of post-mining large-scale ground failures: blast swarms field experiment for calibration of permanent microseismic early-warning systems. - Coal mining induced seismicity in the Ruhr area, Germany. - Mining induced seismicity in the Saarland, Germany. - Omori’s law applied to mining induced seismicity and re-entry protocol development. - Statistical properties of mine tremor aftershocks. - Passive[...]

Fields of interest
Applied Earth Sciences; Mineral Resources

Type of publication
Research

The Caspian Sea Encyclopedia

The Caspian Sea is a unique natural feature, the world’s largest landlocked water body. Historically the Caspian was one of the key zones where the interests of great powers such as Russia, Britain and Persia clashed. And the reason was and still is the oil - the “black gold” of the Caspian and also the natural riches of the sea, its other gold – the sturgeons with their black caviar. With this encyclopedia attempt to relate the Caspian story via an objective approach to the past and present of the sea where even today many geopolitical, economic, social and environmental issues are focused. These issues are vital not only to the Caspian countries, but other countries of the world as well. The encyclopedia contains about 1500 articles and terms providing descriptions of geographical features, cities, ports, transport routes, main oil and gas fields, aqueous biological resources, international treaties, national and international programs, research institutions, historical and archeological[...]

Features
The Caspian Sea is a unique natural feature, the world’s largest landlocked water body. Historically the Caspian was one of the key zones where the interests of great powers such as Russia, Britain and Persia clashed. And the reason was and still is the oil - the “black gold” of the Caspian and also the natural riches of the sea, its other gold – the sturgeons with their black caviar. With this [...]

Fields of interest
Historical Geology; Physical Geography; Landscape, Regional and Urban Planning; Ecology; Geocoeology / Natural Processes; Ecotoxicology

Type of publication
Monograph

Available
2010. XII, 546 p. 144 illus., 72 in color. Hardcover

169,95 €
ISBN 978-3-642-13047-2

Advances in Enterprise Engineering IV

This book constitutes the proceedings of the 6th International Workshop on Cooperation and Interoperability, Architecture and Ontology (CIAO! 2010), held at the DESRIST 2010 conference in St. Gallen, Switzerland, on June 4, 2010. The 6 papers included in the book were carefully reviewed and selected from 13 submissions. The topics covered are Enterprise Ontology, Organizational Modeling, and System Development.

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

Type of publication
Proceedings

Available
2010. XVI, 93 p. (Lecture Notes in Business Information Processing, Vol. 49) Softcover

46,00 €
ISBN 978-3-642-13047-2
Super-Flexibility for Knowledge Enterprises

A Toolkit for Dynamic Adaptation

Today, we live in a dynamic and inter-connected world. A multitude of “revision triggers” make it necessary to anticipate, prepare for, and continuously adapt to new realities. The key to dynamic adaptation we argue, is to become “super-flexible”. Super-flexibility is defined as the ability to engage in a continuous balancing act: on the one hand, we need to withstand turbulence and create stable anchors, on the other hand, we have to transform and adapt to new realities. Our leadership “toolkit” should help us diagnose on the fly, and take rapid actions as new developments unfold. This book is about how business leaders can harness uncertainty and make their teams and enterprises “super-flexible”. Based on 25 years of field research, advisory work, and professional experience in Silicon Valley’s innovative ecosystem, the authors present a cross-functional, “general management” toolkit for strategizing, organizing, leading, and ultimately re-inventing knowledge enterprises for a dynamic world.

Features

Today, we live in a dynamic and inter-connected world. A multitude of “revision triggers” make it necessary to anticipate, prepare for, and continuously adapt to new realities. The key to dynamic adaptation we argue, is to become “super-flexible”. Super-flexibility is defined as the ability to engage in a continuous balancing act: on the one hand, we need to withstand turbulence and create stable anchors, on the other hand, we have to transform and adapt to new realities. Our leadership “toolkit” should help us diagnose on the fly, and take rapid actions as new developments unfold. This book is about how business leaders can harness uncertainty and make their teams and enterprises “super-flexible”. Based on 25 years of field research, advisory work, and professional experience in Silicon Valley’s innovative ecosystem, the authors present a cross-functional, “general management” toolkit for strategizing, organizing, leading, and ultimately re-inventing knowledge enterprises for a dynamic world.

Contents


Fields of interest

Management/Business for Professionals; Organization / Planning; Business Information Systems

Target groups

Professional/practitioner

Type of publication

Professional book

Available

2010. XX, 209 p. Hardcover

44,95 €

ISBN 978-3-642-02446-7
Cost-Minimizing Choice Behavior in Transportation Planning

A Theoretical Framework for Logit Models

This book stems from a desire to understand the underlying assumptions and structure of the choice probability models most often used in transportation planning. The book investigates how far a new way of defining cost minimizing behavior can take us. All commonly used choice probability distributions of the logit type – log linear probability functions – follow from cost minimizing behavior defined in the new way; some new nested models also appear. The new approach provides a deeper understanding of what is at work in the models. The new way of defining cost minimizing behavior is as follows: cost minimizing behavior pertains if the likelihood (probability) of any independent sample of observations is a decreasing function of the average cost of the sample. Extreme value distributed random variables are not used in the derivation of models. A measure of freedom of choice related to the Shannon measure of how much “choice” is involved is used to obtain a welfare measure which is equal to composite cost.

Features

This book stems from a desire to understand the underlying assumptions and structure of the choice probability models most often used in transportation planning. The book investigates how far a new way of defining cost minimizing behavior can take us. All commonly used choice probability distributions of the logit type – log linear probability functions – follow from cost minimizing behavior defined in the new way. The book presents ten new case studies. Written by practitioners for practitioners and students and filled with simple tools for putting corporate storytelling into practice, it provides knowledge and inspiration for using storytelling as a strategic tool for releasing your company’s potential.

Features

As a business concept “storytelling” has had a significant impact on how companies can build strong corporate cultures and credible brands. Yet many corporations are still confused as to how exactly storytelling can make a difference: Why should we tell stories at all? What makes a good story? And how do we tell it in a way that advances our company both culturally and fiscally while strengthening our brand? The second edition of this successful book presents ten new case studies. Written by practitioners for practitioners and students and filled with simple tools for putting corporate storytelling into practice, it provides knowledge and inspiration for using storytelling as a strategic tool for releasing your company’s potential.

Contents


Fields of interest

Regional Science; Econometrics; Operations Research; Mathematical Programming

Target groups

Research

Type of publication

Monograph

Available

2010. XII, 160 p. (Advances in Spatial Science) Hardcover

89,95 €
ISBN 978-3-642-11910-1

Storytelling

Branding in Practice

As a business concept “storytelling” has had a significant impact on how companies can build strong corporate cultures and credible brands. Yet many corporations are still confused as to how exactly storytelling can make a difference: Why should we tell stories at all? What makes a good story? And how do we tell it in a way that advances our company both culturally and fiscally while strengthening our brand? The second edition of this successful book presents ten new case studies. Written by practitioners for practitioners and students and filled with simple tools for putting corporate storytelling into practice, it provides knowledge and inspiration for using storytelling as a strategic tool for releasing your company’s potential.

Features

As a business concept “storytelling” has had a significant impact on how companies can build strong corporate cultures and credible brands. Yet many corporations are still confused as to how exactly storytelling can make a difference: Why should we tell stories at all? What makes a good story? And how do we tell it in a way that advances our company both culturally and fiscally while strengthening our brand? The second edition of this successful book presents ten new case studies. Written by practitioners for practitioners and students and filled with simple tools for putting corporate storytelling into practice, it provides knowledge and inspiration for using storytelling as a strategic tool for releasing your company’s potential.

Contents


Fields of interest

Management/Business for Professionals; Marketing

Target groups

Professional/practitioner

Type of publication

Professional book

Available

2010. 254 p. 28 illus., 26 in color. Hardcover

44,95 €
ISBN 978-3-540-88348-7

Geschäftsprozessintegration mit SAP

Fallstudien zur Steuerung von Wertschöpfungsprozessen entlang der Supply Chain


Features


Contents


Fields of interest

Business Information Systems; Management/Business for Professionals; Information Storage and Retrieval

Target groups

Upper undergraduate

Type of publication

Monograph

Available

2010. CXXIV, 16 S. Hardcover

27,99 €
ISBN 978-3-642-12720-5
Price Regulation and Risk

The Impact of Regulation System Shifts on Risk Components

Natural monopolies are not subject to the market-based principle of competition. Consequently, it is necessary to control companies in such monopoly positions with regard to their pricing. In the future, it will become more and more important to consider a possible change in the regulation regime when the future-oriented costs of equity - both in terms of price regulation and for conducting capital market-oriented business valuations - are to be determined. Based on the principal-agent problem, the book explains this topic. The effect of a change in the regulation regime is presented in the form of two studies: an international secondary analysis of the effects on cost of equity based on event studies of the Anglo-Saxon area and a primary analysis based on the Austrian regulation policy for electricity and gas supply systems. The two studies arrive at similar results: The change from a rate-of-return regulation to incentive regulation systems leads to a significant increase in systematic risk.

Features
Natural monopolies are not subject to the market-based principle of competition. Consequently, it is necessary to control companies in such monopoly positions with regard to their pricing. In the future, it will become more and more important to consider a possible change in the regulation regime when the future-oriented costs of equity - both in terms of price regulation and for conducting capital [..]

Contents

Fields of interest
Public Finance & Economics; Accounting / Auditing; Economic Systems; Econometrics; Game Theory / Mathematical Methods

Target groups
Research

Type of publication
Monograph

Available
69.95 €
ISBN 978-3-642-12046-6

Ingredient Branding

Making the Invisible Visible

An Ingredient Brand is exactly what the name implies: an ingredient or component of a product that has its own brand identity. This is the first comprehensive book that explains how Ingredient Branding works and how brand managers can successfully improve the performance of component marketing. The authors have examined more than one hundred examples, analyzed four industries and developed nine detailed case studies to demonstrate the viability of this marketing innovation. The new concepts and principles can easily be applied by professionals. In the light of the success stories of Intel, GoreTex, Dolby, TetraPak, Shimano, and Telfon it can be expected that component suppliers will increasingly use Ingredient Branding strategies in the future.

Features
An Ingredient Brand is exactly what the name implies: an ingredient or component of a product that has its own brand identity. This is the first comprehensive book that explains how Ingredient Branding works and how brand managers can successfully improve the performance of component marketing. The authors have examined more than one hundred examples, analyzed four industries and developed nine detailed [..]

Contents

Fields of interest
Marketing; Management/Business for Professionals

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XX, 393 p. Hardcover
44.95 €
ISBN 978-3-642-04213-3

Universities and Climate Change

Introducing Climate Change to University Programmes

Climate change is a matter of global concern and specific sectors of society such as universities need to engage and be active in the search for regional and local solutions for what is a global problem. Despite the fact that many universities all around the world are undertaking remarkable efforts in tackling the challenges posed by climate change, few of such works are widely documented and disseminated. The book 'Universities and Climate Change' addresses this gap. The book pursues three aims. Firstly, it presents a review of the approaches and methods to inform, communicate and educate university students and the public on climate change being used by universities around the world. Secondly, it introduces initiatives, projects and communication strategies undertaken by universities with a view to informing students and other stakeholders in order to raise awareness on matters related to climate change. Finally, the book documents, promotes and disseminates some of the on-going initiatives.

Features
Climate change is a matter of global concern and specific sectors of society such as universities need to engage and be active in the search for regional and local solutions for what is a global problem. Despite the fact that many universities all around the world are undertaking remarkable efforts in tackling the challenges posed by climate change, few of such works are widely documented and disseminated. [..]

Contents
Chapter 1 Climate Change at Universities: Results of a World Survey, Walter Leal Filho . - Chapter 2 Path to the Future for Climate Change Education: an University Project Approach, Maruf Sanni, James O. Adejouwon, Iwodwo Ologeh and William O. Syanbola. - Chapter 3 Australian Universities, Government Research and the Application of Climate Change Knowledge in Australian Coastal Zone Management, Laura Stocker, Bob Pokrant, David Wood, Nicholas Harvey, Marcus Haward, Kevin O’Toole, Tim Smith. - Chapter 4 Implications of the University with the Climatic Change, Javier Benayas, Imamaladej. [..]

Fields of interest
Environmental Economics; Climate Change; Environmental Management

Target groups
Research

Type of publication
Contributed volume

Available
99.95 €
ISBN 978-3-642-10750-4
Krisenmanagement in Projekten
Handeln, wenn Probleme eskalieren


Features

Fields of interest
Management/Business for Professionals; Industrial and Production Engineering

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XVIII, 278 S. Hardcover
37,34 €
ISBN 978-3-642-12399-3

Entropy, Water and Resources
An Essay in Natural Sciences-Consistent Economics

This book at the intersection of natural sciences, economics, and water engineering aims to reduce the gaps between economic theory, natural sciences, and engineering practice. Based on an extended thermodynamic approach, the authors explain which economic assumptions are acceptable for constructing a dynamic model that is consistent with the natural sciences. In particular, the special role of water in the production and reproduction activities will be considered as an integral component. Water is generated in a separate water treatment process and is used to transport the unavoidable by-products of production and reproduction activities to a wastewater sector. In this respect, not only environmental protection aspects, but also the interrelation between the water requirements and the use of non-renewable resources for producing desired consumption goods will be highlighted.

Features
This book at the intersection of natural sciences, economics, and water engineering aims to reduce the gaps between economic theory, natural sciences, and engineering practice. Based on an extended thermodynamic approach, the authors explain which economic assumptions are acceptable for constructing a dynamic model that is consistent with the natural sciences. In particular, the special role of water in the [-]

Contents

Fields of interest
Environmental Economics; Energy Economics; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution

Target groups
Research

Type of publication
Monograph

Available
2010. IX, 219 p. Hardcover
99,95 €
ISBN 978-3-7908-2415-5
Collective Decision Making
Views from Social Choice and Game Theory

Features
This book discusses collective decision making from the perspective of social choice and game theory. The chapters are written by well-known scholars in the field. The topics range from Arrow’s Theorem to the Condorcet and Ostrogorski Paradoxes, from vote distributions in the European Council to influence processes and information sharing in collective decision making networks; from cardinal utility to [...] Contents
Economic Theory; Public Finance & Economics

Target groups
Research

Type of publication
Monograph

Available
99.95 €
ISBN 978-3-642-02864-9

Project Knowledge Management
Systematic Learning with the Project Comparison Technique

This is the first English book on Project Comparison Technique, i.e. comparative project processes, project theory, project evaluation, and project benchmarking in all branches. It facilitates the first steps towards project comparisons for project management experts and scientists, details possible approaches and relates real-world experiences. While readers are assumed to have some knowledge of project management, the mathematical and statistical aspects are explained. For the first time in the history of project management we show that the efficiency of project realizations can be evaluated objectively and numerically in detail and as a whole, and how to do so. We lay out the first comprehensive, scientifically founded characteristics system for projects, formulate the first mathematical project model, demonstrate the usefulness of the characteristics system with authentic projects, and show how to handle the new tools and how to present them in tables and diagrams.

Features
This is the first English book on Project Comparison Technique, i.e. comparative project processes, project theory, project evaluation, and project benchmarking in all branches. It facilitates the first steps towards project comparisons for project management experts and scientists, details possible approaches and relates real-world experiences. While readers are assumed to have some knowledge of project [...] Contents
Management/Business for Professionals; Organization/Planning

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XV, 172 p. Hardcover
89.95 €
ISBN 978-3-540-92793-8

Handbook of Multicriteria Analysis

Multicriteria analysis is a rapidly growing aspect of operations research and management science, with numerous practical applications in a wide range of fields. This book presents all the recent advances in multicriteria analysis, including multicriteria optimization, goal programming, outranking methods, and disaggregation techniques. The latest developments on robustness analysis, preference elicitation, and decision making when faced with incomplete information, are also discussed, together with applications in business performance evaluation, finance, and marketing. Finally, the interactions of multicriteria analysis with other disciplines are also explored, including among others data mining, artificial intelligence, and evolutionary methods.

Features
Multicriteria analysis is a rapidly growing aspect of operations research and management science, with numerous practical applications in a wide range of fields. This book presents all the recent advances in multicriteria analysis, including multicriteria optimization, goal programming, outranking methods, and disaggregation techniques. The latest developments on robustness analysis, preference elicitation, [...] Contents
Operation Research / Decision Theory; Operations Research, Mathematical Programming; Computational Intelligence

Target groups
Research

Type of publication
Handbook

Available
139.95 €
ISBN 978-3-540-92827-0
The Integrated Architecture Framework Explained

Why, What, How

This book captures and communicates the wealth of architecture experience Capgemini has gathered as a member of The Open Group – a vendor- and technology-neutral consortium formed by major industry players – in developing, deploying, and using its "Integrated Architecture Framework" (IAF) since its origination in 1993. Today, many elements of IAF have been incorporated into the new version 9 of TOGAF, the related Open Group standard. The authors, all working on and with IAF for many years, here provide a full reference to IAF and a guide on how to apply it. In addition, they describe in detail the relations between IAF and the architecture standards TOGAF and Archimate and other development or process frameworks like ITIL, CMMI, and RUP. Their presentation is targeted at architects, project managers, and process analysts who have either considered or are already working with IAF – they will find many roadmaps, case studies, checklists, and tips and advice for their daily work.

Features
This book captures and communicates the wealth of architecture experience Capgemini has gathered as a member of The Open Group – a vendor- and technology-neutral consortium formed by major industry players – in developing, deploying, and using its "Integrated Architecture Framework" (IAF) since its origination in 1993. Today, many elements of IAF have been incorporated into the new version 9 of TOGAF, the [...].

Contents
1) IAF Background, Value, and Strategy - 2) IAF’s Architecture - 3) IAF’s Aspect Areas Explained - 4) IAF in Perspective with Other Frameworks and Methods - 5) Applying IAF and Using Its Outcomes - 6) Real Life Case Studies - 7) The Making of IAF

Fields of interest
Business Information Systems; Models and Principles; Information Systems Applications (incl.Internet); Computer Appl. in Administrative Data Processing

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XVIII, 200 p. Hardcover
39,95 €
ISBN 978-3-642-11517-2

Education

S. Billett, Griffith University, Nathan, Qld, Australia (Ed.)

Learning Through Practice
Models, Traditions, Orientations and Approaches

Practice-based learning—the kind of education that comes from experiencing real work in real situations—has always been a prerequisite to qualification in professions such as medicine. However, there is growing interest in how practice-based models of learning can assist the initial preparation for and further development of skills for a wider range of occupations. Rather than being seen as a tool of first-time training, it is now viewed as a potentially important aspect of professional development and lifelong learning. This book provides perspectives on practice-based learning from a range of disciplines and fields of work. The collection here draws on a wide spectrum of perspectives to illustrate as well as to critically appraise approaches to practice-based learning. The book’s two sections first explore the conceptual foundations of learning through practice, and then provide detailed examples of its implementation. Long-standing practice-based approaches to learning have been used in many [...].

Features
Practice-based learning—the kind of education that comes from experiencing real work in real situations—has always been a prerequisite to qualification in professions such as medicine. However, there is growing interest in how practice-based models of learning can assist the initial preparation for and further development of skills for a wider range of occupations. Rather than being seen as a tool of [...]
Learning Through Teaching Mathematics
Development of Teachers’ Knowledge and Expertise in Practice

This volume explores how and when teachers’ knowledge develops through teaching. The book presents international views on teachers’ learning from their practice; the chapters are written by mathematicians or mathematics educators from Brazil, Canada, Israel, Mexico, UK, and USA. They address diverse content – numerical literacy, geometry, algebra, and real analysis – and a variety of levels – elementary school, secondary school, undergraduate mathematics, and teacher education courses. The authors employ different methodological tools and different theoretical perspectives as they consider teaching in different learning environments: lecturing, small group work on problems and tasks, mathematical explorations with the support of technological software, or e-learning. Despite these differences, the authors exemplify and analyze teachers’ learning that occurred and address the question: “What kinds of knowledge are developed as a result of teaching mathematics and what are the factors that support or..[...]

Features
This volume explores how and when teachers’ knowledge develops through teaching. The book presents international views on teachers’ learning from their practice; the chapters are written by mathematicians or mathematics educators from Brazil, Canada, Israel, Mexico, UK, and USA. They address diverse content – numerical literacy, geometry, algebra, and real analysis – and a variety of levels – elementary school, secondary school, undergraduate mathematics, and teacher education courses. The authors employ different methodological tools and different theoretical perspectives as they consider teaching in different learning environments: lecturing, small group work on problems and tasks, mathematical explorations with the support of technological software, or e-learning. Despite these differences, the authors exemplify and analyze teachers’ learning that occurred and address the question: “What kinds of knowledge are developed as a result of teaching mathematics and what are the factors that support or...[...]

Fields of interest
Mathematics Education; Teaching and Teacher Education; Learning and Instruction; Educational Psychology

Target groups
Research

Type of publication
Contributed volume

Available


99,95 €

Gender and Sexual Diversity in Schools

Issues related to gender and sexual diversity in schools can generate a lot of controversy, with many educators and youth advocates under-prepared to address these topics in their school communities. This text offers an easy-to-read introduction to the subject, providing readers with definitions and research evidence, as well as the historical context for understanding the roots of bias in schools related to sex, gender, and sexuality. Additionally, the book offers tangible resources and advice on how to create more equitable learning environments. Topics such as working with same-sex parented families in elementary schools; integrating gender and sexual diversity topics into the curriculum; addressing homophobic bullying and sexual harassment; advising gay-straight alliances; and supporting a transgender or gender non-conforming student are addressed. The suggestions offered by this book are based on recent research evidence and legal decisions to help educators handle the various situations.[...]

Features
Issues related to gender and sexual diversity in schools can generate a lot of controversy, with many educators and youth advocates under-prepared to address these topics in their school communities. This text offers an easy-to-read introduction to the subject, providing readers with definitions and research evidence, as well as the historical context for understanding the roots of bias in schools related to sex, gender, and sexuality. Additionally, the book offers tangible resources and advice on how to create more equitable learning environments. Topics such as working with same-sex parented families in elementary schools; integrating gender and sexual diversity topics into the curriculum; addressing homophobic bullying and sexual harassment; advising gay-straight alliances; and supporting a transgender or gender non-conforming student are addressed. The suggestions offered by this book are based on recent research evidence and legal decisions to help educators handle the various situations.[...]

Fields of interest
Sociology of Education; Gender Studies; Teaching and Teacher Education; Sexual Behavior

Target groups
Research

Type of publication
Monograph

Available

2010. XI, 135 p. (Explorations of Educational Purpose, Vol. 10) Hardcover

99,95 €

Professional Learning as Relational Practice

Given the emphasis on transforming professional work through the adoption of enquiry-based and trans-disciplinary approaches to service development, there is an urgent need for those involved in professional education to develop a robust understanding of how changes in practice occur. A more inclusive approach to the analysis of the processes involved across the varied and interrelated contexts in which they occur is thus very timely. In this book, Jenny Reeves sets out to explore the gap between the experience of professional learning as an interactive, dynamic and socially contextualised process, and descriptions that are often individualistic, overly linear and largely context-free. She makes the claim that this disjunction is the outcome of modes of enquiry that concentrate on limited selections of the available data. Adopting a relational approach to describing practice-based professional development, including graphical means for exploring the spaces produced by the activity, provides a very[...]

Features
Given the emphasis on transforming professional work through the adoption of enquiry-based and trans-disciplinary approaches to service development, there is an urgent need for those involved in professional education to develop a robust understanding of how changes in practice occur. A more inclusive approach to the analysis of the processes involved across the varied and interrelated contexts in which they occur is thus very timely. In this book, Jenny Reeves sets out to explore the gap between the experience of professional learning as an interactive, dynamic and socially contextualised process, and descriptions that are often individualistic, overly linear and largely context-free. She makes the claim that this disjunction is the outcome of modes of enquiry that concentrate on limited selections of the available data. Adopting a relational approach to describing practice-based professional development, including graphical means for exploring the spaces produced by the activity, provides a very[...]

Contents

Fields of interest
Professional and Vocational Education; Administration, Organization and Leadership; Teaching and Teacher Education

Target groups
Research

Type of publication
Monograph

Available

2010. XI, 190 p. Hardcover

99,95 €
Wie Deutschland zum Leitanbieter für Elektromobilität werden kann

Statuts Quo - Herausforderungen - Offene Fragen


Features

Nach den Plänen der Bundesregierung sollen bis zum Jahr 2020 eine Million Elektrofahrzeuge auf Deutschlands Straßen fahren und die Bundesrepublik zu einem internationalen Leitmarkt werden lassen. Welche Hürden gilt es dabei zu nehmen, damit Deutschland nicht nur zu einem Leitmarkt, sondern auch zu einem internationalen Leitanbieter von marktfähiger Elektromobilität wird? Welcher Zeithorizont ist dabei [..]

Fields of interest

Automotive Engineering; Mathematical Modeling and Industrial Mathematics

Target groups

Professional/practitioner

Type of publication

Proceedings

Available

2010. 39 S. 40 Abb. in Farbe. (acatech BEZEICHPOSITION, Vol. 0) Softcover
13,97 €
ISBN 978-3-642-13828-7
Electronic Engineering and Computing Technology

Electronic Engineering and Computing Technology contains sixty-one revised and extended research articles written by prominent researchers participating in the conference. Topics covered include Control Engineering, Network Management, Wireless Networks, Biotechnology, Signal Processing, Computational Intelligence, Computational Statistics, Internet Computing, High Performance Computing, and industrial applications. Electronic Engineering and Computing Technology will offer the state of art of tremendous advances in electronic engineering and computing technology and also serve as an excellent reference work for researchers and graduate students working with/on electronic engineering and computing technology.

Features
A large international conference in Electronic Engineering and Computing Technology was just held in London, July 1-3, 2009, under the World Congress on Engineering (WCE 2009). The WCE 2009 is organized by the International Association of Engineers (IAENG), with congress details available at: http://www.iaeng.org/WCE2009. IAENG is a non-profit international association for the engineers and the computer [...]
Intelligent Information Access

The book aims to investigate current developments and new insights into methods, techniques and technologies for intelligent information access from a multidisciplinary perspective. It comprises six chapters authored by participants in the research event Intelligent Information Access, held in Cagliari (Italy) in December 2008.

Contents
Enhancing Conversational Access to Information through a Social Intelligent Agent. - Annotating and Identifying Emotions in Text. - Improving Ranking by Respecting the Multidimensionality and Uncertainty of User Preferences. - Data Mining on Folksonomies. - A uniform theoretic approach to opinion certainty of User Preferences. - Data Mining on Folksonomies. - A uniform theoretic approach to opinion certainty of User Preferences.

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

Target groups
Research

Type of publication
Monograph

Available
2010. 150 p. 1 illus. in color. (Studies in Computational Intelligence, Vol. 301) Hardcover
99,95 €
ISBN 978-3-642-13999-4

Direct and Large-Eddy Simulation VII
Proceedings of the Seventh International ERCOFTAC Workshop on Direct and Large-Eddy Simulation, held at the University of Trieste, September 8-10, 2008

After Surrey in 1994, Grenoble in 1996, Cambridge in 1999, Enschede in 2001, Munich in 2003 and Poitiers in 2005, the 7th Workshop, DLES7, will be held in Trieste, again under the auspices of ERCOFTAC. Following the spirit of the series, the goal of this latest workshop is to establish a state-of-the-art of DNS and LES techniques for the computation and modeling of transitional/turbulent flows covering a broad scope of topics such as aerodynamics, acoustics, combustion, multiphase flows, environment, geophysics and bio-medical applications. This gathering of specialists in the field should once again be a unique opportunity for discussions about the more recent advances in the prediction, understanding and control of turbulent flows in academic or industrial situations.

Features
The seventh ERCOFTAC Workshop on 'Direct and Large-Eddy Simulation' (DLES-7) was held at the University of Trieste from September 8-10, 2008. Following the tradition of previous workshops in the DLES-series this edition reflects the state of the art of numerical simulation of traditional and turbulent flows and provided an active forum for discussion of recent developments in simulation techniques and applications.

Fields of interest
Computational Fluid Dynamics; Computational Fluid Dynamics

Target groups
Research

Type of publication
Proceedings

Available
249,00 €

Artificial Intelligence Techniques for Networked Manufacturing Enterprises Management

Artificial Intelligence Techniques for Networked Manufacturing Enterprises Management addresses prominent concepts and applications of AI technologies in the management of networked manufacturing enterprises. The aim of this book is to align latest practices, innovation and case studies with academic frameworks and theories, where AI techniques are used efficiently for networked manufacturing enterprises. More specifically, it includes the latest research results and projects at different levels addressing quick-response system, theoretical performance analysis, performance and capability demonstration. The role of emerging AI technologies in the modelling, evaluation and optimisation of networked enterprises’ activities at different decision levels is also covered. Artificial Intelligence Techniques for Networked Manufacturing Enterprises Management is a valuable guide for postgraduates and researchers in industrial engineering, computer science, automation and operations research.

Features
Enterprise networks offer a wide range of new business opportunities, especially for small and medium-sized enterprises that are usually more flexible than larger companies. In order to be successful, however, performances and expected benefits have to be carefully evaluated and balanced: enterprises must ensure they become a member of the right network for the right task and must find an efficient, [...]
Natural Computing in Computational Finance

Volume 3

This book consists of eleven chapters each of which was selected following a rigorous, peer-reviewed, selection process. The chapters illustrate the application of a range of cutting-edge natural computing and agent-based methodologies in computational finance and economics. While describing cutting edge applications, the chapters are written so that they are accessible to a wide audience. Hence, they should be of interest to academics, students and practitioners in the fields of computational finance and economics. The inspiration for this book was due in part to the success of EvoFIN 2009, the 3rd European Workshop on Evolutionary Computation in Finance and Economics. This book follows on from Natural Computing in Computational Finance Volumes I and II.

Features

This book consists of eleven chapters each of which was selected following a rigorous, peer-reviewed, selection process. The chapters illustrate the application of a range of cutting-edge natural computing and agent-based methodologies in computational finance and economics. While describing cutting edge applications, the chapters are written so that they are accessible to a wide audience. Hence, they should be [...]
Algae Energy
Algae as a New Source of Biodiesel

Algae Energy covers the production of algae culture and the usage of algal biomass conversion products. It also reviews modern biomass-based transportation fuels, including biodiesel, bio-oil, biomethane and biohydrogen. Each chapter opens with fundamental explanations suitable for those with a general interest in algae energy and goes on to provide in-depth scientific details for more expert readers. Algae energy is discussed within the wider context of green energy, with chapters covering topics such as: green energy facilities, algae technology, energy from algae and biodiesel from algae. Algae Energy addresses the needs of energy researchers, chemical engineers, fuel and environmental engineers, postgraduate and advanced undergraduate students, and others interested in a practical tool for pursuing their interest in bio-energy.

Features
• Climate change, environmental impact and declining natural resources are driving scientific research and novel technical solutions. Green Energy and Technology serves as a publishing platform for scientific and technological approaches to “green” - i.e., environmentally friendly and sustainable - technologies. While the main focus lies on energy and power supply, the series also covers green [...] 

Contents
• Energy from Algae
• Biodiesel from Algae
• Biorefinery
• Future Developments

Fields of interest
• Renewable and Green Energy
• Biochemical Engineering
• Environmental Engineering
• Biotechnology

Target groups
• Research

Type of publication
• Monograph

Available
2010. XIX, 218 p. 29 illus. (Green Energy and Technology) Hardcover

169,95 €
ISBN 978-1-84996-049-6

3-Dimensional VLSI
A 2.5-Dimensional Integration Scheme

“3-Dimensional VLSI: A 2.5-Dimensional Integration Scheme” elaborates the concept and importance of 3-Dimensional (3-D) VLSI. The authors have developed a new 3-D IC integration paradigm, called 2.5-D integration, to address many problems that are hard to resolve using traditional non-monolithic integration schemes. The book also introduces major 3-D VLSI design issues that need to be solved by IC designers and Electronic Design Automation (EDA) developers. By treating 3-D integration in an integrated framework, the book provides important insights for semiconductor process engineers, IC designers, and those working in EDA R&D. Dr. Yangdong Deng is an associate professor at the Institute of Microelectronics, Tsinghua University, China. Dr. Wojciech P. Maly is the U. A. and Helen Whitaker Professor at the Department of Electrical and Computer Engineering, Carnegie Mellon University, USA.

Features
• “3-Dimensional VLSI: A 2.5-Dimensional Integration Scheme” elaborates the concept and importance of 3-Dimensional (3-D) VLSI. The authors have developed a new 3-D IC integration paradigm, called 2.5-D integration, to address many problems that are hard to resolve using traditional non-monolithic integration schemes. The book also introduces major 3-D VLSI design issues that need to be solved by IC [...] 

Contents
• Background of 2.5-D VLSI Integration
• Cost Modeling of VLSI Integration Strategies
• Custom Design Case Studies of 2.5-D Integration
• ASIC Design Case Studies with 2.5-D Layout Design Automation Tools

Fields of interest
• Circuits and Systems

Target groups
• Research

Type of publication
• Monograph

Available
2010. Approx. 200 p. 50 illus. Hardcover

99,95 €
ISBN 978-3-642-04156-3

Supply Chain Engineering
Useful Methods and Techniques

Supply Chain Engineering considers how modern production and operations management techniques can respond to the pressures of the competitive global marketplace. It provides a comprehensive analysis of concepts and models related to outsourcing, dynamic pricing, inventory management, RFID, and flexible and re-configurable manufacturing systems, as well as real-time assignment and scheduling processes. A significant part is also devoted to lean manufacturing, line balancing, facility layout and warehousing techniques. Explanations are based on examples and detailed algorithms while discarding complex and unnecessary theoretical minutiae. All examples have been carefully selected from an industrial application angle. This book is written for students and professors in industrial and systems engineering, management science, operations management and business. It is also an informative reference for managers looking to improve the efficiency and effectiveness of their production systems.

Features
• Supply Chain Engineering considers how modern production and operations management techniques can respond to the pressures of the competitive global marketplace by integrating all activities in the supply chain, adding flexibility to the system, and drastically reducing production cost. Several POM challenges are answered through a comprehensive analysis of concepts and models that [...] 

Contents
• Introduction to Pricing
• Dynamic Pricing Models
• Outsourcing
• Inventory Management in Supply Chains
• Radio Frequency Identification (RFID): Technology and Applications
• X-Manufacturing Systems
• Design and Balancing of Packed Assembly Lines
• Advanced Line Balancing Approaches and Generalizations
• Dynamic Scheduling and Real-time Assignment
• Manufacturing Layout

Fields of interest
• Engineering Economics
• Organization, Logistics, Marketing
• Operation Research / Decision Theory
• Facility Management

Target groups
• Research

Type of publication
• Monograph

Available
2010. XX, 539 p. 149 illus. Hardcover

169,95 €
Fault Tolerant Flight Control

A Benchmark Challenge

The European Flight Mechanics Action Group FM-AG(16) on Fault Tolerant Control, established in 2004 and concluded in 2008, represented a collaboration involving thirteen European partners from industry, universities and research establishments under the auspices of the Group for Aeronautical Research and Technology in Europe (GARTEUR) program. The book consists of five parts. Part I contains the introduction and motivation of this research project and a state-of-the-art overview in Fault Tolerant Flight Control (FTC). Part II includes the description of the benchmark challenge, consisting of details of the benchmark simulation model and the assessment criteria used to evaluate the performance of the Fault Tolerant Controllers. Part III covers all the different FDI/FTC design methods which have been applied to the benchmark simulation model. There are two different evaluation methods for these FDI/FTC designs, namely an offline evaluation using the assessment criteria in the benchmark simulation [...] Features

The European Flight Mechanics Action Group FM-AG(16) on Fault Tolerant Control, established in 2004 and concluded in 2008, represented a collaboration involving thirteen European partners from industry, universities and research establishments under the auspices of the Group for Aeronautical Research and Technology in Europe (GARTEUR) program. The book consists of five parts. Part I contains the introduction [...] Contents


Control, Robotics, Mechatronics; Systems Theory, Control; Automotive Engineering

Target groups

Research

Type of publication

Monograph

Available

2010. 853 p. (Understanding Complex Systems, Preliminary entry 0) Hardcover

159,95 €
ISBN 978-3-642-13937-6

Advances in Grey Systems Research

This book contains contributions by some of the leading researchers in the area of grey systems theory and applications. All the papers included in this volume are selected from the contributions physically presented at the 2009 IEEE International Conference on Grey Systems and Intelligent Services, November 11 – 12, 2009, Nanjing, Jiangsu, People’s Republic of China. This event was jointly sponsored by IEEE Systems, Man, and Cybernetics Society, Natural Science Foundation of China, and Grey Systems Society of China. Additionally, Nanjing University of Aeronautics and Astronautics also invested heavily in this event with its direct and indirect financial and administrative support. Features

This book contains contributions by some of the leading researchers in the area of grey systems theory and applications. All the papers included in this volume are selected from the contributions physically presented at the 2009 IEEE International Conference on Grey Systems and Intelligent Services, November 11 – 12, 2009, Nanjing, Jiangsu, People’s Republic of China. This event was jointly sponsored by IEEE [...] Contents


Fields of interest

Complexity; Statistical Physics, Dynamical Systems and Complexity

Target groups

Research

Type of publication

Monograph

Available

2010. 831 p. (Understanding Complex Systems, Preliminary entry 0) Hardcover

159,95 €
ISBN 978-3-642-13937-6

Fertigungstechnik


Einführung. - Urformen. - Fügen. - Trennen (Zerteilen; Spanen; Abtragen; thermisches Schneiden). - Umformen. - Sachwortverzeichnis.

Fields of interest

Industrial and Production Engineering; Operating Procedures, Materials Treatment; Characterization and Evaluation of Materials; Manufacturing, Machines, Tools; Control; Robotics, Mechatronics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Available

2010. XVIII, 508 S. 815 Abb. (Springer-Lehrbuch) Hardcover

51,36 €
ISBN 978-3-642-12878-3
Precision Nanometrology
Sensors and Measuring Systems for Nanomanufacturing

Precision Nanometrology describes the new field of precision nanometrology, which plays an important part in nanoscale manufacturing of semiconductors, optical elements, precision parts and similar items. It pays particular attention to the measurement of surface forms of precision workpieces and to stage motions of precision machines. The first half of the book is dedicated to the description of optical sensors for the measurement of angle and displacement, which are fundamental quantities for precision nanometrology. The second half presents a number of scanning-type measuring systems for surface forms and stage motions. The systems discussed include:

- the measurement of micro-aspheric surfaces based on scanning probe microscopy, and scanning image-sensor systems. Precision Nanometrology presents the fundamental and practical technologies of precision nanometrology with a helpful selection of chapters.

Features
Precision Nanometrology describes the new field of precision nanometrology, which plays an important part in nanoscale manufacturing of semiconductors, optical elements, precision parts and similar items. It pays particular attention to the measurement of surface forms of precision workpieces and to stage motions of precision machines. The first half of the book is dedicated to the description of optical sensors for the measurement of angle and displacement, which are fundamental quantities for precision nanometrology. The second half presents a number of scanning-type measuring systems for surface forms and stage motions. The systems discussed include:

- the measurement of micro-aspheric surfaces based on scanning probe microscopy, and scanning image-sensor systems. Precision Nanometrology presents the fundamental and practical technologies of precision nanometrology with a helpful selection of chapters.

Contents
1. Angle Sensor for Measurement of Surface Slope and Tilt Motion
2. Laser Autocollimator for Measurement of Multi-axis Tilt Motion
3. Surface Encoder for Measurement of In-plane Motion
4. Grating Encoder for Measurement of In-plane and Out-of-plane Motion
5. Scanning Multi-probe System for Measurement of Roundness
7. Scanning Micro-stylus System for Measurement of Surface Forms
8. Large Area Scanning Probe Microscope for Micro-textured Surface
9. Automatic Alignment Scanning Probe Microscope System

Fields of Interest
Manufacturing, Machines, Tools; Measurement Science, Instrumentation; Nanotechnology; Control, Robotics, Mechatronics

Target Groups
Research

Type of Publication
Monograph

Available
2010. XV, 355 p. 337 illus. (Springer Series in Advanced Manufacturing) Hardcover
129.95 €

POWER/HV MOS Devices Compact Modeling

Semiconductor power electronics plays a dominant role due to its increased efficiency and high reliability in various fields, including the medium and high electrical drives, automotive and aircraft applications, electrical power conversion, etc. Power/HV MOS Devices Compact Modeling will cover very extensive range of topics related to the development and characterization of power devices and circuits.

Contents
CHAPTER 1: Numerical Power/HV Device Simulations
CHAPTER 2: HiSiM-HV: A scalable, surface-potential-based compact model for symmetric and asymmetric high-voltage MOSFETs
CHAPTER 3: MM20 HV MOS Model: A surface-potential based LDMOS model for circuit simulation
CHAPTER 4: Practical HV DMOS modeling using HVEKV
CHAPTER 5: Power Devices: Andrez Napieralski, Malgorzata Napieralska et al.
CHAPTER 6: Distributed modeling

Fields of Interest
Circuits and Systems; Simulation and Modeling; Optical and Electronic Materials; Microwaves, RF and Optical Engineering

Target Groups
Research

Field of Interest
Monograph

Available
2010. V, 300 p. Hardcover
99.95 €

Kreiselpumpen

Handbuch für Entwicklung, Anlagenplanung und Betrieb


Features

Contents

Fields of Interest
Energy Technology; Engineering Fluid Dynamics; Machinery and Machine Elements

Target Groups
Research

Field of Interest
Professional book

Available
2010. XXII, 984 S. 896 Abb., 448 in Farbe. Hardcover
232,71 €
ISBN 978-3-642-05478-5
IUTAM Symposium on Variational Concepts with Applications to the Mechanics of Materials

Proceedings of the IUTAM Symposium on Variational Concepts with Applications to the Mechanics of Materials, Bochum, Germany, September 22-26, 2008

Research in multi-agent systems offers a promising technology for problems with networks, online trading and negotiations but also social structures and communication. This is a book on agent and multi-agent technology for internet and enterprise systems. The book is a pioneer in the combination of the fields and is based on the concept of developing a platform to share ideas and presents research in technology in the field and application to real problems. The chapters range over both applications, illustrating the possible uses of agents in an enterprise domain, and design and analytic methods, needed to provide the solid foundation required for practical systems.

Features
Research in multi-agent systems offers a promising technology for problems with networks, online trading and negotiations but also social structures and communication. This is a book on agent and multi-agent technology for internet and enterprise systems. The book is a pioneer in the combination of the fields and is based on the concept of developing a platform to share ideas and presents research in [...]}

Fields of interest
- Continuum Mechanics and Mechanics of Materials
- Calculus of Variations and Optimal Control
- Optimization
- Mathematical Modeling and Industrial Mathematics
- Analysis
- Appl. Mathematics / Computational Methods of Engineering

Target groups
Research

Type of publication
Proceedings

Available

89,95 €

Agent and Multi-agent Technology for Internet and Enterprise Systems

In this book, a generic model in as far as possible mathematical closed-forms developed that predicts the behavior of large self-organizing robot groups (robot swarms) based on their control algorithm. In addition, an extensive subsumption of the relatively young and distinctive interdisciplinary research field of swarm robotics is emphasized. The connection to many related fields is highlighted and the concepts and methods borrowed from these fields are described shortly.

Features
In this book, a generic model in as far as possible mathematical closed-forms developed that predicts the behavior of large self-organizing robot groups (robot swarms) based on their control algorithm. In addition, an extensive subsumption of the relatively young and distinctive interdisciplinary research field of swarm robotics is emphasized. The connection to many related fields is highlighted and the [...]}

Fields of interest
- Robotics and Automation
- Artificial Intelligence (incl. Robotics)
- Complexity
- Computational Intelligence
- Cognitive Psychology

Target groups
Research

Type of publication
Monograph

Available

79,95 €
ISBN 978-3-642-13376-3

Space-Time Continuous Models of Swarm Robotic Systems

Supporting Global-to-Local Programming

In this book, a generic model in as far as possible mathematical closed-forms developed that predicts the behavior of large self-organizing robot groups (robot swarms) based on their control algorithm. In addition, an extensive subsumption of the relatively young and distinctive interdisciplinary research field of swarm robotics is emphasized. The connection to many related fields is highlighted and the [...]
Large-Scale PDE-Constrained Optimization in Applications

This book results from the authors work done on simulation based optimization problems at the Department of Mathematics, University of Trier, and reported in his postdoctoral thesis ("Habilitationsschrift") accepted by the Faculty-IV of this University in 2008. The focus of the work has been to develop mathematical methods and algorithms which lead to efficient and high performance computational aspects related to this challenge, and it explores problems in real-life applications. Systematic development of the methods and algorithms are presented here. Practical aspects of implementations are discussed at each level as the complexity of the problems increase, supporting with enough number of computational examples. It consists of two parts: first part deals with time dependent optimization problems with applications in environmental engineering and the second part deals with steady state optimization problems, in which the PDEs are solved using semi-iterative or pseudo-time-stepping techniques, with applications [...] Features This book results from the authors work done on simulation based optimization problems at the Department of Mathematics, University of Trier, and reported in his postdoctoral thesis ("Habilitationsschrift") accepted by the Faculty-IV of this University in 2008. The focus of the work has been to develop mathematical methods and algorithms which lead to efficient and high performance computational [...] Contents Partial Differential Equations in Mathematical Modeling of Fluid Flow Problems. - PDE-Constrained Optimization Methods. - Part I: Applications in Environmental Engineering. - Mathematical Model of Multiphase Flow Through Porous Media. - Parameter Identification Multiphase Flow Through Porous Media. - Part II: Applications in Aerodynamics. - Aerodynamic Shape Optimization Using Simultaneous Pseudo-Time-Stepping. - Indirect Treatment of State Constraints in Aerodynamic Shape Optimization Using Simultaneous [...] Fields of interest Engineering Fluid Dynamics; Fluid- and Aerodynamics; Computational Science and Engineering; Numerical and Computational Physics Target groups Research Type of publication Monograph Available 2010. XXII, 202 p. 63 illus. in color. (Lecture Notes in Applied and Computational Mechanics, Vol. 49) Hardcover 99,95 € ISBN 978-3-642-01501-4 Modelling and Management of Engineering Processes

Coupled Data Communication Techniques for High-Performance and Low-Power Computing

This book provides an overview of the circuits, architectures, and chip packaging for coupled data techniques. It discusses the current research in chip-to-board capacitive coupling, chip-to-chip capacitive coupling, chip-to-chip inductive coupling, and chip-to-chip optical coupling. Circuits, modeling, and their implications for packaging are explored in depth. Mechanical methods to ensure accurate and sustained chip alignment are discussed, as well as electrical methods to compensate for resulting misalignment. Finally, the book covers issues raised by design for manufacturing and test. This book is one of the first in a new and emerging area. Coupled data communication offers new ways of looking at the old problem of limited off-chip I/O; it trades off packaging complexity for I/O performance; it offers a set of enabling technologies for 3D or stacked-chip architectures; and it raises the possibility of replaceable chips—and thus high yield—in an MCM.

Features
Designers of next-generation high-performance computer systems face a host of technical challenges. For the past several decades, rising clock frequencies and increased chip integration have fueled the growth of computer performance. Now these trends have slowed: power and complexity constrain further increases in clock frequencies, and economic realities limit the pace of Moore’s Law. Coupled data techniques for high-performance and low-power computing offer new ways of looking at the old problem of limited off-chip I/O: they trade off packaging complexity for I/O performance; they offer a set of enabling technologies for 3D or stacked-chip architectures; and they raise the possibility of replaceable chips—and thus high yield—in an MCM.

Contents

Fields of interest
Circuits and Systems; Electronics and Microelectronics; Instrumentation; Electrical Engineering; Computer Hardware.

Target groups
Research.

Type of publication
Contributed volume.

Available
99.95 €

Modelling with Transparent Soils
Visualizing Soil Structure Interaction and Multi Phase Flow, Non-Intrusively

The fundamental premise of this monograph is that transparent synthetic materials with geotechnical properties similar to those of natural soils can be used to study 3D deformation and flow problems in natural soils. Transparent soils can be made by matching the refractive index of synthetic soil materials and the pore fluid. This monographs presents the geotechnical behaviour of several families of transparent soils that can be combined to meet model-test requirements, in terms of strength, deformation, or permeability. “Modelling with Transparent Soils” demonstrates how an optical system consisting of a laser light, a CCD camera, a frame grabber, and a PC can be used to measure spatial deformations in transparent soil models non-intrusively. Transparent soil models are sliced optically using a laser light sheet. A distinctive speckle pattern is generated by the interaction of the laser light and transparent soil. A 2D deformation field is obtained from two speckle images by using an image-[…]

Features
The fundamental premise of this monograph is that transparent synthetic materials with geotechnical properties similar to those of natural soils can be used to study 3D deformation and flow problems in natural soils. Transparent soils can be made by matching the refractive index of synthetic soil materials and the pore fluid. This monographs presents the geotechnical behaviour of several families of transparent soils.[…]

Contents

Fields of interest
Continuum Mechanics and Mechanics of Materials; Geoengineering; Foundations; Hydraulics; Geotechnical Engineering; Vibration, Dynamical Systems, Control; Classical Continuum Physics.

Target groups
Research.

Type of publication
Monograph.

Available
99.95 €
ISBN 978-3-642-02500-6
Advances in Robot Kinematics: Motion in Man and Machine

The book provides about 50 contributions in the area of robot kinematics, the basic research subfield of robotics. The main impetus is on the recent advances in the field. This latest volume of Advances in Robot Kinematics reports the newest scientific and applicative results. All contributions have been peer reviewed. The contributors are the most recognised scientists in this area. Topics treated include: Methods in Kinematics, Properties of Mechanisms, Humanoids and Biomedical Applications, Workspace and Isotropy, Analysis of Mechanisms, Design of Mechanisms, Motion Synthesis and Mobility.

Features
This book is a collection of 58 peer reviewed papers, which should be of interest to researchers inquiring about modern topics and methods in the kinematics, control and design of robotic manipulators. The papers consider the full range of robotic systems, including serial, parallel and cable driven manipulators, both planar and spatial. The systems range from being less than fully mobile to kinematically.

Contents
Singularity analysis of parallel manipulators; design of robots and mechanisms; motion planning and mobility; performance and properties of mechanisms; measure and calibration; kinematic analysis and workspace.

Fields of interest
Robotics and Automation; Theoretical and Applied Mechanics; Industrial and Production Engineering; Control, Robotics, Mechatronics; Engineering Design

Target groups
Research

Type of publication
Proceedings

Available
2010. 300 p. Hardcover

139.95 €

Symbiotic Multi-Robot Organisms
Reliability, Adaptability, Evolution

This book is devoted to the study of the evolution of self-organised multicellular structures and the remarkable transition from unicellular to multicellular life. Multicellular organisms provide the inspiration for the development of novel principles of adaptation and evolution for robotics and, in particular, for so-called multi-robot organisms. Multi-robot organisms are defined as large-scale swarms of robots that can physically dock with each other and symbiotically share energy and computational resources within a single “artificial-life-form”. When it is advantageous to do so, these robots can dynamically aggregate and self-assemble into one or many symbiotic organisms in order to collectively interact with the physical world via a variety of sensors and actuators. Bio-inspired evolutionary paradigms, combined with robot embodiment and swarm-emergent phenomena, enable the organisms to autonomously manage their own hardware and software organisation. In this way, artificial robotic organisms.

Features
This book is devoted to the study of the evolution of self-organised multicellular structures and the remarkable transition from unicellular to multicellular life. Multicellular organisms provide the inspiration for the development of novel principles of adaptation and evolution for robotics and, in particular, for so-called multi-robot organisms. Multi-robot organisms are defined as large-scale swarms of robots that can physically dock with each other and symbiotically share energy and computational resources within a single “artificial-life-form”.

Contents

Fields of interest
Computational Intelligence; Control, Robotics, Mechatronics; Artificial Intelligence (incl. Robotics); Statistical Physics, Dynamical Systems and Complexity; Complexity

Target groups
Research

Type of publication
Monograph

Available

119.95 €
ISBN 978-3-642-11691-9

Dynamical Systems
Discontinuity, Stochasticity and Time-Delay

Dynamical Systems: Discontinuous, Stochasticity and Time-Delay provides an overview of the most recent developments in nonlinear dynamics, vibration and control. This book focuses on the most recent advances in all three areas, with particular emphasis on recent analytical, numerical and experimental research and its results. Real dynamical system problems, such as the behavior of suspension systems of railways, nonlinear vibration and applied control in coal manufacturing, along with the multifractal spectrum of LAN traffic, are discussed at length, giving the reader a sense of real-world instances where these theories are applied.

Features
Dynamical Systems: Discontinuous, Stochasticity and Time-Delay provides an overview of the most recent developments in nonlinear dynamics, vibration and control. This book focuses on the most recent advances in all three areas, with particular emphasis on recent analytical, numerical and experimental research and its results. Real dynamical system problems, such as the behavior of suspension.

Contents

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

Target groups
Research

Type of publication
Proceedings

Available
2010. X, 450 p. 280 illus., 100 in color. Hardcover

189.95 €
FEM updating allows FEMs to be tuned better to reflect measured data. It can be conducted using two different statistical frameworks: the maximum likelihood approach and Bayesian approaches. This book applies both strategies to the field of structural mechanics, using vibration data. Computational intelligence techniques including: multi-layer perceptron neural networks; particle swarm and GA-based optimization methods; simulated annealing; response surface methods; and expectation maximization algorithms, are proposed to facilitate the updating process. Based on these methods, the most appropriate updated FEM is selected, a problem that traditional FEM updating has not addressed. This is found to incorporate engineering judgment into finite elements through the formulations of prior distributions. Case studies, demonstrating the principles test the viability of the approaches, and, by critically analysing the state of the art in FEM updating, this book identifies new research directions.

**Features**

Finite element models (FEMs) are widely used to understand the dynamic behaviour of various systems. FEM updating allows FEMs to be tuned better to reflect measured data and may be conducted using two different statistical frameworks: the maximum likelihood approach and Bayesian approaches. Finite Element Model Updating Using Computational Intelligence Techniques applies both strategies to the field of [...]
Archimedes is held in high esteem by mathematicians, physicists and engineers as one of the most brilliant scientists of all time. These proceedings contain original, unpublished papers with the primary emphasis on the scientific work of Archimedes and his influence on the fields of mathematics, science, and engineering. There are also papers dealing with archaeological aspects and the myths and legends about Archimedes and the Archimedes Palimpsest. Papers on the following subjects form part of the book: Hydrostatics (buoyancy, fluid pressure and density, stability of floating bodies); Mechanics (levers, pulleys, centers of gravity, laws of equilibrium); Pycnometry (measurement of volume and density); Integral Calculus (Archimedes as the father of the integral calculus, method of exhaustion, approximation of π, determination of areas and volumes); Mathematical Physics (Archimedes as the father of mathematical physics, Law of the Lever, Law of Buoyancy, Axiaimization of Physics); History.

Features
Archimedes is held in high esteem by mathematicians, physicists and engineers as one of the most brilliant scientists of all time. These proceedings contain original, unpublished papers with the primary emphasis on the scientific work of Archimedes and his influence on the fields of mathematics, science, and engineering. There are also papers dealing with archaeological aspects and the myths and legends about Archimedes.

Fields of interest
Mechanical Engineering; History of Science; History; Anthropology; Cultural Heritage

Target groups
Research

Type of publication
Proceedings

Available
2010. 169,95 €

Proceedings of an International Conference held at Syracuse, Italy, June 8-10, 2010

The MEDICON conferences are international events of high scientific standards with long lasting tradition held every third year in one of the Mediterranean countries under the auspices of the International Federation for Medical and Biomedical Engineering. This "MEDICON 2010" conference proceedings present recent advances in practically every main topic of Biomedical Engineering. The volume provides communication and an exchange of ideas on Biomechanics, Bioinstrumentation, Medical Imaging, Medical Radiation Physics, Technology Assessment, Clinical Engineering, Rehabilitation Engineering, Medical Informatics, Biomaterials and Educational, Ethical and Professional Aspects.

Features
The MEDICON conferences are international events of high scientific standards with long lasting tradition held every third year in one of the Mediterranean countries under the auspices of the International Federation for Medical and Biomedical Engineering. This "MEDICON 2010" conference proceedings present recent advances in practically every main topic of Biomedical Engineering. The volume provides [...]
WiMAX Networks

Techno-Economic Vision and Challenges

Ignited by the mobile phone's huge success at the end of last century, the demand for wireless services is constantly growing. To face this demand, wireless systems have been and are deployed at a large scale. These include mobility-oriented technologies such as GPRS, CDMA or UMTS, and Local Area Network-oriented technologies such as WiFi. WiMAX Networks covers aspects of WiMAX quality of service (QoS), security, mobility, radio resource management, multiple input multiple output antenna, planning, cost/revenue optimization, physical layer, medium access control (MAC) layer, network layer, and so on.

Features

Ignited by mobile phone huge success at the end of last century, the demand for wireless services is constantly growing. To face this demand, wireless systems have been and are deployed at a large scale. These include mobility-oriented technologies such as GPRS, CDMA or UMTS, and Local Area Network-oriented technologies such as WiFi. The next step in wireless communications is broadband wireless access [...]
Pneumatic Conveying of Solids

A theoretical and practical approach

Pneumatic conveying is one of the most popular methods of handling bulk powdered and granular materials in mining, chemical, and agricultural industries. This 3rd edition of this successful book covers both theoretical and practical aspects of the subject. It is unique in its blending of academic materials and good industrial design techniques. Each topic is covered in depth, with emphasis placed on the latest techniques, hardware systems and design and research methodology. Its comprehensive worked examples and tables ensure that the reader need not consult any other reference material. In this 3rd edition new sections on simulation and modelling have been added, while the use of tomography as a tool for monitoring pneumatic conveying is also covered.

Features

Pneumatic conveying is one of the most popular methods of handling bulk powdered and granular materials in mining, chemical, and agricultural industries. This 3rd edition of this successful book covers both theoretical and practical aspects of the subject. It is unique in its blending of academic materials and good industrial design techniques. Each topic is covered in depth, with emphasis placed on the [...]
Mixed-Signal Embedded Microcontrollers are commonly used in integrating analog components needed to control non-digital electronic systems. They are used in automatically controlled devices and products, such as automotive engine control systems, wireless remote controllers, office machines, home appliances, power tools, and toys. Microcontrollers make it economical to digitally control even more devices and processes by reducing the size and cost, compared to a design that uses a separate microprocessor, memory, and input/output devices. In many undergraduate and postgraduate courses, teaching of mixed-signal microcontrollers and their use for project work has become compulsory. Students face a lot of difficulties when they have to interface a microcontroller with the electronics they deal with. This book addresses some issues of interfacing the microcontrollers and describes some project implementations with the Silicon Lab C8051F020 mixed–signal microcontroller. The intended readers are college[...]

Features
Mixed-Signal Embedded Microcontrollers are commonly used in integrating analog components needed to control non-digital electronic systems. They are used in automatically controlled devices and products, such as automotive engine control systems, wireless remote controllers, office machines, home appliances, power tools, and toys. Microcontrollers make it economical to digitally control even more devices and[...]

Contents

Fields of interest
Electronics and Microelectronics, Instrumentation; Control Structures and Microprogramming; Control, Robotics, Mechatronics; Circuits and Systems

Target groups
Research

Type of publication
Monograph

Available
2010. 250 p. 57 illus. in color. (Lecture Notes in Electrical Engineering, Vol. 63) Hardcover
99,95 €
ISBN 978-3-642-13635-1
Incremental Learning for Motion Prediction of Pedestrians and Vehicles

The monograph written by Alejandro Díaz Ans Vasquez Govea focuses on the practical problem of moving in a cluttered environment with pedestrians and vehicles. A framework based on Hidden Markov models is developed to learn typical motion patterns which can be used to predict motion on the basis of sensor data. All the theoretical results have been implemented and validated with experiments, using both real and simulated data. Remarkably, the monograph is based on the author’s doctoral thesis, which received the prize of the Eight Edition of the EURON Georges Giralt PhD Award devoted to the best PhD thesis in Robotics in Europe. A very fine addition to STAR!

Features
Modeling and predicting human and vehicle motion is an active research domain. Owing to the difficulty in modeling the various factors that determine motion (e.g. internal state, perception) this is often tackled by applying machine learning techniques to build a statistical model, using as input a collection of trajectories gathered through a sensor (e.g. camera, laser scanner), and then using that model [...]
Nanometer CMOS RFICs for Mobile TV Applications

Nanometer CMOS RFICs for Mobile TV Applications focuses on how to break the trade-off between power consumption and performance (linearity and noise figure) by optimizing the mobile TV front-end dynamic range in three hierarchical levels: the intrinsic MOSFET level, the circuit level, and the architectural level. It begins by discussing the fundamental concepts of MOSFET dynamic range, including non-linearity and noise. Then moves to the circuit level introducing the challenges associated with designing wide-dynamic range, variable-gain, broadband low-noise amplifiers (LNAs). The book gives a detailed analysis of a new noise-canceling technique that helps CMOS LNAs achieve a sub-2 dB wideband noise figure. Lastly, the book deals with the front-end dynamic range optimization process from the system perspective by introducing the active and passive automatic gain control (AGC) mechanism.

Features
The RF front-end is the most fundamental building block of any wireless system. Nanometer CMOS RFICs for Mobile TV Applications brings together what IC design engineers need to know for the development of low-cost, wide-dynamic range RF front-ends for today’s fastest growing communication markets. Drawing on their experience from both industry and academia, the authors use the emerging DV/H communication markets.

Contents
Preface. List of Symbols and Abbreviation. 1. Introduction and Overview. 1.1 Mobile TV Architectures. 1.2 DV/H Mobile TV System Definitions. 1.3 Scope of This Book. 2. Wideband CMOS LNA Design Techniques. 2.1 Dynamic Range Limits in MOSFETs. 2.2 Traditional CMOS LNA Topologies. 2.3 Recent Trends in Wideband CMOS LNAs. 2.4 Techniques to Improve the Wideband LNA Dynamic Range. 2.5 Chapter Summary. 3. Nanometer CMOS LNAs for Mobile TV Receivers. 3.1 Requirements of the LNA in Mobile TV Receivers. 3.2 A 65 nm CMOS Wideband LNA Prototype. 3.3 Experimental Results. 3.4 Chapter Summary...

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

Target groups
Research

Type of publication
Monograph

Available

99,95 €
Adaptive Capacity and Environmental Governance

Rapid environmental change calls for individuals and societies with the ability to transform our interactions with each other and the ecosystems upon which we depend. Adaptive capacity - the ability of a social-ecological system (or the components of that system) to be robust to disturbances and capable of responding to changes - is increasingly recognized as a critical attribute of multi-level environmental governance. This unique volume offers the first interdisciplinary and integrative perspective on an emerging area of applied scholarship, with contributions from internationally recognized researchers and practitioners. It demonstrates how adaptive capacity makes environmental governance possible in complex social-ecological systems. Cutting-edge theoretical developments are explored and empirical case studies offered from a wide range of geographic settings and natural resource contexts, such as water, climate, fisheries and forestry. • Of interest to researchers, policymakers and resource managers.

Contents

Integrating Perspectives on Adaptive Capacity and Environmental Governance. • Adaptive capacity in theory and reality: implications for governance in the Great Barrier Reef region. • Building adaptive capacity in systems beyond the threshold - the story of Macubeni, South Africa. • Learning and adaptation: the role of fisheries co-management in building resilient social-ecological systems. • Adaptive capacity and adaptation in Swedish multi-use boreal forests: sites of interaction between different land uses. • From the Inside Out: A Multi-Scale Analysis of Adaptive Capacity in a Northern[...]

Fields of interest

Environmental Management; Climate Change; Geocology / Natural Processes; Ecology; Landscape, Regional and Urban Planning; Human Geography

Target groups

Research

Type of publication

Contributed volume

Available


129.95 €

E. Bæhre, Norwegian Water Resources Energy Directorate (NVE), Oslo, Norway; G.S. Rajwar, Rishikesh PG College, Rishikesh, India; M. Haigh, Geography Unit, Oxford Brookes University, Oxford, UK; J. Koernt, Department of Hydrology, Czech Technical University, Prague, Czech Republic (Eds.)

Integrated Watershed Management

Perspectives and Problems

Headwaters are fragile environments threatened by anthropogenic actions. The regeneration of headwaters calls for a practical approach through integrated environmental management. This book discusses various issues concerning headwater regions of the world under wide-ranging themes: climate change impacts, vegetal cover, sub-surface hydrology, catchment and streamflow hydrology, pollution, water quality and limnology, remote sensing and GIS, environmental impact assessment and mitigation, socio-economic impacts, public participation, education and management, and integrated watershed management. This book aims to bring about an awareness in sustainable regeneration of headwater regions and particularly highlighting the problems of environmental management in highlands and headwaters. These regions consist of great reserves of natural resources which need to be explored and managed sustainably.

Contents


Fields of interest

Waste Water Technology / Water Management / Aquatic Pollution; Hydrogeology; Natural Hazards; Sustainable Development; Geography (general)

Target groups

Research

Type of publication

Monograph

Available

2010. X, 280 p. 48 illus. in color. Hardcover

99.95 €
Principles of Environmental Sciences

International experts provide a comprehensive picture of the principles, concepts and methods that are applicable to problems originating from the interaction between the living/non-living environment and mankind. Both the analysis of such problems and the way solutions to environmental problems may work in specific societal contexts are addressed. Disciplinary approaches are discussed but there is a focus on multi- and interdisciplinary methods. A large number of practical examples and case studies are presented. There is special emphasis on modelling and integrated assessment. This book is different because it stresses the societal, cultural and historical dimensions of environmental problems. The main objective is to improve the ability to analyse and conceptualise environmental problems in context and to make readers aware of the value and scope of different methods. Ideal as a course text for students, this book will also be of interest to researchers and consultants in the environmental sciences.

Features

Principles of Environmental Sciences provides a comprehensive picture of the principles, concepts and methods that are applicable to problems originating from the interaction between the living and non-living environment and mankind. Both the analysis of such problems and the way solutions to environmental problems may work in specific societal contexts are addressed. Disciplinary approaches are discussed but [...] 

Contents


Fields of interest

Environment (general); Environmental Management; Sustainable Development; Environmental Economics; Monitoring / Environmental Analysis; Historical Geology

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available

2010. XVIII, 542 p. Softcover
59,95 €

Beyond the Biophysical

Knowledge, Culture, and Power in Agriculture and Natural Resource Management

Beyond the Biophysical provides a broad overview of agriculture and natural resource management (NRM) scholarship and practice that lies beyond the biophysical, emphasizing instead epistemological, cultural, and political foundations of NRM. The volume is oriented toward professionals with expertise in agriculture and natural resource management scholarship and practice, but who lack exposure to the conceptual and methodological underpinnings of critical theory, the anthropology of development, ecological anthropology, and other relevant scholarship. It therefore follows common standards of academic rigour, but minimizes the use of jargon, integrates detailed case studies with conceptual syntheses, and attempts to move from critique to concrete recommendations for scholarship and practice. The volume seeks to foster a more nuanced and responsible engagement with local communities and the natural world among NRM scholars and practitioners.

Features

Beyond the Biophysical argues for an interdisciplinary perspective on agriculture, natural resource management (NRM), and international development practice that extends beyond a purely biophysical orientation. Biophysical interventions succeed or fail not simply on their own merits but within a context shaped by knowledge, culture, and power. The original case studies and conceptual syntheses [...] 

Contents


Fields of interest

Sustainable Development; Anthropology; Sociology; Human Geography; Agriculture; Forestry

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available

2010. XVIII, 301 p. Hardcover
99,95 €

Environmental Communication. Second Edition

Skills and Principles for Natural Resource Managers, Scientists, and Engineers.

Environmental professionals can no longer simply publish research in technical journals. Informing the public is now a critical part of the job. Environmental Communication demonstrates, step by step, how it’s done, and is an essential guide for communicating complex information to groups not familiar with scientific material. It addresses the entire communications process, from message planning, audience analysis and media relations to public speaking—an essential public dialogue. Environmental Communication provides all the knowledge and tools you need to reach your target audience in a persuasive and highly professional manner. “This book will certainly help produce the skills for environmental communications sorely needed for industry, government and non-profit groups as well as an informed public.”- Sol P. Baltimore, Director, Environmental Communications and Adjunct faculty, Hazardous Waste management program, Department of Chemical Engineering, College[...]

Features

Environmental professionals can no longer simply publish research in technical journals. Informing the public is now a critical part of the job. Environmental Communication demonstrates, step by step, how it’s done, and is an essential guide for communicating complex information to groups not familiar with scientific material. It addresses the entire communications process, from message planning, audience[...]

Contents


Fields of interest

Environmental Management; Environmental Health; Organization / Planning; Information Systems and Communication Service; Media Management

Target groups

Professional/practitioner

Type of publication

Monograph

Available

2010. 36 illus., 18 in color. Hardcover
49,95 €
There is no more fundamental resource than water. The basis of all life, water is fast becoming a key issue in today's world, as well as a source of conflict. This fascinating book, which sets out many of the ingenious methods by which ancient societies gathered, transported and stored water, is a timely publication as overextraction and pollution threaten the existence of aquifers and watercourses that have supplied our needs for millennia. It provides an overview of the water technologies developed by a number of ancient civilizations, from those of Mesopotamia and the Indus valley to later societies such as the Mycenaeans, Minoans, Persians, and the ancient Egyptians. Of course, no book on ancient water technologies would be complete without discussing the engineering feats of the Romans and Greeks, yet as well as covering these key civilizations, it also examines how ancient American societies from the Hohokams to the Mayans and Incas husbanded their water supplies. This unusually wide-ranging[...]

Features
There is no more fundamental resource than water. The basis of all life, water is fast becoming a key issue in today's world, as well as a source of conflict. This fascinating book, which sets out many of the ingenious methods by which ancient societies gathered, transported and stored water, is a timely publication as overextraction and pollution threaten the existence of aquifers and watercourses that [...]
Land Degradation and Desertification: Assessment, Mitigation and Remediation

The idea of this volume took shape within a group of scholars working on the history of science in Asia. Despite the great differences in time, locations and disciplines between our respective fields of research, we all faced similar situations: among the huge mass of written documents available to historians and that were eventually taken as sources in the historiography of science, some had been well studied while others had been dismissed or ignored. This observation will seem obvious to historians, whose daily work consists in shaping corpuses to raise new questions. The diagnosis has long been established that such selections related to the historians’ agenda and thereby reflected the ways in which historiography somehow belonged to its time. Yet, it appeared to us that this diagnosis was insufficient and that the selective consideration of source material was also at least partly related to mechanisms of selection that occurred upstream from the historian’s classical work of shaping a corpus.

Features
- The idea of this volume took shape within a group of scholars working on the history of science in Asia. Despite the great differences in time, locations and disciplines between our respective fields of research, we all faced similar situations: among the huge mass of written documents available to historians and that were eventually taken as sources in the historiography of science, some had been well studied while others had been dismissed or ignored. This observation will seem obvious to historians, whose daily work consists in shaping corpuses to raise new questions. The diagnosis has long been established that such selections related to the historians’ agenda and thereby reflected the ways in which historiography somehow belonged to its time. Yet, it appeared to us that this diagnosis was insufficient and that the selective consideration of source material was also at least partly related to mechanisms of selection that occurred upstream from the historian’s classical work of shaping a corpus.

Contents
- From the Table of Contents: Introduction - Background papers - Land degradation and mitigation in Africa: Algeria, Ethiopia, Kenya, Morocco, Nigeria, South Africa, Suda, Tunisia, Uganda - Land degradation and mitigation in Asia: China, India, Indonesia, Iran, Kazakhstan, Kuwait, LAO PDR, Lebanon, Malaysia, Thailand, Turkey, Yemen - Land degradation and mitigation in Europe: Albania, Austria, Czech Republic, Greece, Italy, Poland, Romania, Spain, United Kingdom - Land degradation and mitigation in the Americas: Argentina, Bolivia, Brazil, Canada, Mexico.

Fields of interest
- Nature Conservation; Soil Science & Conservation; Sustainable Development; Environment (general); Climate Change

Target groups
- Research

Type of publication
- Collected works

Available
- 2010. 490 p. Hardcover
- 129.95 €
Geography

Geographies of Science

This collection of essays aims to further the understanding of historical and contemporary geographies of science. It offers a fresh perspective on comparative approaches to scientific knowledge and practice as pursued by geographers, sociologists, anthropologists, and historians of science. The authors explore the formation and changing geographies of scientific centers from the sixteenth to the twentieth centuries and critically discuss the designing of knowledge spaces in early museums, in modern laboratories, at world fairs, and in the periphery of contemporary science. They also analyze the interactions between science and the public in Victorian Britain, interwar Germany, and recent environmental policy debates. The book provides a genuine geographical perspective on the production and dissemination of knowledge and will thus be an important point of reference for those interested in the spatial relations of science and associated fields. The Klaus Tschira Foundation supports diverse symposia.

Features

This collection of essays aims to further the understanding of historical and contemporary geographies of science. It offers a fresh perspective on comparative approaches to scientific knowledge and practice as pursued by geographers, sociologists, anthropologists, and historians of science. The authors explore the formation and changing geographies of scientific centers from the sixteenth to the twentieth centuries and critically discuss the designing of knowledge spaces in early museums, in modern laboratories, at world fairs, and in the periphery of contemporary science. They also analyze the interactions between science and the public in Victorian Britain, interwar Germany, and recent environmental policy debates. The book provides a genuine geographical perspective on the production and dissemination of knowledge and will thus be an important point of reference for those interested in the spatial relations of science and associated fields. The Klaus Tschira Foundation supports diverse symposia.

Features

This work systematically investigates and reconstructs the practical knowledge Galileo shared during his lifetime. Galileo shared many aspects of practical knowledge. These included the methods and experience of foremen and engineers active within various frameworks. Galileo did not always react to such scientific impulses in the same way. On the one hand, he not only shared practical knowledge, but also acted as an engineer, especially within the framework of the art of war at the end of the sixteenth century, and more so during the time he spent in Padua. On the other hand, his scientific achievements were largely based on and influenced by aspects of practical knowledge coming from particular disciplines and activities, without him ever becoming an expert in these disciplines. Two case studies, the first concerned with Galileo’s theory of the strength of materials and the second with his achievement of an atomistic heat doctrine, enable a focus on the early modern model of generation of new[...]

Features

This work systematically investigates and reconstructs the practical knowledge Galileo shared during his lifetime. Galileo shared many aspects of practical knowledge. These included the methods and experience of foremen and engineers active within various frameworks. Galileo did not always react to such scientific impulses in the same way. On the one hand, he not only shared practical knowledge, but also acted as an engineer, especially within the framework of the art of war at the end of the sixteenth century, and more so during the time he spent in Padua. On the other hand, his scientific achievements were largely based on and influenced by aspects of practical knowledge coming from particular disciplines and activities, without him ever becoming an expert in these disciplines. Two case studies, the first concerned with Galileo’s theory of the strength of materials and the second with his achievement of an atomistic heat doctrine, enable a focus on the early modern model of generation of new[...]

Contents


Fields of interest

Geography (general); History of Science; Sociology

Target groups

Research

Type of publication

Contributed volume

Available

2010. X, VII, 250 p. (Knowledge and Space, Vol. 3) Hardcover

99,95 €


Geospatial Analysis and Modelling of Urban Structure and Dynamics

The increasingly urbanized world has created various problems of environment, climate, consumption of resources, and public health, which are closely linked to the side-effects of urbanization such as sprawl, congestion, housing affordability and loss of open space. Fundamental to the urban problems are two separate yet related issues: urban structure and urban dynamics. The chapters collected in this book present an excellent profile of the current state of geospatial analysis and modelling, and demonstrate how these approaches can contribute to the study of various urban issues. The book addresses key themes including new ways of capturing data digitally at the individual level, the development of systems based around networks, the notion of linking hierarchy to networks to morphological as in complexity theory, and the development of new ways of integrating diverse urban processes through simulation paying careful attention to the basic econometric and statistical principles of spatial[...]

Features

The increasingly urbanized world has created various problems of environment, climate, consumption of resources, and public health, which are closely linked to the side-effects of urbanization such as sprawl, congestion, housing affordability and loss of open space. Fundamental to the urban problems are two separate yet related issues: urban structure and urban dynamics. The chapters collected in this book present an excellent profile of the current state of geospatial analysis and modelling, and demonstrate how these approaches can contribute to the study of various urban issues. The book addresses key themes including new ways of capturing data digitally at the individual level, the development of systems based around networks, the notion of linking hierarchy to networks to morphological as in complexity theory, and the development of new ways of integrating diverse urban processes through simulation paying careful attention to the basic econometric and statistical principles of spatial[...]

Contents


Fields of interest

Geographical Information Systems / Cartography; Cities, Countries, Regions; Human Geography; Urbanism; Landscape, Regional and Urban Planning

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available


139,95 €


Geography

B. Jiang, University of Gävle, Sweden; X. Yao, University of Georgia, Athens, GA, USA (Eds.)
Law

R. Abeyratne, Montreal, QC, Canada

Aviation Security Law

The law plays a significant role in ensuring aviation security. This book addresses new and emerging threats to civil aviation; evaluates security tools now in use such as the Public Key Directory, Advance Passenger Information, Passenger Name Record and Machine Readable travel documents in the context of their legal and regulatory background; and discusses applicable security treaties while providing an insight into the process of the security audits conducted by the International Civil Aviation Organization (ICAO). The conclusion of the book provides an insight into the application of legal principles through risk management.

Features

The law plays a significant role in ensuring aviation security. This book addresses new and emerging threats to civil aviation; evaluates security tools now in use such as the Public Key Directory, Advance Passenger Information, Passenger Name Record and Machine Readable travel documents in the context of their legal and regulatory background; and discusses applicable security treaties while providing an [...]

Contents

From the contents: A Security Culture.- Principles of Responsibility.- Initiatives of the Early 21st Century.- Narco-Terrorism.- The Unlawful Interference Conventions adopted at ICAO. The conclusion of the book provides an insight into the application of legal principles through risk management.

Aviation Security Law

J. Arnade, Köln

Kostendruck und Standard

Zu den Auswirkungen finanzieller Zwänge auf den Standard sozialversicherungsrechtlicher Leistungen und den haftungsrechtlichen Behandlungsstandard


Features


Contents

Strafbareitsrisiken des Arztes bei religiös motiviertem Behandlungsveto

Die Arbeit setzt sich mit den Strafbareitsrisiken des Arztes auseinander, der sich mit einem Patienten konfrontiert sieht, der infolge seines Glaubens bestimmte, mitunter gar sämtliche medizinische Maßnahmen ablehnt. Basierend auf der juristischen Untersuchung entwickelt die Autorin eine Leitlinie, die dem Arzt in dieser Konfliktsituation eine Entscheidungshilfe bietet. Dem Arzt wird aufgezeigt, dass er durch [...].

Features
Die Arbeit setzt sich mit den Strafbareitsrisiken des Arztes auseinander, der sich mit einem Patienten konfrontiert sieht, der infolge seines Glaubens bestimmte, mitunter gar sämtliche medizinische Maßnahmen ablehnt. Basierend auf der juristischen Untersuchung entwickelt die Autorin eine Leitlinie, die dem Arzt in dieser Konfliktsituation eine Entscheidungshilfe bietet. Dem Arzt wird aufgezeigt, dass er durch [...].

Contents

Fields of interest
Criminal Law; Medical Law

Target groups
Research

Type of publication
Monograph

Available

93,41 €
ISBN 978-3-642-13045-8

Kommentar zum UGB, Band 1
Unternehmensgesetzbuch mit Firmenbuchgesetz, CMR, AÖsp


Features
In dieser zweibändigen Neuauflage des bisherigen HGB-Kommentars erfolgt eine umfassende Darstellung des Unternehmensgesetzbuches (UGB), das durch das HaRÄG 2005 in Kraft getreten ist. Neben den wesentlichen Änderungen und Neuerungen (einhheitlicher Unternehmeneinlehn, Liberalisierung des Firmenrechts, Neuregelung des Unternehmensüberganges, etc) erfolgt eine grundlegende Bearbeitung des Firmenbuchgesetzes [...].

Contents

Fields of interest
Civil Law; Commercial Law

Target groups
Professional/practitioner

Type of publication
Reference work

Available
2010. XI, 3007 S. Hardcover

399,09 €
ISBN 978-3-211-88862-9

Rechtsfragen des Einsatzes der Telemedizin im Rettungsdienst
Eine Untersuchung am Beispiel des Forschungsprojektes Med-on-@ix

Die zunehmende Ressourcenknappheit im Gesundheitswesen bei raschem medizinischem, technischem und wissenschaftlichem Fortschritt erfordert ein ökonomisches Denken. Dabei darf die Qualität der Patientenversorgung nicht unter wirtschaftlichen Gesichtspunkten leiden, sie muss sich stets auf dem aktuellen Wissens- und Versorgungsstand begeben. Diesem Spannungsfeld unterliegt auch die Notfallmedizin, die sich längst von der Ersten Hilfe in eine spezifische, präklinische Intensivtherapie gewandelt hat. Um die Effizienz der gesamten Prozesskette der Rettungseinsätze zu optimieren, setzt die Notfallversorgung große Hoffnungen in den Einsatz moderner technologischer Entwicklungen. Von einer telematischen Vernetzung des präklinischen Bereichs verspricht sich die Notfallmedizin die Verbesserung der Versorgungsqualität bei gleichzeitiger Senkung der betrieblichen und volkswirtschaftlichen Kosten. Der vorliegende Band zeigt die rechtlichen Vorgaben und Anforderungen an die Implementierung eines[...].

Features
Die zunehmende Ressourcenknappheit im Gesundheitswesen bei raschem medizinischem, technischem und wissenschaftlichem Fortschritt erfordert ein ökonomisches Denken. Dabei darf die Qualität der Patientenversorgung nicht unter wirtschaftlichen Gesichtspunkten leiden, sie muss sich stets auf dem aktuellen Wissens- und Versorgungsstand begeben. Diesem Spannungsfeld unterliegt auch die Notfallmedizin, die sich [...]
Einführung in das koreanische Recht


Features

Contents

Fields of interest
International & Foreign Law

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XII, 266 S. Hardcover
46,68 €
ISBN 978-3-642-11603-2

K. Laubenthal, Universität Würzburg, N. Nestler, Universität Würzburg

Strafvollstreckung


Features
Gesundheit und Wirtschaftswachstum

Recht, Ökonomie und Ethik als Innovationsmotoren für die Medizin


Features

Fields of interest
Medical Law; Public Health; Social Policy

Target groups
Research

Type of publication
Proceedings

Available
2010. 200 S. (Gesundheit und Medizin im interdisziplinären Diskurs) Hardcover
74,72 €
ISBN 978-3-642-11584-4

Internet of Things

Legal Perspectives

The Internet of Things as an emerging global Internet-based information architecture facilitating the exchange of goods and services is gradually developing. While the technology of the Internet of Things is still being dis-cussed and created, the legal framework should be established before the Internet of Things is fully operable, in order to allow for an effective introduction of the new information architecture. The regulatory framework must provide for provisions ensuring the security of the structure as well as the privacy of its users. Furthermore, legal barriers that may stand in the way of the coming into operation of the Internet of Things are to be considered. The Internet of Things has positive effects in different fields, such as the inclusion of developing countries in global trade and the use of search engines to the benefit of civil society.

Features
The Internet of Things as an emerging global Internet-based information architecture facilitating the exchange of goods and services is gradually developing. While the technology of the Internet of Things is still being dis-cussed and created, the legal framework should be established before the Internet of Things is fully operable, in order to allow for an effective introduction of the new information architecture […]

Contents

Fields of interest
International & Foreign Law; European Law / Public International Law; Legal Aspects of Computing

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XXIV, 129 p. Hardcover
89,95 €
ISBN 978-3-642-11709-1

Plant Communication from an Ecological Perspective

This book shows the complexity of plant signaling and behavior in an ecological context and is intended to increase our understanding of it. It reflects the multifaceted interactions between plants and other organisms that affect their growth and development. In addition it puts emphasis on the effects of plant signaling and behavior on other trophic levels. This field of research is growing and developing rapidly, and new findings are regularly reported. Thus, this book provides a broader view of the field and represents a valuable reference work on the current state of research.

Features
This book shows the complexity of plant signaling and behavior in an ecological context and is intended to increase our understanding of it. It reflects the multifaceted interactions between plants and other organisms that affect their growth and development. In addition it puts emphasis on the effects of plant signaling and behavior on other trophic levels. This field of research is growing and developing […]

Contents

Fields of interest
Plant Sciences

Target groups
Research

Type of publication
Contributed volume

Available
2010. XII, 253 p. 16 Illus, 8 in color. (Signaling and Communication in Plants) Hardcover
139,95 €
ISBN 978-3-642-12161-6
Integrated Management of Arthropod Pests and Insect Borne Diseases

The fifth and last Volume of this IPMD series reviews, in a multi-disciplinary approach, recent achievements in crop protection and integrated management of arthropod pests. The volume is organized in a first Section covering IPM in citrus productions, a second dealing with advancements in the integration of management technologies and a last Section covering mites and their biological control agents. As for the previous volumes, we attempted to provide an informative coverage for a broad range of agricultural systems and situations. The chapters are mainly organized and centered on crops, with a particular emphasis on citrus. This is one of the main crops in which biological control and IPM approaches were tested successfully, and the experience gained herein may indeed result helpful for IMIP efforts deployed worldwide on other crops and/or cropping systems. Chapters in Section 2 review the integration of insect and disease management options in pecan crops, the application of remote sensing[...]

Contents
Preface.- Section 1: IPM in Citrus Groves. 1. Citrus Pest Management in the Northern Mediterranean Basin (Spain, Italy and Greece). 2. Main Arthropod Pests of Citrus Culture and Pest Management in Greece. 3. Biological Control in Citrus in Spain: from Classical to Conservation Biological Control. 4. Citrus Integrated Pest Management in Italy. 5. Entomopathogenic Nematode Ecology and Biological Control in Florida Citrus Orchards. Section II: Advanced IPM Technologies. 6. Integration of Insect and Mite Management with Disease and Weed Control in Pecan Production. 7. Locust Habitat Monitoring and[...]

Fields of interest
Plant Pathology; Entomology; Agriculture; Plant Sciences; Zoology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
149.95 €

Sustainable use of Genetic Diversity in Forage and Turf Breeding

This book is a collection of papers presented at the 2009 meeting of the Fodder Crops and Amenity grasses section of Eucarpia. It provides a unique source of information on the most recent results on genetic diversity and breeding in forage crops and turf species from Europe and overseas. It is organized in five sections. The first section is devoted to genetic resources which are the source of diversity for breeding but also a source of information for a better preservation of diversity through biogeography approaches. The second section focuses on changes which may occur in grassland and turf swards. These swards are plant communities which are likely to experience species and genetic changes. Population genetics provides keys to understand these changes in order to take them into account during breeding and sward management. The third section documents the genetic gains achieved during breeding while the fourth one gives a detailed presentation of the results and potential of molecular biology to[...]

Features
This book is a collection of papers presented at the 2009 meeting of the Fodder Crops and Amenity grasses section of Eucarpia. It provides a unique source of information on the most recent results on genetic diversity and breeding in forage crops and turf species from Europe and overseas. It is organised in five sections. The first section is devoted to genetic resources which are the source of diversity[...]

Contents
Preface.- Introduction: Section 1: Genetic resources.- Section 2: Genetic changes in grassland and turf communities.- Section 3: Genetic progresses to meet end-users’ expectations.- Section 4: Molecular biology and biotechnologies for an appropriate management and creation of genetic diversity.- Section 5: Type and structure of varieties to better exploit genetic diversity.

Fields of interest
Plant Breeding / Biotechnology; Plant Genetics and Genomics; Plant Sciences; Agriculture

Target groups
Research

Type of publication
Proceedings

Available
169.95 €

The Fish Production Potential of the Baltic Sea

A New General Approach for Optimizing Fish Quota Including a Holistic Management Plan Based on Ecosystem Modelling

It presents a new approach to set fish quota based on holistic ecosystem modeling (the CoastWeb-model) and also a plan to optimize a sustainable management of the Baltic Sea including a cost-benefit analysis. This plan accounts for the production of prey and predatory fish under different environmental conditions, professional fishing, recreational fishing and fish cage farm production plus an analysis of associated economic values. Several scenarios and remedial strategies for Baltic Sea management are discussed and an “optimal” strategy motivated and presented, which challenges the HELCOM strategy that was accepted by the Baltic States in November 2007. The strategy advocated in this book would create more than 7000 new jobs, the total value of the fish production would be about 1600 million euro per year plus 1000 million euro per year related to the willingness-to-pay to combat the present conditions in the Baltic Sea. Our strategy would cost about 370 million euro whereas the HELCOM strategy[...]

Features
It presents a new approach to set fish quota based on holistic ecosystem modeling (the CoastWeb-model) and also a plan to optimize a sustainable management of the Baltic Sea including a cost-benefit analysis. This plan accounts for the production of prey and predatory fish under different environmental conditions, professional fishing, recreational fishing and fish cage farm production plus an analysis of[...]

Contents
Introduction.- Background.- CoastWeb.- Modelling.- Scenarios.- Epilogue.- References.- Appendix

Fields of interest
Fish & Wildlife Biology & Management; Marine & Freshwater Sciences; Sustainable Development; Ecology

Target groups
Research

Type of publication
Monograph

Available
129.95 €
ISBN 978-3-642-11561-5
Genetic Engineering, Biofertilisation, Soil Quality and Organic Farming

Sustainable agriculture is a rapidly growing field aiming at producing food and energy in a sustainable way for humans and their children. Sustainable agriculture is a discipline that addresses current issues such as climate change, increasing food and fuel prices, poor-nation starvation, rich-nation obesity, water pollution, soil erosion, fertility loss, pest control, and biodiversity depletion. Novel, environmentally-friendly solutions are proposed based on integrated knowledge from sciences as diverse as agronomy, soil science, molecular biology, chemistry, toxicology, ecology, economy, and social sciences. Indeed, sustainable agriculture deciphers mechanisms of processes that occur from the molecular level to the farming system to the global level at time scales ranging from seconds to centuries. For that, scientists use the system approach that involves studying components and interactions of a whole system to address scientific, economic, and social issues. In that respect, sustainable.[…]

Features
Sustainable agriculture is a rapidly growing field aiming at producing food and energy in a sustainable way for humans and their children. Sustainable agriculture is a discipline that addresses current issues such as climate change, increasing food and fuel prices, poor-nation starvation, rich-nation obesity, water pollution, soil erosion, fertility loss, pest control, and biodiversity depletion. Novel, […]

Contents
1. Avidin and plant biotechnology to control pests; Rene Kizek. 2. Cover crops for sustainable agrosystems in the Americas; Johannes M.S. Scholberg. 3. Cover crops in agrosystems, innovations and applications; Johannes M.S. Scholberg. 4. Improving bioavailability of phosphate rock for organic farming; Anthony C. Edwards. 5. Mixed cropping and bioavailability of phosphate rock for organic farming; Anthony C. Edwards. 6. Decreasing nitrate leaching in vegetable suppressions of soilborne diseases; Gerbert A. Hidding; Anthony C. Edwards. 7. Manures spills and remediation methods to crops with better N management; Francesco Agosini. 8. Manures spills and remediation methods to crops with better N management; Francesco Agosini. 9. Avidin and plant biotechnology to control pests; Rene Kizek. 10. Decreasing nitrate leaching in vegetable suppressions of soilborne diseases; Gerbert A. Hidding; Anthony C. Edwards. 11. Avidin and plant biotechnology to control pests; Rene Kizek. 12. Decreasing nitrate leaching in vegetable suppressions of soilborne diseases; Gerbert A. Hidding; Anthony C. Edwards. 13. Avidin and plant biotechnology to control pests; Rene Kizek. 14. Decreasing nitrate leaching in vegetable suppressions of soilborne diseases; Gerbert A. Hidding; Anthony C. Edwards. 15. Avidin and plant biotechnology to control pests; Rene Kizek. 16. Decreasing nitrate leaching in vegetable suppressions of soilborne diseases; Gerbert A. Hidding; Anthony C. Edwards.

Fields of interest
Agriculture; Sustainable Development; Plant Sciences; Climate Change; Ecosystems; Soil Science & Conservation

Target groups
Research

Type of publication
Contributed volume

Available
2010. VI, 390 p. (Sustainable Agriculture Reviews, 4) Hardcover
149,95 €

Toxic Plant Proteins

Many plants produce enzymes collectively known as ribosome-inactivating proteins (RIPs). RIPs catalyze the removal of an adenine residue from a conserved loop in the large ribosomal RNA. The adenine residue removed by this depurination is crucial for the binding of elongation factors. Ribosomes modified in this way are no longer able to carry out protein synthesis. Most RIPs exist as single polypeptides (Type 1 RIPs) which are largely non-toxic to mammalian cells. Their ability to reach and modify ribosomes in target cells means these proteins are some of the most potently cytotoxic poisons found in nature, and are widely assumed to play a protective role as part of the host plant’s defenses. RIPs are able to further damage[…]

Features
Many plants produce enzymes collectively known as ribosome-inactivating proteins (RIPs). RIPs catalyze the removal of an adenine residue from a conserved loop in the large ribosomal RNA. The adenine residue removed by this depurination is crucial for the binding of elongation factors. Ribosomes modified in this way are no longer able to carry out protein synthesis. Most RIPs exist as single polypeptides (Type […]

Contents

Fields of interest
Plant Biochemistry; Cell Biology; Plant Physiology; Plant Sciences

Target groups
Research

Type of publication
Contributed volume

Available
139,95 €
ISBN 978-3-642-12175-3

Bild-DVD, Molekulare Virologie


Features

Fields of interest
Life Sciences (general); Virology; Microbiology; Veterinary Medicine; Medical Microbiology; Cell Biology

Target groups
Upper undergraduate

Type of publication
German textbook

Available
2010. 161 Abb. in Farbe. DVD.
21,01 €
ISBN 978-3-8274-2074-9
Clostridium difficile
Methods and Protocols

Clostridium difficile, a major nosocomial pathogen shown to be a primary cause of antibiotic-associated disease, has emerged as a highly transmissible and frequently antibiotic-resistant organism, causing a considerable burden on health care systems worldwide. In Clostridium difficile: Methods and Protocols, expert researchers bring together the most recently developed methods for studying the organism, including techniques involving isolation, molecular typing, genomics, genetic manipulation, and the use of animal models. Written in the highly successful Methods in Molecular Biology™ series format, chapters include brief introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and notes highlighting tips on troubleshooting and avoiding known pitfalls.

Authoritative and cutting-edge, Clostridium difficile: Methods and Protocols serves as an ideal guide for scientists now in a position to gain an in-depth understanding of this important pathogen.

Contents

Clostridium difficile: No Longer an Enigmatic Pathogen? - Clostridium difficile and the Disease It Causes. - Clostridium difficile Isolation and Culture Techniques. - Molecular Typing Methods for C. difficile: Pulsed-Field Gel Electrophoresis and PCR Ribotyping. - Clostridium difficile Toxinotyping. - Multilocus Sequence Typing for Clostridium difficile. - Molecular Methods to Study Transcriptional Regulation of Clostridium difficile Toxin Genes. - Dissecting the Cell Surface. - Human Intestinal Epithelial Response(s) to Clostridium difficile. - Comparative Genome Analysis of Clostridium[...]

Fields of interest
Microbiology; Pathology; Laboratory Medicine

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2010: 150 p. 45 illus. Hardcover
99,95 €
ISBN 978-1-4419-6243-0

On the Origins and Dynamics of Biodiversity: The Role of Chance

Chance is necessary for living systems – from the cell to organisms, populations, communities and ecosystems. It is at the heart of their evolution and diversity. Long considered contingent on other factors, chance both produces random events in the environment, and is the product of endogenous mechanisms - molecular as well as cellular, demographic and ecological. This is how living things have been able to diversify themselves and survive on the planet. Chance is not something to which Life has been subjected; it is quite simply necessary for Life.

The endogenous mechanisms that bring it about are at once the products and the engines of evolution, and they also produce biodiversity. These internal mechanisms – veritable "biological roulettes" - are analogous to the mechanical devices that bring about "physical chance". They can be modeled by analogous mathematical equations. This opens the way of a global modeling of biodiversity dynamics, but we need also to gather quantitative data in both the[...]

Features
What are the origins of chance? Although its existence has long been accepted as a fact, the theory of probability only allows us to examine the random events produced by chance without enabling us to determine what creates it – and this despite knowing that living systems (from the cell to organisms, populations, communities and ecosystems) need chance to survive. In this book on living systems, we identify [...]?

Contents

Fields of interest
Biodiversity; Philosophy of Biology; Theoretical Ecology / Statistics

Target groups
Research

Type of publication
Monograph

Available
2010: 150 p. 45 illus. Hardcover
99,95 €
ISBN 978-1-4419-6243-0

Microbial Mats
Modern and Ancient Microorganisms in Stratified Systems

This book provides information about microbial mats, from early fossils to modern mats located in marine and terrestrial environments. Microbial mats – layered biofilms containing different types of cells – are most complex systems in which representatives of various groups of organisms are found together. Among them are cyanobacteria and eukaryotic phototrophs, aerobic heterotrophic and chemotrophic bacteria, protozoa, anoxicogenic photosynthetic bacteria, and other types of microorganisms.

These mats are perfect models for biogeochemical processes, such as the cycles of chemical elements, in which a variety of microorganisms cooperate and interact in complex ways. They are often found under extreme conditions and their study contributes to our understanding of extremophilic life. Moreover, microbial mats are models for Precambrian stromatolites; the study of modern microbial mats may provide information on the processes that may have occurred on Earth when prokaryotic life began to spread.

Features
This book provides information about microbial mats, from early fossils to modern mats located in marine and terrestrial environments. Microbial mats – layered biofilms containing different types of cells – are most complex systems in which representatives of various groups of organisms are found together. Among them are cyanobacteria and eukaryotic phototrophs, aerobic heterotrophic and chemotrophic[...]

Contents

Fields of interest
Life Sciences (general); Microbial Ecology; Biogeosciences

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
149,95 €
Eriophyoid Mites: Progress and Prognoses

Fourteen informative papers dealing with their DNA, species interactions, adventiveness, host specificity, potential as bio-control agents of weeds, chemical control, behaviour, their role in fungal pathogen epidemiology, influence in forests and on orchards, cataloging and mounting techniques and their interaction with crops are presented here. This is an extensive and valuable contribution to eriophyoid science and a must for present and future researchers in this field.

Features

This collection of 14 papers comprises primary research articles and literature reviews, presenting a broad overview of the developments in about all possible aspects of members of the plant parasitic superfamily Eriophyidea. It deals with their DNA, species interactions, quarantine importance, host specificity, potential as biological control agents of weeds, chemical control, behaviour, their role in fungal...

Contents

The conference addressed the main topics of Polymer Science. Scientists from different areas were involved and the covered topics may excite a wide range of scientists from PhD students to research group leaders. People working in any of the research fields of Polymer Timescales, Polymer based Composites and Nano-composites, Polymer chemistry and physics. TOP is an evolving, dynamic conference that embraces cutting edge research topics and emerging scientists. It was thought having as a primary objective the meeting of a number of researchers working within the area of timescales of polymers, conceived as the background driving force for the progress of knowledge in many field of Polymer Science.

Features
The conference addressed the main topics of Polymer Science. Scientists from different areas were involved and the covered topics may excite a wide range of scientists from PhD students to research group leaders. People working in any of the research fields of Polymer Timescales, Polymer based Composites and Nano-composites, Polymer chemistry and physics. TOP is an evolving, dynamic conference that embraces cutting edge research topics and emerging scientists. It was thought having as a primary objective the meeting of a number of researchers working within the area of timescales of polymers, conceived as the background driving force for the progress of knowledge in many field of Polymer Science.

Fields of interest
Tribology, Corrosion and Coatings; Polymer Sciences; Nanoscale Science and Technology

Target groups
Research

Type of publication
Proceedings

Available
199,95 €

V International Conference on Times of Polymers (TOP) and Composites

The conference addressed the main topics of Polymer Science. Scientists from different areas were involved and the covered topics may excite a wide range of scientists from PhD students to research group leaders. People working in any of the research fields of Polymer Timescales, Polymer based Composites and Nano-composites, Polymer chemistry and physics. TOP is an evolving, dynamic conference that embraces cutting edge research topics and emerging scientists. It was thought having as a primary objective the meeting of a number of researchers working within the area of timescales of polymers, conceived as the background driving force for the progress of knowledge in many field of Polymer Science.

Features
The conference addressed the main topics of Polymer Science. Scientists from different areas were involved and the covered topics may excite a wide range of scientists from PhD students to research group leaders. People working in any of the research fields of Polymer Timescales, Polymer based Composites and Nano-composites, Polymer chemistry and physics. TOP is an evolving, dynamic conference that embraces cutting edge research topics and emerging scientists. It was thought having as a primary objective the meeting of a number of researchers working within the area of timescales of polymers, conceived as the background driving force for the progress of knowledge in many field of Polymer Science.

Fields of interest
Tribology, Corrosion and Coatings; Polymer Sciences; Nanoscale Science and Technology

Target groups
Research

Type of publication
Proceedings

Available
199,95 €

90 Materials Science

5. A. Paipetis, University of Patras, Greece

The Unknown Technology in Homer

This book has been well received in the original Greek version and is now available in English. It is a thorough review of recent research discoveries of scientific and technological knowledge contained in the Iliad and the Odyssey, suggesting elements of a very advanced, almost modern, civilization, in the Mycenaean era. Recommended for a wide audience.

Features
The astonishing accounts of almost modern technological achievements found in the Homeric Epics constitute one of the so-called Homeric Issues. The question is whether such achievements existed in reality or whether they were just poetic conceptions. Both views have their followers and adversaries. For example, robots, either in human form, as the golden girls serving Hephaestus, or in animal form, as the [...] contents.

Contents

Fields of interest
Materials Science (general); Structural Materials; History of Science

Target groups
Research

Type of publication
Monograph

Available
79,95 €

Biology, Nanotechnology, Toxicology and Applications

4th BioNanoTox (Biology, Nanotechnology, Toxicology) and Applications

BioNanoTox has become the forum for leaders in biology, chemistry, nanotechnology, toxicology, and medicine to share knowledge as well as applications in many scientific disciplines. BioNanoTox recognizes both the clinical and the laboratory aspects of Biology, Chemistry, Nanotechnology, Medicine, and Diagnostics. BioNanoTox offers a variety of educational tools to instruct a diverse audience. Expert in academia, industrial scientists, and laboratory specialists will have an opportunity to share the latest information through a combination of lectures, case studies, and poster abstracts. This is an exclusive opportunity to stay up-to-date with the latest scientific discoveries and achievements in BioNanoTox fields: Biology, Chemistry, Nanotechnology, Bioinformatics, Statistics, Toxicology, Medicine, and Diagnostics.

Features
BioNanoTox has become the forum for leaders in biology, chemistry, nanotechnology, toxicology, and medicine to share knowledge as well as applications in many scientific disciplines. BioNanoTox recognizes both the clinical and the laboratory aspects of Biology, Chemistry, Nanotechnology, Medicine, and Diagnostics. BioNanoTox offers a variety of educational tools to instruct a diverse audience. Expert in [...] contents.

Fields of interest
Nanotechnology; Molecular Medicine, Biotechnology

Target groups
Research

Type of publication
Proceedings

Available
86,95 €

O. Tarasenko, University of Arkansas, Little Rock, AR, USA (Ed.)
Ring and Module Theory

The volume consists of a collection of invited research papers and expository/survey articles, many of which were presented at the International Conference on Ring and Module Theory held at Hacettepe University in Ankara, Turkey, in August 2008. The selected papers and articles examine wide-ranging and cutting-edge developments in various areas of algebra, including ring theory, module theory, and commutative algebra. There is also a section devoted to open problems to motivate further research.

Features

This volume features a collection of 13 peer-reviewed contributions consisting of expository/survey articles and research papers by 24 authors. Many of these contributions were presented at the International Conference on Ring and Module Theory held at Hacettepe University in Ankara, Turkey, from August 18 to 22, 2008. The selected contributions examine wide-ranging and cutting-edge developments in various areas of algebra, including ring theory, module theory, and commutative algebra. There is also a section devoted to open problems to motivate further research.

Contents

Preface.- Research Articles.- Open Problems.

Fields of interest

Algebra

Target groups

Research

Type of publication

Proceedings

Available


89.95 €
ISBN 978-3-0346-0006-4

A Glimpse at Hilbert Space Operators

Paul R. Halmos in Memoriam

The book is a commemorative volume honoring the mathematician Paul R. Halmos (1916–2006), who contributed passionately to mathematics in manifold ways, among them by basic research, by unparalleled mathematical exposition, by unselfish service to the mathematical community, and, not least, by the inspiration others found in his dedication to that community. Halmos made fundamental contributions in several areas of mathematics. This volume emphasises Halmos’s contributions to operator theory, his venue for most of his mathematical life. The core of the volume is a series of expository articles by prominent operator theorists providing an overview of how operator theory prospered during the Halmos era, in no small measure thanks to Halmos’s leadership and penetrating insights.

Features

This volume features a collection of 13 peer-reviewed contributions consisting of expository/survey articles and research papers by 24 authors. Many of these contributions were presented at the International Conference on Ring and Module Theory held at Hacettepe University in Ankara, Turkey, in August 2008. The selected contributions examine wide-ranging and cutting-edge developments in various areas of algebra, including ring theory, module theory, and commutative algebra. There is also a section devoted to open problems to motivate further research.

Contents


Fields of interest

Operator Theory

Target groups

Research

Type of publication

Commemorative publication

Available


109.95 €
ISBN 978-3-7643-9910-8
Arithmetic and Geometry Around Quantization

In recent decades, quantization has led to interesting applications in various mathematical branches. This volume, comprised of research and survey articles, discusses key topics, including symplectic and algebraic geometry, representation theory, quantum groups, the geometric Langlands program, quantum ergodicity, and non-commutative geometry. A wide range of topics related to quantization are covered, giving a glimpse of the broad subject. The articles are written by distinguished mathematicians in the field and reflect subsequent developments following the Arithmetic and Geometry around Quantization conference held in Istanbul. List of Contributors: S. Akbulut, R. Hadani, S. Arkhipov, K. Mirkovic, O. Ceyhan, S. Mahanta, E. Frenkel, S. Salur, K. Fukaya, G. Ben Simon, D. Gaitsgory, W. van Suijlekom, S. Gurevich.

Features
In recent decades, quantization has led to interesting applications in various mathematical branches. This volume, comprised of research and survey articles, discusses key topics, including symplectic and algebraic geometry, representation theory, quantum groups, the geometric Langlands program, quantum ergodicity, and non-commutative geometry. A wide range of topics related to quantization are [...]}

Fields of interest
Geometry; Applications of Mathematics; Algebra; Mathematical Methods in Physics; Quantum Physics; Algebraic Geometry

Target groups
Research

Type of publication
Contributed volume

Available

109.95 €

Functions, Spaces, and Expansions
Mathematical Tools in Physics and Engineering

This graduate-level textbook is a detailed exposition of key mathematical tools in analysis aimed at students, researchers, and practitioners across science and engineering. Every topic covered has been specifically chosen because it plays a key role outside the field of pure mathematics. Although the treatment of each topic is mathematical in nature, and concrete applications are not delineated, the principles and tools presented are fundamental to exploring the computational aspects of physics and engineering. A central theme of the book is the structure of various vector spaces—most importantly, Hilbert spaces—and expansions of elements in these spaces in terms of bases. As a textbook that provides a deep understanding of central issues in mathematical analysis, Functions, Spaces, and Expansions is intended for graduate students, researchers, and practitioners in applied mathematics, physics, and engineering. Readers are expected to have a solid understanding of linear algebra, in Rn and in[...]

Features
This graduate-level textbook is a detailed exposition of key mathematical tools in analysis aimed at students, researchers, and practitioners across science and engineering. Every topic covered has been specifically chosen because it plays a key role outside the field of pure mathematics. Although the treatment of each topic is mathematical in nature, and concrete applications are not delineated, the [...]}

Contents

Fields of interest
Functional Analysis; Appl. Mathematics / Computational Methods of Engineering; Mathematical Methods in Physics; Special Functions; Fourier Analysis; Computational Science and Engineering

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2010. IX, 266 p. 9 illus. (Applied and Numerical Harmonic Analysis) Hardcover

39.95 €
ISBN 978-0-8176-4979-1

Scientific Computing in Electrical Engineering SCEE 2008

This book is a collection of 65 selected papers presented at the 7th International Conference on Scientific Computing in Electrical Engineering (SCEE), held in Espoo, Finland, in 2008. The aim of the SCEE 2008 conference was to bring together scientists from academia and industry, e.g. mathematicians, electrical engineers, computer scientists, and physicists, with the goal of intensive discussions on industrially relevant mathematical problems, with an emphasis on modeling and numerical simulation of electronic circuits and devices, electromagnetic fields, and coupled problems.

Features
This book is a collection of 65 selected papers presented at the 7th International Conference on Scientific Computing in Electrical Engineering (SCEE), held in Espoo, Finland, in 2008. The aim of the SCEE 2008 conference was to bring together scientists from academia and industry, e.g. mathematicians, electrical engineers, computer scientists, and physicists, with the goal of intensive discussions on [...]}

Contents

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

Target groups
Research

Type of publication
Proceedings

Available

129.95 €
ISBN 978-3-642-12293-4
The aim of the book is to present new results in operator theory and its applications. In particular, the book is devoted to operators with automorphic symbols, applications of the methods of modern operator theory and differential geometry to some problems of theory of elasticity, quantum mechanics, hyperbolic systems of partial differential equations with multiple characteristics, Laplace-Beltrami operators on manifolds with singular points. Moreover, the book comprises new results in the theory of Wiener-Hopf operators with oscillating symbols, large hermitian Toeplitz band matrices, commutative algebras of Toeplitz operators, and discusses a number of other topics.

Features
The aim of the book is to present new results in operator theory and its applications. In particular, the book is devoted to operators with automorphic symbols, applications of the methods of modern operator theory and differential geometry to some problems of theory of elasticity, quantum mechanics, hyperbolic systems of partial differential equations with multiple characteristics, Laplace-Beltrami operators on manifolds with singular points. Moreover, the book comprises new results in the theory of Wiener-Hopf operators with oscillating symbols, large hermitian Toeplitz band matrices, commutative algebras of Toeplitz operators, and discusses a number of other topics.

Contents
Nonlinear Partial Differential Equations
Asymptotic Behavior of Solutions and Self-Similar Solutions

The main focus of this textbook, in two parts, is on showing how self-similar solutions are useful in studying the behavior of solutions of nonlinear partial differential equations, especially those of parabolic type. The exposition moves systematically from the basic to more sophisticated concepts with recent developments and several open problems. With challenging exercises, examples, and illustrations to help explain the rigorous analytic basis for the Navier–Stokes equations, mean curvature flow equations, and other important equations describing real phenomena, this book is written for graduate students and researchers, not only in mathematics but also in other disciplines. Nonlinear Partial Differential Equations will serve as an excellent textbook for a first course in modern analysis or as a useful self-study guide. Key topics in nonlinear partial differential equations as well as several fundamental tools and methods are presented. The only prerequisite required is a basic course in calculus.

Features
The main focus of this textbook, in two parts, is on showing how self-similar solutions are useful in studying the behavior of solutions of nonlinear partial differential equations, especially those of parabolic type. The exposition moves systematically from the basic to more sophisticated concepts with recent developments and several open problems. With challenging exercises, examples, and [...]

Contents

Fields of interest
Partial Differential Equations; Functional Analysis; Analysis; Approximations and Expansions

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
59,95 €

Mutational Analysis
A Joint Framework for Cauchy Problems in and Beyond Vector Spaces

Ordinary differential equations play a central role in science and have been extended to evolution equations in Banach spaces. For many applications, however, it is difficult to specify a suitable normed vector space. Shapes without a priori restrictions, for example, do not have an obvious linear structure. This book generalizes ordinary differential equations beyond the borders of vector spaces with a focus on the well-posed Cauchy problem in finite time intervals. Here are some of the examples: - Feedback evolutions of compact subsets of the Euclidean space - Birth-and-growth processes of random sets (not necessarily convex) - Semilinear evolution equations - Nonlocal parabolic differential equations - Nonlinear transport equations for Radon measures - Structured population model - Stochastic differential equations with nonlocal sample dependence and how they can be coupled in systems immediately due to the joint framework of Mutational Analysis. Finally, the book offers new tools for modelling.

Features
Ordinary differential equations play a central role in science and have been extended to evolution equations in Banach spaces. For many applications, however, it is difficult to specify a suitable normed vector space. Shapes without a priori restrictions, for example, do not have an obvious linear structure. This book generalizes ordinary differential equations beyond the borders of vector spaces with a focus [...]

Contents

Fields of interest
Analysis; Dynamical Systems and Ergodic Theory; Ordinary Differential Equations; Partial Differential Equations; Systems Theory, Control; Mathematical Biology in General

Target groups
Graduate

Type of publication
Monograph

Available
89,95 €
ISBN 978-3-642-12470-9

Engineering Dynamics
A Primer

This primer is intended to provide the theoretical background for the standard undergraduate, mechanical engineering course in dynamics. It grew out of the author’s desire to provide an affordable companion to the standard texts on the subject in which the gap between the theory presented and the problems to be solved is oftentimes too large. The book contains several worked examples and at the end of each chapters summaries and exercises to aid the student in their understanding of the chapter. Teachers who wish to have a source of more detailed theory for the course, as well as graduate students who need a refresher course on undergraduate dynamics when preparing for certain first year graduate school examinations, and students taking the course will find the work very helpful.

Features
This primer is intended to provide the theoretical background for the standard undergraduate, mechanical engineering course in dynamics. It grew out of the author’s desire to provide a companion to the standard texts on the subject in which the gap between the theory presented and the problems to be solved is often times too large. The primer has three intended audiences: undergraduate students enrolled in a [...]
Three-Dimensional Flows

In this book, the authors present the elements of a general theory for flows on three-dimensional compact boundaryless manifolds, encompassing flows with equilibria accumulated by regular orbits. The book aims to provide a global perspective of this theory and make it easier for the reader to digest the growing literature on this subject. This is not the first book on the subject of dynamical systems, but there are distinct aspects which together make this book unique. Firstly, this book treats mostly continuous time dynamical systems, instead of its discrete counterpart, exhaustively treated in some other texts. Secondly, this book treats all the subjects from a mathematical perspective with proofs of most of the results included. Thirdly, this book is meant to be an advanced graduate textbook and not just a reference book or monograph on the subject. This aspect is reflected in the way the cover material is presented, with careful and complete proofs, and precise references to topics in the book.

Features

Contents


Fields of interest

Dynamical Systems and Ergodic Theory; Ordinary Differential Equations

Target groups

Research

Type of publication

Monograph

Available


139,95 €

ISBN 978-3-642-11413-7

Scientific Computing with MATLAB and Octave

This textbook is an introduction to Scientific Computing, in which several numerical methods for the computer-based solution of certain classes of mathematical problems are illustrated. The authors show how to compute the zeros or the integrals of continuous functions, solve linear systems, approximate functions using polynomials and construct accurate approximations for the solution of ordinary and partial differential equations. To make the format concrete and appealing, the programming environments Matlab and Octave are adopted as faithful companions. The book contains the solutions to several problems posed in exercises and examples, often originating from important applications. At the end of each chapter, a specific section is devoted to subjects which were not addressed in the book and contains bibliographical references for a more comprehensive treatment of the material.

Features

This textbook is an introduction to Scientific Computing, in which several numerical methods for the computer-based solution of certain classes of mathematical problems are illustrated. The authors show how to compute the zeros or the integrals of continuous functions, solve linear systems, approximate functions using polynomials and construct accurate approximations for the solution of ordinary and partial differential equations. To make the format concrete and appealing, the programming environments Matlab and Octave are adopted as faithful companions. The book contains the solutions to several problems posed in exercises and examples, often originating from important applications. At the end of each chapter, a specific section is devoted to subjects which were not addressed in the book and contains bibliographical references for a more comprehensive treatment of the material.

Contents


Fields of interest

Computational Science and Engineering; Numerical and Computational Physics; Computational Intelligence; Theoretical and Computational Chemistry; Visualization

Target groups

Lower undergraduate

Type of publication

Undergraduate textbook

Available


49,95 €

ISBN 978-3-642-12429-7

Modeling of Curves and Surfaces

This concise text on geometry with applications in a variety of disciplines is devoted to three main geometrical topics: curves, surfaces, and polyhedra. It presents elementary methods for analytical modeling and their visualization, as well as demonstrating the potential of symbolic computational tools to support the development of analytical solutions. The author systematically examines powerful tools including 2D and 3D animation of geometric images, transformations, shadows and colors, and then further studies more complex geometrical modeling problems related to analysis and differential equations. With over 150 stimulating exercises and problems, this text integrates traditional differential and non-Euclidean geometries with more current computer systems in a practical and user-friendly format. The book is also well illustrated, with over 300 figures reproducible using Matlab programs. This text greatly extends the author’s previous title, “Geometry of Curves and Surfaces with Maple” [...]

Features

This text on geometry is devoted to various central geometrical topics including: graphs of functions, transformations, (non-)Euclidean geometries, curves and surfaces as well as their applications in a variety of disciplines. This book presents elementary methods for analytical modeling and demonstrates the potential for symbolic computational tools to support the development of analytical [...]
Affine Flag Manifolds and Principal Bundles

Affine flag manifolds are infinite dimensional versions of familiar objects such as Graßmann varieties. The book features lecture notes, survey articles, and research notes - based on workshops held in Berlin, Essen, and Madrid - explaining the significance of these and related objects (such as double affine Hecke algebras and affine Springer fibers) in representation theory (e.g., the theory of symmetric polynomials), arithmetic geometry (e.g., the fundamental lemma in the Langlands program), and algebraic geometry (e.g., affine flag manifolds as parameter spaces for principal bundles). Novel aspects of the theory of principal bundles on algebraic varieties are also studied in the book.

Features

The manuscript of the Traité de Logique algorithmique resulted from lectures Couturat gave at the University of Caen in 1898/99 on recent developments in symbolic logic, on the relations of logic and mathematics, and on the scope of the methods of mathematics. It is the only one of several manuscripts Couturat mentioned in his correspondence that meanwhile has been rediscovered. It is an outstanding document of the popularization and propagation of symbolic logic around 1900. It allows to better understand the difficult relations of algebraic logic and the so-called logistic program which surpasses the simple alternative of logic as an application of algebra vs. logic as the foundation of mathematics. The complicated interactions in the historical developments of these two currents become manifest in Couturat’s hesitations and changing attitudes within his own intellectual biography. The publication of this manuscript helps to achieve a much more complete picture of the latter.

Contents


Fields of interest

History of Mathematics

Target groups

Research

Type of publication

Monograph

Available

2010. VIII, 317 p. (Science autour de / around 1900) Hardcover

89,95 €

ISBN 978-3-0346-0410-9

Pappus of Alexandria: Book 4 of the Collection

Edited With Translation and Commentary by Heike Sefrin-Weis

Although not so well known today, Book 4 of Pappus’ Collection is one of the most important and influential mathematical texts from antiquity. The mathematical vignettes form a portrait of mathematicians during the Hellenistic “Golden Age”, illustrating central problems – for example, squaring the circle; doubling the cube; and trisecting an angle – varying solution strategies, and the different mathematical styles within ancient geometry. This volume provides an English translation of Collection 4, in full, for the first time, including: a new edition of the Greek text, based on a fresh transcription from the main manuscript and offering an alternative to Hultsch’s standard edition, notes to facilitate understanding of the steps in the mathematical argument, a commentary highlighting aspects of the work that have so far been neglected, and supporting the reconstruction of a coherent plan and vision within the work, bibliographical references for further study.

Contents


Fields of interest

History of Mathematics; Geometry

Target groups

Research

Type of publication

Monograph

Available

2010. 247 p. 10 illus. (Sources and Studies in the History of Mathematics and Physical Sciences) Hardcover

89,95 €

Geometric Etudes in Combinatorial Mathematics

This second edition of Alexander Soifer’s Geometric Etudes in Combinatorial Mathematics provides supplementary reading materials to students of all levels interested in pursuing mathematics, especially in algebra, geometry, and combinatorial geometry. Within the text, the author outlines an introduction to graph theory and combinatorics while exploring topics such as the pigeonhole principle, Borůvka problem, and theorems of Helly and Szekfű–Nagy. The book introduces these ideas along with practical applications that will prepare young readers for the mathematical world. Geometric Etudes in Combinatorial Mathematics is not only educational; it is inspirational. This distinguished mathematician captivates his readers, propelling them to search for solutions of life’s problems—problems that previously seemed hopeless.

Features

The etudes presented here are not simply those of Czerny, but are better compared to the etudes of Chopin, not only technically demanding and addressed to a variety of specific skills, but at the same time possessing an exceptional beauty that characterizes the best of art... Keep this book at hand as you plan your next problem solving seminar. — Don Chakerian THE AMERICAN MATHEMATICS MONTHLY

Contents


Fields of interest

Combinatorics; Geometry; Algebra

Target groups

Lower undergraduate

Type of publication

Undergraduate textbook

Available

2010. XXX, 348 p. 664 illus., 332 in color. Softcover
49,95 €

Data Mining and Knowledge Discovery via Logic-Based Methods

There are many approaches to data mining and knowledge discovery (DM&KD), including neural networks, closest neighbor methods, and various statistical methods. This monograph, however, focuses on the development and use of a novel approach, based on mathematical logic, that the author and his research associates have worked on over the last 20 years. The methods presented in the book deal with key DM&KD issues in an intuitive manner and in a natural sequence. Compared to other DM&KD methods, those based on mathematical logic offer a direct and often intuitive approach for extracting easily interpretable patterns from databases. The book discusses the theoretical foundations of the methods described, and it also presents a wide collection of examples, many of which come from real-life applications. Almost all theoretical developments are accompanied by extensive empirical analysis which often involved the solution of a very large number of simulated test problems.

Features

The importance of having efficient and effective methods for data mining and knowledge discovery (DM) is rapidly growing. This is due to the wide use of fast and affordable computing power and data storage media and also the gathering of huge amounts of data in almost all aspects of human activity and interest. While numerous methods have been developed, the focus of this book presents algorithms and [...] Contents


Operations Research, Mathematical Programming; Mathematical Logic and Formal Languages; Operation Research / Decision Theory

Target groups

Research

Type of publication

Monograph

Available

89,95 €

The Hill–Brown Theory of the Moon’s Motion

This book, in three parts, describes three phases in the development of the modern theory and calculation of the Moon’s motion—the last of which, in 1984, resulted in the transfer in the responsibility for producing lunar tables from the Nautical Almanac Office in Washington, D.C., to the Jet Propulsion Laboratory in Pasadena, CA—definitively ending an era. The mathematical, philosophical, and historical interest in the analytic solution to the lunar problem using the Hill–Brown method still engages celestial mechanicians and is the primary focus of this work. Part I explains the crisis in lunar theory in the 1870s that led G.W. Hill to lay a new foundation for an analytic solution, a preliminary orbit he called the “variational curve.” Part II is devoted to E.W. Brown’s completion of the new theory as a series of successive perturbations of Hill’s variational curve. Part III describes the revolutionary developments in time-measurement and the determination of Earth-Moon and Earth-planet distances.[...]

Contents

Preface.- Part I. Hill lays the foundation (1877-1878).- Part II. Brown completes the theory (1892-1908) and constructs tables (1908-1919).- Part III. Revolutionary developments in time measurement, computing, and data collection.- Appendix.- Index.

Fields of interest

History of Mathematics; Astronomy, Observations and Techniques; History and Philosophical Foundations of Physics

Target groups

Research

Type of publication

Monograph

Available

2010. XV, 323 p. 9 illus., 8 in color. (Sources and Studies in the History of Mathematics and Physical Sciences) Hardcover
109,95 €
Regularity and Approximability of Electronic Wave Functions

The electronic Schrödinger equation describes the motion of N-electrons under Coulomb interaction forces in a field of clamped nuclei. The solutions of this equation, the electronic wave functions, depend on 3N variables, three spatial dimensions for each electron. Approximating these solutions is thus inordinately challenging, and it is conventionally believed that a reduction to simplified models, such as those of the Hartree-Fock method or density functional theory, is the only tenable approach. The text shows that this conventional wisdom need not be ironclad: the regularity of the solutions, which increases with the number of electrons, the decay behavior of their mixed derivatives, and the antisymmetry enforced by the Pauli principle contribute properties that allow these functions to be approximated with an order of complexity which comes arbitrarily close to that for a system of one or two electrons. The text is accessible to a mathematical audience at early graduate level.

Features
The electronic Schrödinger equation describes the motion of N-electrons under Coulomb interaction forces in a field of clamped nuclei. The solutions of this equation, the electronic wave functions, depend on 3N variables, three spatial dimensions for each electron. Approximating these solutions is thus inordinately challenging, and it is generally believed that a reduction to simplified models, such as [...]
Basic Radiation Oncology

Basic Radiation Oncology is an all-in-one book, encompassing the essential aspects of radiation physics, radiobiology, and clinical radiation oncology. A complete section is devoted to each of these fields. In the first two sections, concepts that are crucial in radiation physics and radiobiology are reviewed in depth. The third section describes radiation treatment regimens appropriate for the main cancer sites and tumor types. The book has been designed to ensure that the reader will find it easy to use. Many “pearl boxes” are used to summarize the most information, and there are more than 350 helpful illustrations, the majority of them in color. Basic Radiation Oncology will meet the need for a practical, up-to-date, bedside-oriented radiation oncology book. It will be extremely useful for residents, fellows, and clinicians in the fields of radiation, medical, and surgical oncology, as well as for medical students, physicians, and medical physicists with an interest in clinical oncology.

Contents


Fields of interest

Oncology

Target groups

Professional/practitioner

Type of publication

Professional book

Available

2010. XVIII, 576 p. 96 illus., 48 in color. Hardcover

99,95 €

ISBN 978-3-642-11665-0

Imaging dell’Apparato Urogenitale

Pathologia non oncologica

La presente pubblicazione dedicata alla patologia non oncologica dell’Apparato Urogenitale nasce da un’idea del nucleo storico degli Uroradiologi italiani, in particolare del Prof. Antonio Rotondo, i quali si occupano da anni dell’argomento e che, sotto l’egida della Sezione di studio di radiologia urogenitale, hanno coinvolto autori, giovani e meno giovani, ma comunque rappresentativi degli addetti ai lavori, esperti di questa branca specialistica. Il testo intende fornire informazioni sullo stato dell’arte, che possano essere utili nella clinica, sia a chi pratica quotidianamente la disciplina sia a chi se ne occupa saltuariamente. L’opera è corredata da una ricca e significativa iconografia così come da schemi di semplificazione, che consentono di accedere rapidamente ai concetti fondamentali delle varie problematiche.

Features

La presente pubblicazione dedicata alla patologia non oncologica dell’Apparato Urogenitale nasce da un’idea del nucleo storico degli Uroradiologi italiani, in particolare del Prof. Antonio Rotondo, i quali si occupano da anni dell’argomento e che, sotto l’egida della Sezione di studio di radiologia urogenitale, hanno coinvolto autori, giovani e meno giovani, ma comunque rappresentativi degli addetti ai lavori, [...] 

Contents

Parte I Malformazioni e displasie dell’apparato urogenitale 1 Basi embriologiche per la comprensione della patologia 2 Malformazioni del rene e delle vie urinarie 3 Malformazioni congenite dell’apparato genitale maschile 4 Malformazioni congenite dell’apparato genitale femminile 5 Malattie cistiche del parenchima renale Parte II Patologie infettive 12 Infezioni renali acute e croniche Parte IV Apparato genitale [...] 

Fields of interest

Imaging / Radiology; Urology / Andrology

Target groups

Research

Type of publication

Monograph

Available

2010. X, 118 S. Hardcover

37,34 €

ISBN 978-3-642-11166-2

Wege der homöopathischen Arzneimitteltherapie

Features


Contents


Fields of interest

Complementary & Alternative Medicine

Target groups

Research

Type of publication

Monograph

Available

2010. XIV, 290 pagg. 80 figg. a colori. Hardcover

91,30 €

Improving Patient Treatment Adherence
A Clinician’s Guide

Despite its direct effect on a patient’s health, the literature on treatment adherence does not yet include a summary of proven methods for identifying and addressing patient non-adherence. Improving Patient Treatment Adherence Across Multiple Behaviors: A Clinician’s Guide differs significantly from many treatment adherence books on the market by focusing on clinicians and the practical tactics they need to improve patient adherence. The book is organized by behavior and special issues as opposed to other texts, which look at treatment adherence as a theoretical concept. Each chapter provides a summary of existing literature regarding the impact of patient non-adherence, including costs, clinical outcomes and health-related quality of life, as well as a review of patient factors related to treatment adherence across behaviors, diseases, and special populations. A discussion of methods for improving treatment adherence takes a look at both proven methods and new technological advances in the field. […]

Contents
What is treatment adherence?.- Physical function/exercise adherence.- Diet and adherence.- Medication adherence.- Smoking cessation.- Primary prevention adherence.- Contraception and adherence.- Chronic pain and adherence.- Adherence and psychological therapies.- Adherence and depression in the primary care setting.- HIV/AIDS and infectious disease and adherence.- Adherence and substance abuse.- Cardiovascular and stroke rehabilitation.- Special populations: Children, parents and adherence.- Special populations: Older adults, caregivers, end of life and adherence.- Special populations[...]

Fields of interest
General Practice / Family Medicine; Health Promotion and Disease Prevention; Medicine (general)

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. 300 p. 6 illus., 3 in color. Softcover

34.95 €

Optic Nerve Disorders
Diagnosis and Management

The optic nerve and the brain comprise the main anatomic components of neuro-ophthalmology. Although there are numerous handbooks and major texts describing all the common disorders of neuro-ophthalmology, Optic Nerve Disorders is the only practical reference book focusing only on common optic nerve disorders. The author discusses diagnosis, pathophysiology, management, and prognosis of complex optic nerve disorders. Optic Nerve Disorders is organized by optic nerve diagnoses commonly encountered in a neuro-ophthalmologic practice. It is written in a clear, concise style for quick, easy reference in the clinic. Each chapter is formatted in a similar manner and thoroughly discusses epidemiology, diagnosis (by clinical signs and symptoms and by electrophysiologic, ocular and neuroimaging techniques), pathophysiology, management (by both conventional treatments and experimental/newer medications under consideration) and prognosis. Updated information on diagnostic techniques, such as OCT, mfVEP, […]

Features
The optic nerve and the brain comprise the main anatomic components of neuro-ophthalmology. Although there are numerous handbooks and major texts describing all the common disorders of neuro-ophthalmology, OPTIC NERVE DISORDERS provides a practical reference book focusing only on common optic nerve disorders. This book is organized by optic nerve diagnoses commonly encountered in a […]

Contents

Fields of interest
Ophthalmology; Neurology

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. 284 p. 62 illus., 47 in color. Softcover

29.95 €
ISBN 978-1-4419-1587-0

Movement Disorders in Clinical Practice

Movement disorders attack the part of the brain that controls our movements, they are a complex group of disorders, spanning all aspects of neurological illnesses. Such disorders are widespread, often destroying the independence of those affected. Movement Disorders in Clinical Practice provides a concise, practical overview of the diagnosis, treatment and management of patients with these debilitating conditions, including a brief evaluation of ongoing clinical trials. Edited by two key international movement disorder experts, chapters cover Parkinson’s disease, Parkinsonian syndromes, dystonia, tremor, restless legs syndrome, an overview of other movement disorders. An accessible text for family practitioners, critical care and emergency doctors, neurologists in training, consultant neurologists and specialist nurses and allied health professionals working in the field.

Features
Movement disorders attack the part of the brain that controls our movements, they are a complex group of disorders, spanning all aspects of neurological illnesses. Such disorders are widespread, often destroying the independence of those affected. Movement Disorders in Clinical Practice provides a concise, practical overview of the diagnosis, treatment and management of patients […]

Contents

Fields of interest
Neurology; General Practice / Family Medicine; Emergency Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. IX, 100 p. Softcover

29.95 €
Risonanza magnetica cardiaca

La risonanza magnetica del cuore è in grado di fornire contemporaneamente informazioni morfologiche, di caratterizzazione tissutale, funzionali, di perfusione e di flusso in un’unica indagine. Il suo utilizzo è in continuo incremento, sia nella ricerca che nella clinica, in molti ambiti della cardiologia: dalle miocarditi, ai vari aspetti della cardiopatia ischemica, dalle cardiopatie congenite alle aritmie cardache. Il volume rappresenta un’importante novità editoriale ponendo l’accento sull’ottimizzazione delle tecniche di acquisizione e dei protocolli di studio e descrivendo, oltre alle basi fisiche delle apparecchiature, anche l’anatomia cardiaca e tutte le tecniche per lo studio del cuore, e infine evidenziando le principali applicazioni cliniche della metodica e le sue indicazioni consolide. L’opera, principalmente rivolta a radiologi e cardiologi, risulterà di interesse anche per i meno esperti, grazie alla trattazione esaustiva e didattica dei contenuti.

Features
La risonanza magnetica del cuore è in grado di fornire contemporaneamente informazioni morfologiche, di caratterizzazione tissutale, funzionali, di perfusione e di flusso in un’unica indagine. Il suo utilizzo è in continuo incremento, sia nella ricerca che nella clinica, in molti ambiti della cardiologia: dalle miocarditi, ai vari aspetti della cardiopatia ischemica, dalle cardiopatie congenite alle aritmie cardache.

Contents
1 Requisiti hardware e software: preparazione del paziente 2 Anatomia cardiaca e piani di studio 3 Le sequenze a sangue nero 4 Studio funzionale: paziente 5 Studio con mezzo Le sequenze a sangue nero 6 Studio funzionale: paziente 7 Studio di contrasto: perfusione e delayed enhancement 8 Cardioangiografia 9 Coronaro-RM 10 Cardiomiopatie 11 Come strutturare un esame RM completo 12 Studio di contrasto: perfusione e delayed enhancement 13 Studio con mezzo Le sequenze a sangue nero 14 Malattie del pericardio 15 Valvulopatie 16 Cardiopatie...
Rethinking physical and rehabilitation medicine

"Re-education" consists in training people injured either by illness or the vagaries of life to achieve the best functionality now possible for them. Strangely, the subject is not taught in the normal educational curricula of the relevant professions. It thus tends to be developed anew with each patient, without recourse to knowledge of what such training, or assistance in such training, might be. New paradigms of re-education are in fact possible today, thanks to advances in cognitive science, and new technologies such as virtual reality and robotics. They lead to the re-thinking of the procedures of physical medicine, as well as of re-education. The first part looks anew at re-education in the context of both international classifications of functionality, handicap and health, and the concept of normality. The second part highlights the function of implicit memory in re-education. And the last part shows the integration of new cognition technologies in the new paradigms of re-education.

Features
"Re-education" consists in training people injured either by illness or the vagaries of life to achieve the best functionality now possible for them. Strangely, the subject is not taught in the normal educational curricula of the relevant professions. Reeducation thus tends to be developed anew with each patient, without recourse to knowledge of what such training, or assistance in such training, might be. New paradigms of re-education are in fact possible today, thanks to advances in cognitive science, and new technologies such as virtual reality and robotics. They lead to the re-thinking of the procedures of physical medicine, as well as of re-education. The first part looks anew at re-education in the context of both international classifications of functionality, handicap and health, and the concept of normality. The second part highlights the function of implicit memory in re-education. And the last part shows the integration of new cognition technologies in the new paradigms of re-education.

Fields of interest
Rehabilitation; Neuropsychology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2010. XXI, 246 p. (Collection de L’Académie Européenne de Médecine de Réadaptation) Softcover

100,00 €

Heart Valve Surgery
An Illustrated Guide

This book offers a comprehensive overview of the surgical treatment of heart valve disease. The aim is to provide the reader with precise information on treatment modalities, indications, and specific situations that may be encountered. After introductory chapters on history and surgical anatomy, available valve replacement devices are reviewed and the optimal choice in different settings explained. The surgical management of aortic, mitral, tricuspid, and pulmonary valve disease is then presented in individual chapters with the aid of superbly realistic illustrations and high-quality photos. Dysfunctions of implanted heart valves are also addressed, and a concluding chapter summarizes the results achieved to date. The authors are recognized experts in heart valve surgery, and draw on their vast experience to provide a book that will serve not only as a basic manual for cardiac surgeons but also as an invaluable compendium of readily understood information for cardiologists and general practitioners.

Features
This book offers a comprehensive overview of the surgical treatment of heart valve disease. The aim is to provide the reader with precise information on treatment modalities, indications, and specific situations that may be encountered. After introductory chapters on history and surgical anatomy, available valve replacement devices are reviewed and the optimal choice in different settings explained. The...

Contents

Fields of interest
Cardiac Surgery; Cardiology

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XI, 416 p. Hardcover

184,83 €

Tumeurs malignes rares

En cancérologie, la Médecine basée sur les preuves permet de prendre en charge les patients atteints de cancer. Il existe cependant des cancers et des situations cliniques rares pour lesquels aucune information n’est disponible. Oncologues, spécialistes, chirurgiens cancérologues, anatomo-pathologistes, médecins généralistes, vous disposez à présent d’un ouvrage de référence sur les Tumeurs malignes rares, le premier en français publié sur ce thème et coordonné par les Professeurs Jean-Pierre Droz et Jean-Louis Peix et le Docteur Isabelle Ray-Coquard. Il vous apportera une documentation de base sur les tumeurs rares ubiquitaires ou spécifiques de certains organes, les hémopathies malignes, les tumeurs pédiatriques rares, mais aussi les syndromes para-néoplasiques, ou bien l’association cancer et grossesse. Par ailleurs cet ouvrage aborde l’apport des techniques d’anatomie pathologique, de la génétique, de l’épidémiologie, de la médecine du travail pour la prise en charge de ces cancers. Il vous ...

Features
Alors qu’il existe une littérature abondante fondée sur l’EBM (Evidence Based Medicine) concernant la prise en charge et le traitement des cancers les plus fréquents, celle-ci fait défaut pour les tumeurs malignes rares. L’ouvrage coordonné par les Professeurs Jean-Pierre Droz, Jean-Louis Peix et le Docteur Isabelle Ray-Coquard complète ce vide. Oncologues, spécialistes, chirurgiens cancérologues,...

Fields of interest
Oncology; Surgical Oncology; Internal Medicine; Pediatrics; Gynecology; Epidemiology

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XXII, 632 p. Hardcover

184,83 €
Molecular Pathology of Hematolymphoid Diseases

The past two decades have seen an ever-accelerating growth in knowledge about molecular pathology of human diseases which received a large boost with the sequencing of the human genome in 2003. Molecular diagnostics, molecular targeted therapy and genetic therapy are now routine in many medical centers. The molecular field now impacts every field in medicine, whether clinical research or routine patient care. There is a great need for basic researchers to understand the potential clinical implications of their research whereas private practice clinicians of all types (general internal medicine and internal medicine specialists, medical oncologists, radiation oncologists, surgeons, pediatricians, family practitioners), clinical investigators, pathologists and medical laboratory directors and radiologists require a basic understanding of the fundamentals of molecular pathogenesis, diagnosis and treatment for their patients. Traditional textbooks in molecular biology deal with basic science and are not[...]

Features
Molecular Pathology of Hematolymphoid Diseases
The Molecular Pathology Library Series fills the gap between basic science and clinical application. Each user-friendly reference brings together diverse topics about molecular pathogenesis, diagnosis and treatment in one volume. The series serves physicians and healthcare providers in multiple disciplines who need to understand and apply molecular[...]

Contents
Section I. Molecular Pathology of Hematolymphoid Neoplasms: General Principles - Section II: Specific Techniques and Their Applications in Molecular Hematopathology - Section III: Molecular Pathology of Hematolymphoid Neoplasms: Specific Subtypes - Index.

Fields of interest
Pathology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2010. XII, 172 pagg. 150 fogg. a color. Softcover
33,61 €

U. Frank, Klinikum der Albert-Ludwigs-Universität Freiburg

Antibiotika am Krankenbett


Features
griffbereit - prägnant – übersichtlich Der Kit
teltaschen-Ratgeber für die Klinik zur Therapie von Infektionskrankheiten. Die wichtigsten Antibiotika und Antimykotika: Spektrum - Dosierung - Nebenwirkungen - Zahlreiche Tabellen geordnet nach Substanzen, Erregern und Indikationen. Antibiotikagabe bei Schwangerschaft, Nieren- und Leberinsuffizienz, ...
Neuromuscular Monitoring

Neuromuscular monitoring is critical for the judicious use of muscle relaxants. In combination with reversal, it is fundamental to every successful strategy for managing postoperative residual blocks. This reference work is a compendium of all the essential information needed to monitor neuromuscular function. Physiological and pharmacological basics of neuromuscular transmission, principles of neuromuscular monitoring: How to place stimulation electrodes, properly select the stimulation mode and interpret findings, practical techniques for clinical routine, clinical concepts behind qualitative and quantitative nerve stimulators, comprehensive presentation of acceleromyography including a question & answer section, summaries of all key points, current guidelines on the scientific use of acceleromyography.

Features
Neuromuscular monitoring is critical for the judicious use of muscle relaxants. In combination with reversal, it is fundamental to every successful strategy for managing postoperative residual blocks. This reference work is a compendium of all the essential information needed to monitor neuromuscular function. Physiological and pharmacological basics of neuromuscular transmission, principles of neuromuscular [-]

Contents
Principles of neuromuscular transmission.- Principles of neuromuscular monitoring.- Clinical application.- Acceleromyography.- FAQs.

Fields of interest
Anesthesiology

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. 215 p. Softcover
19,95 €
ISBN 978-3-642-13476-0

Amyloidosis

Diagnosis and Treatment

An up-to-date reference on this fascinating set of complex disorders, this book features the most comprehensive strategies for diagnosing, classifying, imaging, treating, and managing amyloidosis in multiple organ systems. Beneficial to the spectrum of practitioners from residents to sub-specialists, this book is a succinct authoritative text written by leaders in the field. The authors provide instruction on all forms of amyloidosis - including primary amyloidosis (AL), secondary amyloidosis (AA), and familial amyloidosis. With essential treatment algorithms, Amyloidosis: Diagnosis and Treatment is the gold-standard for all hematologists, oncologists, and internists caring for patients with this complex disease.

Features
An up-to-date reference on this fascinating set of complex disorders, this book features the most comprehensive strategies for diagnosing, classifying, imaging, treating, and managing amyloidosis in multiple organ systems. Beneficial to the spectrum of practitioners from residents to sub-specialists, this book is a succinct authoritative text written by leaders in the field. The authors provide instruction on all forms of amyloidosis.

Contents

Fields of interest
Hematology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2010. X, 238 p. 32 illus., 16 in color. (Contemporary Hematology) Hardcover
139,95 €
ISBN 978-1-60761-630-6

Il gioco d’azzardo patologico

Una guida clinica al trattamento

Gli ultimi anni hanno testimoniato un significativo aumento della ricerca nell’ambito del gioco d’azzardo patologico – una diagnosi purtroppo spesso trascurata dai medici, non sempre consci delle sue conseguenze a livello personale e sociale, e a volte nemmeno delle attuali possibilità di cura. Di fatto, oggi, i clinici possono scegliere tra diverse opzioni terapeutiche in grado di migliorare in modo incisivo la qualità di vita delle persone che soffrono di questa patologia disabilitante. Questo volume si presenta come una “guida clinica” che offre al lettore una panoramica omnicomprensiva sull’argomento dal punto di vista della salute pubblica, delle caratteristiche cliniche e della terapia, della psicoterapia e della psicofarmacologia, facendo il punto sullo stato dell’arte del recente, straordinario progresso in questo campo. Scritti dai maggiori esperti internazionali negli aspetti psichiatrici del gioco d’azzardo, i vari capitoli ne descrivono in dettaglio la fenomenologia clinica, l’eziologia,

Features
Gli ultimi anni hanno testimoniato un significativo aumento della ricerca nell’ambito del gioco d’azzardo patologico – una diagnosi purtroppo spesso trascurata dai medici, non sempre consci delle sue conseguenze a livello personale e sociale, e a volte nemmeno delle attuali possibilità di cura. Di fatto, oggi, i clinici possono scegliere tra diverse opzioni terapeutiche in grado di migliorare in modo incisivo la qualità di vita delle persone che soffrono di questa patologia disabilitante. Questo volume si presenta come una “guida clinica” che offre al lettore una panoramica omnicomprensiva sull’argomento dal punto di vista della salute pubblica, delle caratteristiche cliniche e della terapia, della psicoterapia e della psicofarmacologia, facendo il punto sullo stato dell’arte del recente, straordinario progresso in questo campo. Scritti dai maggiori esperti internazionali negli aspetti psichiatrici del gioco d’azzardo, i vari capitoli ne descrivono in dettaglio la fenomenologia clinica, l’eziologia,

Contents
Parte I Sanità Pubblica ed epidemiologia 1 Gioco d’azzardo patologico e sistema sanitario 2 Epidemiologia Parte II Caratteristiche cliniche 3 Caratteristiche cliniche 4 Classificazione 5 Adolescenti e giovani adulti 6 Anziani 7 Differenze di genere Parte III Eziologia 8 Approccio comportamentale 9 Basi biologiche del gioco d’azzardo patologico Parte IV Prevenzione e trattamento 10 Prevenzione e ruolo del clinico 11 Prevenzione e trattamento del gioco d’azzardo problematico e patologico negli adolescenti 12 Terapie cognitive e comportamentali 13 Trattamenti farmacologici

Fields of interest
Psychiatry

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. 190 pagg Softcover
48,03 €
ISBN 978-88-470-1537-1
F. Greco

Echography in anesthesiology, intensive care and emergency medicine: A beginner’s guide

These pages condense the knowledge to make your initiation to echography in emergency situations easier. You will realize that, face to the patient, the best echographic examination is worth nothing without a good clinical examination. This Fast Program of Echography permits you to learn the process by watching, feeling and talking. It is based upon an ancestral methodology that regulates the learning of a manual gesture: “practice makes perfect”. This book will convince you that you can control this program of echography, increasing thus your self-confidence when taking care of your patients.

Features
These pages condense the knowledge to make your initiation to echography in emergency situations easier. You will realize that, face to the patient, the best echographic examination is worth nothing without a good clinical examination. This Fast Program of Echography permits you to learn the process by watching, feeling and talking. It is based upon an ancestral methodology that regulates the learning of a manual gesture: “practice makes perfect”. This book will convince you that you can control this program of echography, increasing thus your self-confidence when taking care of your patients.

Fields of interest
Anesthesiology; Emergency Medicine; Intensive / Critical Care Medicine; Imaging / Radiology

Target groups
Professional/practitioner

Type of publication
Manual

Available
2010. Approx. 95 p. Softcover

44,95 €

A. Griffiths, Great North Air Ambulance, Darlington, UK; T. Lowes, Great North Air Ambulance, Darlington, UK; J. Henning, James Cook University Hospital, Middlesbrough, UK

Pre-Hospital Anesthesia Handbook

Pre-Hospital Anaesthesia is one of the most demanding interventions that can be made in the field. The exact incidence of failed intubation is difficult to quantify, but it is clear that it is higher than in hospital. Equally it is certain that anyone undertaking it should have clear instruction in the technique and a thorough understanding of all it entails. This handbook details the procedures, drugs and algorithms used by the crews of the Great North Air Ambulance who have been providing this life saving intervention since 2004. It draws on huge experience in the field and provides a spring board for any practitioner who wishes to take it on.

Features
The safe and swift establishment of a secure airway is crucial in the pre-hospital situation, and many pre-hospital systems have developed standard operating procedures that involve inducing anesthesia for airway control. Developed from the manual for a two-day course on the introduction to pre-hospital anaesthesia given by the Great North Air Ambulance Service, the Pre-Hospital Anesthesia Handbook details [...] Contents
Introduction.- Indications and decision making.- Pre-hospital Rapid Sequence Intubation.- Post-Intubation Management.- Equipment and minimum monitoring standards.- Drugs and sedation.- Special circumstances.- Complications & Adverse Events.

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

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XIII, 102 p. 18 illus., 9 in color. Softcover

39,95 €

R.E. Hendrick, Northwestern University’s Feinberg School of Medicine, Northwestern Memorial Hospital, Chicago, IL, USA

Breast MRI

Fundamentals and Technical Aspects

Breast MRI has emerged as a valuable adjunct to the conventional imaging modalities in the detection of primary and recurrent breast cancer. Yet, most radiologists who rely on MRI do not have knowledge of the fundamentals so essential to achieving and maintaining high image quality. With a focus on the basic imaging principles of breast MRI rather than on mathematical equations, this book takes a practical approach to imaging protocols that helps radiologists increase their diagnostic effectiveness. The text walks the reader through the basics of MRI, making it especially accessible to beginners. From a detailed outline of equipment prerequisites for obtaining high quality breast MRI to instructions on how to optimize image quality, expanded discussions on how to obtain optimized dynamic information, and explanations of good and bad imaging techniques, the book covers the topics that are most relevant to performing breast MRI.

Features
Breast MRI has emerged as a valuable adjunct to the conventional imaging modalities in the detection of primary and recurrent breast cancer. Yet, most radiologists who rely on MRI do not have knowledge of the fundamentals so essential to achieving and maintaining high image quality. With a focus on the basic imaging principles of breast MRI rather than on mathematical equations, this book takes a practical [...] Contents
Introduction.- Indications and decision making.- Equipment and minimum monitoring standards.- Breast MRI.- Complications & Adverse Events.- Detailed instructions for obtaining breast MRI.- Pre-operative planning.- Intra-operative planning.

Fields of interest
Imaging / Radiology

Target groups
Professional/practitioner

Type of publication
Atlas

Available
2010. 254 p. 131 illus., 42 in color. Softcover

14,95 €
Führungskompetenz für Leitende Ärzte
Motivation, Teamführung, Konfliktmanagement im Krankenhaus

Insbesondere von Leitenden Ärzten werden neben den medizinischen zunehmend auch Führungskompetenzen erwartet. Diese Kompetenzen sind nachwuchskarrierefördernd.


Features

Contents
Sektion Motivation.
Sektion Teamentwicklung.
Sektion Konfliktbewältigung.

Fields of interest
Public Health; Medicine (general); Internal Medicine; Surgery; Health Administration

Target groups
Professional/practitioner

Type of publication
Professional book

Lehrbuch Tertiare Notfall- und Intensivmedizin


Features
Das komplette Basiswissen zur Notfallmedizin, Anästhesie und Intensivmedizin wird übersichtlich und praxisrelevant dargestellt. Innovativ ist der fallbezogene und interdisziplinäre Zugang, der sich an das neue Curriculum der Medizin anlehnt. Zudem wird der Lehrstoff übersichtlich gegliedert und didaktisch aufbereitet. Zahlreiche Abbildungen und anschauliche Fotos geben Einblick in diese spannenden [...] [..]

Contents
Aus dem Inhalt: Worin unterscheiden sich Anästhesie, Intensiv- und Notfallmedizin? - Warum sind sie aber trotzdem so eng miteinander verknüpft? - Welchen Sinn macht die gemeinsame Betrachtung, das parallele Lernen? - Manuelle Kompetenzen: Zugangswege; Atemwegsmanagement und Beatmungstherapie; Monitoring. - Anästhesie: Päranäthesiervisite; Anästhesiearbeitsplatz; Atemwegsmanagement in der Anaesthesie; Anaesthesie-Medikamente; Patientenübernahme; Monitoring und erweitertes Monitoring in der Anaesthesie; Anaesthesieverfahren; Postoperatives Management. - Notfallmedizin: Herzstillstand und [...] [..]

Fields of interest
Urology / Andrology

Target groups
Professional/practitioner

Type of publication
Monograph

Donner et après...

La procréation par don de spermatzoïdes avec ou sans anonymat

Faut-il lever l’anonymat du don de sperme ? La question se pose d’autant que plusieurs pays ont modifié leur législation en ce sens et que des enfants devenus adultes revendiquent avec force la possibilité de connaître l’identité de l’homme qui, en donnant son sperme, a permis à leurs parents de les concevoir. Malheureusement le débat reste souvent dans les registres émotionnel et compassionnel, sans réelle évaluation des programmes d’aide à la procréation par don de spermatozoïdes et sans véritable réflexion sur les enjeux et les conséquences des choix éthiques qui devront être faits. Cet ouvrage rend compte du vécu et du regard des équipes médicales et des psychologues qui aident les hommes et les femmes à devenir parents grâce à un don, et donne la parole à des philosophes et à différents spécialistes dans une approche transdisciplinaire. Enfin et surtout, les acteurs eux-mêmes sont présents, qu’ils soient parents, donneurs ou enfants, grâce à leurs très nombreux témoignages.

Features
Faut-il lever l’anonymat du don de sperme ? La question se pose d’autant que plusieurs pays ont modifié leur législation en ce sens et que des enfants devenus adultes revendiquent avec force la possibilité de connaître l’identité de l’homme qui, en donnant son sperme, a permis à leurs parents de les concevoir. Malheureusement le débat reste souvent dans les registres émotionnel et compassionnel, sans réelle [...] [..]

Fields of interest
Urology / Andrology

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. XV, 302 p. (L’homme dans tous ses états, Vol. 1) Softcover
19,91 €

2010. XI, 169 S. 169 Abb. in Farbe. Hardcover
36,32 €
ISBN 978-3-211-75604-1

106 Medicine
Batman und andere himmlische Kreaturen - Nochmal 30 Filmcharaktere und ihre psychischen Störungen


Contents
Beschreibung von psychischen Störungen anhand der Hauptcharaktere aus 30 Spielfilmen.

Fields of interest
Psychiatry; Psychotherapy; Psychology (general)

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. 350 S. 68 Abb. in Farbe. Hardcover
37,34 € ISBN 978-3-642-12738-0

Asymptomatic Atherosclerosis
Pathophysiology, Detection and Treatment

Despite recent advances in the diagnosis and treatment of asymptomatic atherosclerosis, available traditional screening methods for early detection and treatment of asymptomatic coronary artery disease are grossly insufficient and fail to identify the majority of victims prior to the onset of a life-threatening event. In Asymptomatic Atherosclerosis: Pathophysiology, Detection and Treatment, Dr. Morteza Naghavi and leading authorities from the Society for Heart Attack Prevention and Eradication (SHAPE) present a new paradigm for the screening and primary prevention of asymptomatic atherosclerosis. The text focuses on accurate, yet underutilized, measures of subclinical atherosclerosis, notably coronary artery calcium scanning and carotid intima-media thickness measurement. The authors introduce a comprehensive approach to identifying the vulnerable patients (asymptomatic individuals at risk of a near future adverse event). Additional chapters discuss future directions towards containing the[…]

Features
Despite recent advances in the diagnosis and treatment of asymptomatic atherosclerosis, available traditional screening methods for early detection and treatment of asymptomatic coronary artery disease are grossly insufficient and fail to identify the majority of victims prior to the onset of a life-threatening event. In Asymptomatic Atherosclerosis: Pathophysiology, Detection and Treatment, Dr. Morteza […]

Contents

Features
The text focuses on accurate, yet underutilized, measures of subclinical atherosclerosis, notably coronary artery calcium scanning and carotid intima-media thickness measurement. The authors introduce a comprehensive approach to identifying the vulnerable patients (asymptomatic individuals at risk of a near future adverse event). Additional chapters discuss future directions towards containing the[…]

Contents

Fields of interest
Oncology; Cancer Research; Human Genetics

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2010. XII, 112 p. 6 illus., 3 in color. (Cancer Treatment and Research, Vol. 155) Hardcover
99,95 € ISBN 978-1-4419-6032-0

Cancer Genetics

Cancer Genetics is a collection of chapters covering the key recent developments in cancer genetics which have an impact on clinical care. The target audience will be physicians and scientists who need to be apprised on the most recent developments in the field.

Features
Cancer genetics has revolutionized the practice of medicine as inherited genetic information helps predict which individuals are at risk of developing various forms of cancer. Furthermore, somatically acquired genetic changes help identify therapeutic targets for patients with several common tumor types such as breast and colon cancer. Cancer Genetics reviews seminal discoveries such as genetic susceptibility[…]

Contents
Development of Normal Fetal Movements
The First 25 Weeks of Gestation

This work aims to provide a detailed reasoned map of fetal behavior by describing its features and evolution from 10 to 25 weeks gestation. Each behavioral event is described, measured in seconds and presented as it occurs in its natural sequence, thus providing a ‘real-time’ picture of fetal behavior. Links between events become clear, and events are connected to the changing anatomy and physiology of the nervous system and of the fetal body in general. Transient behaviour with its underlying structures and possible functions is carefully distinguished from anticipatory functions heralding post-natal life. Furthermore, phenomena of physiologic significance during prenatal life, but which can acquire pathological connotations for the premature infant having to meet the different requirements of the post-natal environment, are also outlined. Finally, various prenatal ‘myths’ are discussed, in order to give scientific information on issues that are particularly relevant, given the heated pro-life[...]

Features
This work aims to provide a detailed reasoned map of fetal behavior by describing its features and evolution from 10 to 25 weeks gestation. Each behavioral event is described, measured in seconds and presented as it occurs in its natural sequence, thus providing a ‘real-time’ picture of fetal behavior. Links between events become clear, and events are connected to the changing anatomy and physiology of the[...]

Contents
1 General Movements 2 Startles, Twitches and Clonuses 3 Hiccups, Yawning and Gasping 4 Fetal Breathing Movements 5 Swallowing, Sucking, and Handedness as Inferred from Fetal Thumb Sucking 6 Localized Movements 7 Facial Expressions 8 Rest-Breathing Movements 5 Swallowing, Sucking, and Handedness as Inferred from Fetal Thumb Sucking 6 Localized Movements 7 Facial Expressions 8 Rest-Breathing Movements 5 Swallowing, Sucking, and Handedness as Inferred from Fetal Thumb Sucking 6 Localized Movements 7 Facial Expressions 8 Rest-Breathing Movements 9 Twin Fetuses and Twin Myths 10 Conclusions. Movement is Life

Fields of interest
Obstetrics / Perinatology; Ultrasound; Neurology; Pediatrics; Developmental Psychology

Target groups
Professional/practitioner

Type of publication
Professional/practitioner

Available
2010. X, 76 pagg. 50 figg. Softcover
23,99 €
ISBN 978-88-470-1648-4

Il manuale MERCK dei sintomi
Una guida pratica e concisa all’eziologia, alla valutazione e al trattamento

Il Manuale Merck dei sintomi è una guida concisa e maneggevole che sarà di sostegno al medico nella valutazione accurata del paziente e nella scelta del trattamento volto ad alleviare i suoi sintomi. Adatto a essere portato nella tasca del camice per la sua dimensione compatta, questo manuale è organizzato alfabeticamente, permettendo così una consultazione rapida e intuitiva. Per le sue caratteristiche, il volume è ideale anche per gli studenti di medicina che frequentano i vari reparti specialistici e per gli infermieri; è inoltre un utile aide-mémoire per i clinici nella loro pratica clinica quotidiana.

Features
Il Manuale Merck dei sintomi è una guida concisa e maneggevole che sarà di sostegno al medico nella valutazione accurata del paziente e nella scelta del trattamento volto ad alleviare i suoi sintomi. Adatto a essere portato nella tasca del camice per la sua dimensione compatta, questo manuale è organizzato alfabeticamente, permettendo così una consultazione rapida e intuitiva. Per le sue caratteristiche, [...]


**Management in radiologia**

Il radiologo è oggi chiamato a svolgere, oltre alla professione medica, anche mansioni organizzativo-gestionali, e a operare scelte cliniche sempre più interconnesse a conoscenze e competenze tecniche. Il volume ha un formato semplice e chiaro, a contenuto essenziale, rivolto ai colleghi dell’area radiologica che desiderino cimentarsi con tematiche di ordine gestionale e organizzativo (con un occhio anche alla preparazione di un colloquio per l’incarico di Direzione di Struttura Complessa). La conoscenza degli argomenti trattati è divenuta essenziale nel complesso sistema sanitario, in cui interagiscono molteplici fattori etterogeni e dinamici che devono integrarsi e coordinarsi per rispondere al meglio ai bisogni assistenziali del paziente. Tali tematiche devono pertanto necessariamente far parte del bagaglio culturale di ogni medico specialista e quindi anche del radiologo.

**Features**

Il radiologo è oggi chiamato a svolgere, oltre alla professione medica, anche mansioni organizzativo-gestionali, e a operare scelte cliniche sempre più interconnesse a conoscenze e competenze tecniche. Il volume ha un formato semplice e chiaro, a contenuto essenziale, rivolto ai colleghi dell’area radiologica che desiderino cimentarsi con tematiche di ordine gestionale e organizzativo (con un occhio anche alla […]

**Contents**


**Fields of interest**

Health Administration; Imaging / Radiology

**Target groups**

Professional/practitioner

**Type of publication**

Contributed volume

**Available**

2010. XX, 344 pagg. 10 figg. a colom. Softcover

48,03 €

ISBN 978-88-470-1716-0

---

**B. Shah, Henry Ford Health System, Detroit, MI, USA; G. Fundaro, Henry Ford Health System, Detroit, MI, USA; S. Mandava, Henry Ford Health System, Detroit, MI, USA**

**Breast Imaging Review**

A Quick Guide to Essential Diagnoses

Breast Imaging Review: A Quick Guide to Essential Diagnoses serves as a quick review of essential radiology findings for interpreting multimodality images of the breast. The book includes 92 easy-to-read cases presenting common diagnoses, with over 360 high-quality figures encompassing mammography, ultrasound, MRI, and PET images. Also included are concise pearls covering the basics of interventional breast procedures, such as MRI-guided breast biopsy, galactography, and ultrasound-guided cyst aspirations, along with high yield facts vital to the practice of breast imaging. Co-authored by Drs. Biren A. Shah, Gina M. Fundaro, and Sabala Mandava, this book successfully integrates a comprehensive array of images, diagnoses, and discussion points into a quickly reviewable format. Breast Imaging Review is a valuable resource for radiology residents preparing to take the oral boards, as well as fellows and practicing radiologists interested in reviewing the basics of breast imaging interpretation and […]

**Features**

Breast Imaging Review: A Quick Guide to Essential Diagnoses serves as a quick review of essential radiology findings for interpreting multimodality images of the breast. The book includes 92 easy-to-read cases presenting common diagnoses, with over 360 high-quality figures encompassing mammography, ultrasound, MRI, and PET images. Also included are concise pearls covering the […]

**Contents**


**Fields of interest**

Imaging / Radiology; Diagnostic Radiology

**Target groups**

Professional/practitioner

**Type of publication**

Professional book

**Available**

2010. XII, 238 p. 646 illus., 323 in color. Softcover

49,95 €

ISBN 978-1-4419-1727-0

---

**I. Stöver, Essen; P. Feyer, Vivantes Klinikum Neukölln, Berlin**

**Praxismanual Strahlentherapie**


**Features**

Im Praxismanual Strahlentherapie findet der Strahlentherapeut/die Strahlentherapeutin klare, leicht auffindbare Information zu allen Themen bieten, die ihn/sie im Alltag interessieren könnten. Stichwortartiger Text, viele Aufzählungen und Tabellen garantieren schnelle Erfassbarkeit und optimale Übersichtlichkeit. Gliederung nach Indikationen nur die alltagsrelevanten Informationen zu Klinik, […]

**Contents**


**Fields of interest**

Radiotherapy; Oncology; Imaging / Radiology

**Target groups**

Professional/practitioner

**Type of publication**

Handbook

**Available**

2010. 443 S. 50 Abb. Softcover

56,03 €

ISBN 978-3-642-10536-4
La maladie mentale, au sens large, se manifestant à bas bruit ou par une symptomatologie lourde, a été analysée de manière spécifique par la Scolastique de l'Iran médiéval. Cette singularité repose sur le fait que le sujet s'inscrit dans un monde où la Nature et la matière sont tout aussi mais que ces dernières sont le lieu d'action du Divin. Ainsi une double lecture du trouble psychique en découle, une hyper-rationnelle, issue de la matière, fondée par la notion de causalité, une autre en amont de la matière, autrement plus complexe qu'est l'Intelllect agent, hors psyché, avatar du Stoïcisme musulman. Cet édifice théorique voit ses limites non dans l'appropréhension de la folie, affaire de raison, mais dans l'abord du monde plus vaste des «passions» (le domaine des émotions) ; les difficultés rencontrées là par le dispositif scolastique, ses tentatives d'en discerner les rouages, sont, par elles-mêmes, riches d'enseignement.L'auteur, iranologue, docteur en médecine et en philosophie, s'appuie sur des [...] 

**Features**
La maladie mentale, au sens large, se manifestant à bas bruit ou par une symptomatologie lourde, a été analysée de manière spécifique par la Scolastique de l'Iran médiéval. Cette singularité repose sur le fait que le sujet s'inscrit dans un monde où la Nature et la matière sont tout aussi mais que ces dernières sont le lieu d'action du Divin. Ainsi une double lecture du trouble psychique en découle, l’une [...] 

**Fields of interest**
Medicine (general); Psychiatry; History; Philosophy of Medicine

**Target groups**
Professional/practitioner

**Type of publication**
Monograph

**Available**
2010. VIII, 200 p. (Médecines d'Asie: Savoirs et Pratiques) Softcover

37,91 €

---

**Modern Dietary Fat Intakes in Disease Promotion**

The industrial and agricultural revolutions have dramatically changed our lifestyles including where we get foods and what we eat. Modern diets have moved away from a close association with historically beneficial foods and diets towards foods and diets with increased fats and contaminants and with much lower intakes of fruits and vegetables. Modern Dietary Fat Intakes in Disease Promotion focuses on the scientific evidence that define such risks in modern diets with the consequences of increased illness, cancer and disease. There is also an emphasis on methods to reverse negative components of modern diets for health improvement. The volume is divided into six sections. The first section focuses on the behavioural aspects of eating and is followed by sections on fats, obesity and cardiovascular disease and fats and cholesterol. The fourth section contains novel chapters on the potential for contaminants in fats and oils to increase risk of illnesses. The fifth section examines fat induced[...]

**Features**
The industrial and agricultural revolutions have dramatically changed our lifestyles including where we get foods and what we eat. Modern diets have moved away from a close association with historically beneficial foods and diets towards foods and diets with increased fats and contaminants and with much lower intakes of fruits and vegetables. Modern Dietary Fat Intakes in Disease Promotion focuses on the [...] 

**Contents**
Dietary fatty acids: Biosynthesis, metabolism and mechanisms of disease causation. - Modern Western diets in disease promotion and illness: The reverse Columbus concept. - Nutrition challenges of the 21st century: Role in disease causation. - The adverse role of dietary fat in the metabolic syndrome/insulin-resistant states. - Obesity and dietary fats: a social determinant of ill health. - Fatty acid ratios in animals: Modulation and role in illness promotion. - Diet and toxic liver injury. - Soybean oils in heart disease promotion and prevention. - Partially hydrogenated fats in the US[...]

**Fields of interest**
Clinical Nutrition; Nutrition; Metabolic Diseases; Primary Care Medicine

**Target groups**
Professional/practitioner

**Type of publication**
Contributed volume

**Available**
2010. XXV, 475 p. 24 Illus. (Nutrition and Health) Hardcover

159,95 €

---

**Acupuncture Therapy for Neurological Diseases**

Written in modern scientific language, “Acupuncture Therapy for Neurological Diseases: A Neurobiological View” discusses current research, applying multiple neuroscience approaches, on the effect of acupuncture on neurological diseases and the underlying mechanisms. Apart from basic principles of acupuncture, topics include acupuncture analgesia, acupuncture-drug balanced anesthesia, acute and chronic body pain, stroke, cardiac diseases, hypertension, hypotension, epilepsy, neurotransmitter suppression, female infertility, menopausal & perimenopausal syndrome, smoking, depression, and drug addiction. Each chapter is written by experts in the field. This unique book provides a broad perspective on the principles of acupuncture for acupuncture researchers and neuroscientists. It summarizes clinical applications of various acupuncture and optimal conditions in the treatment of neurological diseases. For a medical student, this book is a modern course in ancient Traditional Chinese Medicine, especially [...] 

**Features**
Written in modern scientific language, “Acupuncture Therapy for Neurological Diseases: A Neurobiological View” discusses current research, applying multiple neuroscience approaches, on the effect of acupuncture on neurological diseases and the underlying mechanisms. Apart from basic principles of acupuncture, topics include acupuncture analgesia, acupuncture-drug balanced anesthesia, acute and chronic body [...] 

**Contents**

**Fields of interest**
Acupuncture; Neurobiology; Complementary & Alternative Medicine; Neurosciences

**Target groups**
Professional/practitioner

**Type of publication**
Monograph

**Available**
2010. Approx. 400 p. 100 Illus., 40 in color. Hardcover

179,95 €
Behçet’s Syndrome

Behçet’s Syndrome has seen great strides over the last two decades in the availability of new treatments and the understanding of underlying pathogenesis. Only 30 years ago the majority of particularly young men with Behçet’s lost total eye sight, now only a minority do. This book covers the most recent developments in the basic and clinical aspects of Behçet’s Syndrome. International authorities have collaborated to offer their diverse expert knowledge on the multiple affected organs and systems, including the skin, the eye, the brain, the lungs and not the least the gastrointestinal and the locomotor systems. A special chapter is devoted to juvenile disease. The definitive resource on Behçet’s Syndrome, this book is well suited for rheumatologists, dermatologists, ophthalmologists, neurologists, and health professionals caring for Behçet’s patients.

Features
Behçet’s Syndrome has seen great strides over the last 2 decades in the availability of new treatments and the understanding of underlying pathogenesis. Only 30 years ago the majority of particularly young men with Behçet’s lost total eye sight, now only a minority do. This book covers the most recent developments in the basic and clinical aspects of Behçet’s Syndrome. International authorities have [...]
Human Capacities and Moral Status

Many debates about the moral status of things—for example, debates about the natural rights of human fetuses or nonhuman animals—eventually migrate towards a discussion of the capacities of the things in question—for example, their capacities to feel pain, think, or love. Yet the move towards capacities is often controversial: if a human’s capacities are the basis of its moral status, how could a human having lesser capacities than you and I have the same “serious” moral status as you and I? This book answers this question by arguing that if something is human, it has a set of typical human capacities; that if something has a set of typical human capacities, it has serious moral status; and thus all human beings have the same sort of serious moral status as you and I. Beginning from what our common intuitions tell us about situations involving “temporary incapacitation”—where a human organism has, then loses, then regains a certain capacity—this book argues for substantive conclusions regarding[…]

Features
Many debates about the moral status of things—for example, debates about the natural rights of human fetuses or nonhuman animals—eventually migrate towards a discussion of the capacities of the things in question—for example, their capacities to feel pain, think, or love. Yet the move towards capacities is often controversial: if a human’s capacities are the basis of its moral status, how could a human[…]

Fields of interest
Ethics; Theory of Medicine / Bioethics; Philosophy of Medicine; Philosophy of Mind; Public Health

Target groups
Professional/practitioner

Available
2010, XIV, 208 p. (Philosophy and Medicine, Vol. 108) Hardcover

99,95 €

The Place of Probability in Science

The Place of Probability in Science In Honor of Ellery Eells (1953-2006)

The purpose of philosophy, broadly conceived, can be described as that of attempting to resolve heretofore unresolvable conceptual and theoretical problems, especially those that lie at the foundations of knowledge and values. Given the central role of science in acquiring reliable knowledge, the study of science has become of special importance within philosophy. And within philosophy of science, in turn, no other concept possesses the centrality and importance as does that of probability. To clarify and illuminate the place of probability in science Ellery Eells and James H. Fetzer have brought together some of the most distinguished philosophers from our time. After a comprehensive introduction to alternative conceptions of objective probability and the difficulties that they confront, three studies describe the special problems that arise within this context and the comparative merits of different accounts. The second section addresses the nature of lawfulness and of relations between micro- and[…]

Features
The purpose of philosophy, broadly conceived, can be described as that of attempting to resolve heretofore unresolvable conceptual and theoretical problems, especially those that lie at the foundations of knowledge and values. Given the central role of science in acquiring reliable knowledge, the study of science has become of special importance within philosophy. And within philosophy of science, in turn, no other concept possesses the centrality and importance as does that of probability. To clarify and illuminate the place of probability in science Ellery Eells and James H. Fetzer have brought together some of the most distinguished philosophers from our time. After a comprehensive introduction to alternative conceptions of objective probability and the difficulties that they confront, three studies describe the special problems that arise within this context and the comparative merits of different accounts. The second section addresses the nature of lawfulness and of relations between micro- and[…]

Fields of interest
Philosophy of Science; Epistemology; Statistical Theory and Methods; Philosophy of the Social Sciences; Modern Philosophy

Target groups
Research

Type of publication
Monograph

Available
2010, XII, 368 p. (Boston Studies in the Philosophy of Science, Vol. 284) Hardcover

139,95 €

Natural Deduction, Hybrid Systems and Modal Logics

This volume provides an extensive treatment of Natural Deduction and related types of proof systems, with a focus on the practical aspects of proof methods. The book has two main aims: Its first aim is to provide a systematic and historical survey of the variety of Natural Deduction systems in Classical and Modal Logics. The second aim is to present some systems of hybrid character, mixing Natural Deduction with other kinds of proof methods (including Sequent systems, Tableaux, Resolution). Such systems tend to be more universal and effective, because of the possibility of mixing strategies of proof search from different areas. All necessary background material is provided, in particular, a detailed presentation of Modal Logics, including First-Order Modal and Hybrid Modal Logics. The deduction systems presented in the book may be of interest to working logicians, researchers on automated deduction and teachers of logic.

Features
This volume provides an extensive treatment of Natural Deduction and related types of proof systems, with a focus on the practical aspects of proof methods. The book has two main aims: Its first aim is to provide a systematic and historical survey of the variety of Natural Deduction systems in Classical and Modal Logics. The second aim is to present some systems of hybrid character, mixing Natural Deduction[…]

Contents

Fields of interest
Logic; Mathematical Logic and Foundations; Mathematical Logic and Formal Languages; Algorithms; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Monograph

Available

169,95 €
Truth in Science, the Humanities and Religion

Balzan Symposium 2008

The question of the meaning of “truth” is central to many areas of contemporary debate, whether between those subscribing to a post-Enlightenment view of the world and those who seek fundamental truth in religious texts, or between those maintaining that there are absolute truths and those believing facts to be social constructs. For some, the ultimate truth is revealed through religious faith and textual authority. Can this view be reconciled with an evidence-based, materialist, post-Enlightenment perspective of the truth as embraced by the natural sciences? If religion holds the key to the truth, which religion and which truths? What is the attitude of the humanities to the meaning of truth? Truth in the sciences and the humanities as well as in religion and theology is the central theme of this book based on the proceedings of a conference organized by the International Balzan Foundation. It contains the speakers’ lectures, the corresponding reactions of the invited panel members as well as the…

Contents


Fields of interest

Philosophy of Science; Humanities; Philosophy of Religion; Epistemology; Interdisciplinary Studies

Target groups

Research

Type of publication

Proceedings

Available

2010. Approx. 200 p. Dustjacket

99.95 €

ISBN 978-1-4020-9895-6

Abortion and the Moral Significance of Merely Possible Persons

Finding Middle Ground in Hard Cases

When, if ever, is it morally permissible for a woman to have an abortion? When, if ever, are agents morally obliged to bring new persons into existence—whether by refraining from having an abortion or by conceiving a child? Questions of abortion and procreation provoke debates at the practical level that can seem endless and emotionally fraught. The same questions also raise surprisingly deep issues regarding the very nature and structure of moral law. The goal of Abortion and the Moral Significance of Merely Possible Persons is to lay the groundwork for a more productive discussion by first identifying the common ground shared by the relevant parties to the debates—including the common ground we can agree exists between the great normative traditions of consequentialism and deontology. The author then will determine just how far, starting from that practical and theoretical common ground, we may go in resolving hard cases. The strategy here is to work from neutral ground to generate the concrete…

Features

This book has two main goals. The first is to give an account, called Variabilism, of the moral significance of merely possible persons—persons who, relative to a particular circumstance, or possible future or world, could but in fact never do exist. The second is to use Variabilism to illuminate abortion. According to Variabilism, merely possible persons—just like anyone else—matter morally…

Contents

From the contents 1 Introduction. 2 The Moral Significance of Merely Possible Persons. 3 McMahan’s Abortion Paradox. 4 Three More Arguments Against Early Abortion. 5 A Variabilist Approach to Abortion. 6 Conclusion.

Fields of interest

Ethics; Theory of Medicine / Bioethics; Constitutional Law; Medical Law; Law Theory / Law Philosophy; Philosophy of Medicine

Target groups

Research

Type of publication

Monograph

Available


99.95 €


Emotions and Risky Technologies

Finding Middle Ground in Hard Cases

By offering an innovative and challenging approach to the topic of risk and emotion, this book covers completely new territory. It focuses on risk and emotion from the perspective of moral philosophy and emphasizes that emotions are an important source of moral knowledge. The book connects to important debates about risk and emotion in empirical decision theory. However, whereas in these debates, emotions are…

Features


Fields of interest

Ethics; Philosophy of Technology; Social Sciences (general)

Target groups

Research

Type of publication

Contributed volume

Available


99.95 €

Das Zeitdenken bei Husserl, Heidegger und Ricoeur


Features

Das Present Situation in the Philosophy of Science

This volume is a serious attempt to open up the subject of European philosophy of science to real thought, and provide the structural basis for the interdisciplinary development of its specialist fields, but also to provoke reflection on the idea of ‘European philosophy of science’. This effort should foster a contemporaneous reflection on what might be meant by philosophy of science in Europe and European philosophy of science, and how in practice awareness of it could assist philosophers interpret and motivate their research through a stronger collective identity. The overarching aim is to set the background for a collaborative project organizing, systematizing, and ultimately forging an identity for, European philosophy of science by creating research structures and developing research networks across Europe to promote its development. 

Features
This volume is a serious attempt to open up the subject of European philosophy of science to real thought, and provide the structural basis for the interdisciplinary development of its specialist fields, but also to provoke reflection on the idea of ‘European philosophy of science’. This effort should foster a contemporaneous reflection on what might be meant by philosophy of science in Europe and European [...] 

Contents

Fields of interest
Philosophy (general)

Target groups
Upper undergraduate

Type of publication
Contributed volume

Available

139,95 €
Laser 2009

The subject of the workshop combines two key technologies of modern research: lasers and ion storage techniques. This combination has opened new research opportunities for investigations in atomic and nuclear physics, for detection of quantum effects in particle ensembles as well as for precision spectroscopy especially for testing fundamental interactions and symmetries. This book highlights the progress in these areas since 2006 and indicates the most attractive directions of future research and technical developments. It may be interesting for a large number of scientists, post doctoral and PhD students.

Features

Fields of interest
Laser Technology and Physics, Photonics

Target groups
Research

Type of publication
Proceedings

Available
189,95 €
ISBN 978-3-642-12285-9

New Paths Towards Quantum Gravity

Aside from the obvious statement that it should be a theory capable of unifying general relativity and quantum field theory, not much is known about the true nature of quantum gravity. New ideas - and there are many of them for this is an exciting field of research - often diverge to a degree where it seems impossible to decide in which of the many possible direction(s) the ongoing developments should be further sustained. The division of the book in two (overlapping) parts reflects the duality between the physical vision and the mathematical construction. The former is represented by tutorial reviews on non-commutative geometry, on space-time discretization and renormalization and on gauge field path integrals. The latter one by lectures on cohomology, on stochastic geometry and on mathematical tools for the effective action in quantum gravity. The book will benefit everyone working or entering the field of quantum gravity research.

Features
Aside from the obvious statement that it should be a theory capable of unifying general relativity and quantum field theory, not much is known about the true nature of quantum gravity. New ideas - and there are many of them for this is an exciting field of research - often diverge to a degree where it seems impossible to decide in which of the many possible direction(s) the ongoing developments should be further sustained. The division of the book in two (overlapping) parts reflects the duality between the physical vision and the mathematical construction. The former is represented by tutorial reviews on non-commutative geometry, on space-time discretization and renormalization and on gauge field path integrals. The latter one by lectures on cohomology, on stochastic geometry and on mathematical tools for the effective action in quantum gravity. The book will benefit everyone working or entering the field of quantum gravity research.

Fields of interest
Atomic, Molecular, Optical and Plasma Physics

Target groups
Research

Type of publication
Proceedings

Available
2010. 228 p. (Atomic, Molecular, Chemical Physics, Vol. 1221)
Hardcover
104,95 €
ISBN 978-0-7354-0764-0

X-Ray Optics and Microanalysis
Proceedings of the 20th International Congress

ICXOM Series is a platform dedicated for reporting progress in fundamental and applied research in x-ray optics and micro- and nano-analysis by means of x-ray beams (with an ICXOM20 emphasis on synchrotron sources), electrons or other energetic particles, including application examples, as well as methodological and instrumental developments.

Features
ICXOM Series is a platform dedicated for reporting progress in fundamental and applied research in x-ray optics and micro- and nano-analysis by means of x-ray beams (with an ICXOM20 emphasis on synchrotron sources), electrons or other energetic particles, including application examples, as well as methodological and instrumental developments.

Fields of interest
Atomic, Molecular, Optical and Plasma Physics

Target groups
Research

Type of publication
Proceedings

Available
2010. XII, 350 p. (Lecture Notes in Physics, Vol. 807)
Softcover
69,95 €
ISBN 978-3-642-11896-8
Technology of Gallium Nitride Crystal Growth

This book deals with the important technological aspects of the growth of GaN single crystals by HVPE, MOCVD, amonothermal and flux methods for the purpose of free-standing GaN wafer production. Leading experts from industry and academia report in a very comprehensive way on the current state-of-the-art of the growth technologies and optical and structural properties of the GaN crystals are compared.

Features

This book deals with the important technological aspects of the growth of GaN single crystals by HVPE, MOCVD, amonothermal and flux methods for the purpose of free-standing GaN wafer production. Leading experts from industry and academia report in a very comprehensive way on the current state-of-the-art of the growth technologies and optical and structural properties of the GaN crystals are compared.

Contents


Fields of interest
Crystallography; Optical and Electronic Materials

Target groups
Research

Type of publication
Monograph

Available

2010. XX, 334 p. 400 illus., 200 in color. (Springer Series in Materials Science, Vol. 133) Hardcover

119.95 €
ISBN 978-3-642-04828-9

The Physics of Proteins

An Introduction to Biological Physics and Molecular Biophysics

Physics and the life sciences have established new connections within the past few decades, resulting in biological physics as an established subfield with strong groups working in many physics departments. These interactions between physics and biology form two-way streets with physics providing new tools and concepts for understanding life, while biological systems can yield new insights into the physics of complex systems. To address the challenges of this interdisciplinary area, The Physics of Proteins: An Introduction to Biological Physics and Molecular Biophysics is divided into three interconnected sections. In Parts I and II, early chapters introduce the terminology and describe the main biological systems that physicists will encounter. Similarities between biomolecules, glasses, and solids are stressed with an emphasis on the fundamental concepts of living systems. The central section (Parts III and IV) delves into the dynamics of complex systems. A main theme is the realization that the study of proteomics delves into the dynamics of complex systems.

Features

Physics and the life sciences have established new connections within the past few decades, resulting in biological physics as an established subfield with strong groups working in many physics departments. These interactions between physics and biology form two-way streets with physics providing new tools and concepts for understanding life, while biological systems can yield new insights into the physics of complex systems. To address the challenges of this interdisciplinary area, The Physics of Proteins: An Introduction to Biological Physics and Molecular Biophysics is divided into three interconnected sections. In Parts I and II, early chapters introduce the terminology and describe the main biological systems that physicists will encounter. Similarities between biomolecules, glasses, and solids are stressed with an emphasis on the fundamental concepts of living systems. The central section (Parts III and IV) delves into the dynamics of complex systems. A main theme is the realization that the study of proteomics delves into the dynamics of complex systems.

Contents


Fields of interest
Biophysics and Biological Physics; Biochemistry; Biomedical Engineering; Biomedicine (general); Proteomics

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available

2010. XV, 448 p. 428 illus., 214 in color. (Biological and Medical Physics, Biomedical Engineering) Hardcover

159.95 €
ISBN 978-1-4419-0434-1

IUTAM-ISIMM Symposium on Mathematical Modeling and Physical Instances of Granular Flows

This symposium brought together mathematicians, physicists and engineers interested in the continuing development and application of mathematical models of granular matter. The main objective was to promote the interchange of new ideas and methodologies in areas ranging from mathematical physics and continuum mechanics to various applications in civil, geotechnical and process engineering. The main themes of the symposium were continuum models for slowly and rapidly sheared granular media, waves, statistical mechanics and statistical physics, with extensive consideration of both numerical simulation and experimental applications.

Features

This symposium brought together mathematicians, physicists and engineers interested in the continuing development and application of mathematical models of granular matter. The main objective was to promote the interchange of new ideas and methodologies in areas ranging from mathematical physics and continuum mechanics to various applications in civil, geotechnical and process engineering. The main themes of the symposium were continuum models for slowly and rapidly sheared granular media, waves, statistical mechanics and statistical physics, with extensive consideration of both numerical simulation and experimental applications.

Fields of interest
Soft and Granular Matter, Complex Fluids and Microfluidics; Mathematical Modeling and Industrial Mathematics; Civil Engineering

Target groups
Research

Type of publication
Proceedings

Available

199.95 €
Neutrino Factories, Superbeams, and Beta Beams

11th International Workshop on Neutrino Factories, Superbeams and Beta Beams—NuFact09

Neutrinos are the most enigmatic of all known elementary particles, able to penetrate kilometers of material and pass through the entire earth, emitted in enormous numbers by the sun and by nuclear reactors. New techniques are being invented to bring unprecedented precision to their study and understand their possible role in the creation of the Universe. The facilities being discussed will also advance the study of muons — massive unstable “cousins” of the electron. The NuFact series of annual international workshops, of which this is the 11th, brings together members of all of the major groups involved in the planning of such future physics facilities for the free exchange and advancement of ideas.

Features
Neutrinos are the most enigmatic of all known elementary particles, able to penetrate kilometers of material and pass through the entire earth, emitted in enormous numbers by the sun and by nuclear reactors. New techniques are being invented to bring unprecedented precision to their study and understand their possible role in the creation of the Universe. The facilities being discussed will also advance the [...] Features

Fields of interest
Particle Acceleration and Detection, Beam Physics; Nuclear Physics, Heavy Ions, Hadrons

Target groups
Research

Type of publication
Proceedings

Available

249,00 € ISBN 978-0-7354-0763-3

Quantum Theory
Reconsideration of Foundations · 5

As previous Växjö conferences on quantum foundations, QTRF-5 was notable not only for the contributions of the papers presented there but also for its exciting debates. These debates offered a great diversity of opinions on foundations of quantum mechanics (QM) and its future developments: from those defined by the view of those who adhere to the orthodox Copenhagen interpretation (which rejected realism and causality), at one end of the spectrum, to those who subscribed to realist views of the type advocated by Einstein, at the other end, with a number of views in between.

Features
As previous Växjö conferences on quantum foundations, QTRF-5 was notable not only for the contributions of the papers presented there but also for its exciting debates. These debates offered a great diversity of opinions on foundations of quantum mechanics (QM) and its future developments: from those defined by the view of those who adhere to the orthodox Copenhagen interpretation (which rejected realism and [...] Features

Fields of interest
Quantum Physics; Quantum Optics, Quantum Electronics, Nonlinear Optics

Target groups
Research

Type of publication
Proceedings

Available

139,95 € ISBN 978-0-7354-0777-0

Superstelle in esplosione
Fare cosmologia con le supernovae e i gamma-ray burst

Le supernovae e i gamma-ray burst, gli eventi più catastrofici che si verificano nell’Universo, sono oggetto di studio nei campi più dinamici della moderna ricerca astronomica. Dei secondi ancora non conosciamo con precisione i meccanismi che li innescano e tuttavia forti indizi suggeriscono che, come nelle supernovae, la causa scatenante sia il collasso esplosivo di stelle di grande massa. Nell’ultimo decennio, questi fenomeni sono diventati strumenti molto efficaci nello studio dell’origine e dell’evoluzione dell’Universo. I cosmologi li utilizzano come “fari” cosmici che illuminano i loro immediati dintorni e anche come sonde per ricostruire la dinamica dell’espansione dell’Universo. Grazie ad essi, oggi sappiamo che circa il 70% del contenuto di energia-materia dell’Universo è costituito di un’energia oscura la cui natura ci è ancora completamente ignota. Questo libro getta un po’ di luce sui curiosi destini delle superstelle in esplosione e sulle affascinanti conclusioni cosmologiche che [...] Features
Le supernovae e i gamma-ray burst, gli eventi più catastrofici che si verificano nell’Universo, sono oggetto di studio nei campi più dinamici della moderna ricerca astronomica. Dei secondi ancora non conosciamo con precisione i meccanismi che li innescano e tuttavia forti indizi suggeriscono che, come nelle supernovae, la causa scatenante sia il collasso esplosivo di stelle di grande [...] Features

Contents
Premessa - Antipasto - Universo in espansione - Dall’Universo alle stelle - Supernova - Stelle supreme: lampi di raggi gamma - Fari nel Cosmo - Un luminoso, scuro futuro - Appendici - Tabella delle costanti - Bibliografia.

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy; Astronomy, Astrophysics and Cosmology; Classical and Quantum Gravitation, Relativity Theory

Target groups
Popular/general

Type of publication
Popular science

Available

2010. X, 150 pagg. 67 figg. (Le Stelle) Softcover
21,15 € ISBN 978-88-470-1624-8
Reaction-Transport Systems
Mesoscopic Foundations, Fronts, and Spatial Instabilities

This book is an introduction to the dynamics of reaction-diffusion systems, with a focus on fronts and stationary spatial patterns. Emphasis is on systems that are not standard in the sense that either the transport is not simply classical diffusion (Brownian motion) or the system is not homogeneous. A important feature is the derivation of the basic phenomenological equations from the mesoscopic system properties. Topics addressed include transport with inertia, described by persistent random walks and hyperbolic reaction-transport equations and transport by anomalous diffusion, in particular subdiffusion, where the mean square displacement grows sublinearly with time. In particular reaction-diffusion systems are studied where the medium is in turn either spatially inhomogeneous, compositionally heterogeneous or spatially discrete. Applications span a vast range of interdisciplinary fields and the systems considered can be as different as human or animal groups migrating under external influences.[..]

Features
This book is an introduction to the dynamics of reaction-diffusion systems, with a focus on fronts and stationary spatial patterns. Emphasis is on systems that are not standard in the sense that either the transport is not simply classical diffusion (Brownian motion) or the system is not homogeneous. A important feature is the derivation of the basic phenomenological equations from the mesoscopic system.[..]

Contents

Fields of interest
Statistical Physics, Dynamical Systems and Complexity; Physical Chemistry; Theoretical Ecology / Statistics; Genetics and Population Dynamics; Industrial Chemistry / Chemical Engineering

Target groups
Research

Type of publication
Monograph

Available
119,95 €
ISBN 978-3-642-11442-7

---

Dislocation Dynamics During Plastic Deformation

The book gives an overview of the dynamic behavior of dislocations and its relation to plastic deformation. It introduces the general properties of dislocations and treats the dislocation dynamics in some detail. Finally, examples are described of the processes in different classes of materials, i.e. semiconductors, ceramics, metals, intermetallic materials, and quasicrystals. The processes are illustrated by many electron micrographs of dislocations under stress and by video clips taken during in situ strain experiments in a high-voltage electron microscope showing moving dislocations. Thus, the users of the book also obtain an immediate impression and understanding of dislocation dynamics.

Features
The book gives an overview of the dynamic behavior of dislocations and its relation to plastic deformation. It introduces the general properties of dislocations and treats the dislocation dynamics in some detail. Finally, examples are described of the processes in different classes of materials, i.e. semiconductors, ceramics, metals, intermetallic materials, and quasicrystals. The processes are illustrated by[..]

Contents

Fields of interest
Crystallography; Condensed Matter Physics; Structural Materials; Engineering (general)

Target groups
Research

Type of publication
Monograph

Available
139,95 €
ISBN 978-3-642-03176-2

---

Quantum Cosmology - The Supersymmetric Perspective - Vol. 1
Fundamentals

The two volumes that comprise Quantum Cosmology tackle the quantum description of the early universe from the perspective of supersymmetric models of elementary particle physics. The first volume is an accessible primer that covers the basics of the field, critically discussing ideas and concepts that comprise our current knowledge of supersymmetry and supergravity. After reviewing the fundamentals, it provides a thorough analysis of a first set of quantum cosmological models. The second volume is dedicated to more advanced topics. In it, the scope for analyzing quantum cosmological models within a supersymmetric framework is broadened. As much as possible, these two volumes treat what we know, what we think we know and what we think we do not know on an equal footing. Complete with problems and solutions for each chapter, the books are ideal for young, inquisitive minds eager to embark on in-depth research in this field. They provide readers with the tools they need to go on their own, pushing[..]

Features
The two volumes that comprise Quantum Cosmology tackle the quantum description of the early universe from the perspective of supersymmetric models of elementary particle physics. The first volume is an accessible primer that covers the basics of the field, critically discussing ideas and concepts that comprise our current knowledge of supersymmetry and supergravity. After reviewing the[..]

Contents
Introduction.- A Survey of Quantum Cosmology.- A Summary of Supersymmetry and Supergravity.- Canonical Quantization of N=1 Supergravity.- SQC.- N=1 SUGRA (Fermionic Differential Operator Representation).- Cosmologies With Hidden N=2 Supersymmetry.- Obstacles and Results: From QC to SQC.- Routes Beyond the Borders.- List of Symbols, Notation, and Useful Expressions.- Quantization of Hamiltonian Systems With Constraints.- Solutions to Exercises.- References.- Index.

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

Target groups
Research

Type of publication
Monograph

Available
2010. XII, 350 p. (Lecture Notes in Physics, Vol. 803) Softcover
69,95 €
ISBN 978-3-642-11574-5
Nuclear Physics Trends
7th Japan-China Joint Nuclear Physics Symposium

This symposium took place after six series of symposium held in Japan and China roughly each three years. The symposium covered almost all subjects related to Nuclear Physics in Japan and China; from low energy nuclear structure to ultra-relativistic energy heavy ion collisions, from photonouclear reaction to nuclear astrophysics, from physics proposals to accelerator facilities and so on.

Features
This symposium took place after six series of symposium held in Japan and China; from low energy nuclear structure to ultra-relativistic energy heavy ion collisions, from photonouclear reaction to nuclear astrophysics, from physics proposals to accelerator facilities and so on.

Fields of interest
Nuclear Physics, Heavy Ions, Hadrons; Particle Acceleration and Detection, Beam Physics

Target groups
Research

Type of publication
Proceedings

Available
199.95 €
ISBN 978-0-7354-0780-0

Optical Absorption of Impurities and Defects in Semiconducting Crystals

Hydrogen-like Centres

Semiconducting and Insulating Crystals details how absorption spectroscopy provides information on the nature, concentration, charge state and configuration of impurities in crystals and also on their kinetics and transformations under annealing. After an introduction of the bulk optical properties of semiconductors and insulators and of impurities in crystals, this book presents the physical bases necessary for the understanding of impurity spectra. The description of various set-ups and accessories used in absorption spectroscopy is followed by a presentation of experimental results on specific impurities and classes of impurities and their relation with those obtained by various computation and by other experimental techniques.

Features
Absorption spectroscopy provides information on the chemical nature, atomic structure and concentration of hydrogen-like centers, to which belong most of the dopants of semiconductors and insulators. In this book, an introduction to the bulk optical properties of these materials and to the properties of hydrogen-like centers is first provided, followed by a description of set-ups used in absorption [...]
Plasma Physics

An Introduction to Laboratory, Space, and Fusion Plasmas

This book is written by an experimentalist and covers all aspects of plasma physics at an introductory level. The fundamental concepts of plasma description are developed in a bottom-up approach of increasing mathematical complexity. The intuitive understanding of the concepts is emphasized. Different from most introductory texts, low-temperature plasmas, plasma discharges and plasma diagnostics get a much larger share. Controlled nuclear fusion is introduced and magnetic confinement is discussed at a simple level. Novel plasma phenomena as found in complex (dusty) plasmas are described. A large number of illustrations, worked out problems with solutions, and short summaries of the basics of each chapter make this text a companion for undergraduate and graduate students and a useful reference on the bookshelf.

Features

Plasma Physics gives a comprehensive introduction to the basic processes in plasmas and demonstrates that the same fundamental concepts describe cold gas-discharge plasmas, space plasmas, and hot fusion plasmas. Starting from particle drifts in magnetic fields, the principles of magnetic confinement fusion are explained and compared with laser fusion. Collective processes are discussed in terms of plasma [...]}

Contents


Fields of interest

Atoms and Molecules in Strong Fields, Laser Matter Interaction; Plasma Physics; Extraregional Physics, Space Sciences; Nuclear Engineering

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Available

2010. XVIII, 420 p. 180 illus. Hardcover

59.95 €
ISBN 978-3-642-10490-9

Optical Generation and Control of Quantum Coherence in Semiconductor Nanostructures

The unprecedented control of coherence that can be exercised in quantum optics of atoms and molecules has stimulated increasing efforts in extending it to solid-state systems. One motivation to exploit the coherent phenomena comes from the emergence of the quantum information paradigm, however many more potential device applications ranging from novel lasers to spintronics are all bound up with issues in coherence. The book focuses on recent advances in the optical control of coherence in exci-tonic and polaritonic systems as model systems for the complex semiconductor dynamics towards the goal of achieving quantum coherence control in solid-state. Special attention is given to the optical control of spin coherence. These front edge research topics are presented in the form of review articles by leading scientists.

Features

The unprecedented control of coherence that can be exercised in quantum optics of atoms and molecules has stimulated increasing efforts in extending it to solid-state systems. One motivation to exploit the coherent phenomena comes from the emergence of the quantum information paradigm, however many more potential device applications ranging from novel lasers to spintronics are all bound up with issues in [...]}

Contents


Fields of interest

Quantum Physics

Target groups

Research

Type of publication

Monograph

Available

2010. XX, 318 p. 290 illus., 145 in color. (NanoScience and Technology) Hardcover

119.95 €
ISBN 978-3-642-12490-7

Relativistic Quantentheorie

Für Bachelor: Mit Einführung in die Quantentheorie der Vielteilchensysteme


Features


Contents


Fields of interest

Quantum Physics; Theoretical, Mathematical and Computational Physics

Target groups

Upper undergraduate

Type of publication

German textbook

Available

2010. XVI, 345 S. 160 Abb., 80 in Farbe. (Springer-Lehrbuch) Softcover

42.01 €
ISBN 978-3-642-12049-7
9th International Conference on Vibration Measurements by Laser and Non-Contact Techniques and Short Course

The 9th International Conference on Vibration Measurements by Laser and Noncontact Techniques, organised by A.I.V.E.L.A. in collaboration with the Department of Mechanics of the Polytechnic University of Marches (former University of Ancona), will be held in the Tower of the Faculty of Engineering at the University in a modern complex of buildings situated on a hill facing Ancona’s beautiful harbour. A one-day tutorial course will be held the day before the Conference in order to provide fundamentals of Laser Techniques for Vibration Measurements and to offer hands-on experience on the most advanced instrumentation.

Features
The 9th International Conference on Vibration Measurements by Laser and Noncontact Techniques, organised by A.I.V.E.L.A. in collaboration with the Department of Mechanics of the Polytechnic University of Marches (former University of Ancona), will be held in the Tower of the Faculty of Engineering at the University in a modern complex of buildings situated on a hill facing Ancona’s beautiful harbour. A one-day […]

Fields of interest
Measurement Science, Instrumentation; Quality Control, Reliability, Safety and Risk; Laser Technology and Physics, Photonics

Target groups
Research

Type of publication
Proceedings

Available
209,00 €

Advances in Cryogenic Engineering

Translations of the Cryogenic Engineering Conference - CEC, Vol. 55

Readership includes engineers, scientists and students working in all areas of cryogenics and superconductivity as well as those working in areas that use cryogenics as an enabling technology (e.g. High Energy Physics, Astronomy, Space exploration, Materials science and Fusion energy). As this is an archival volume of cryogenic research it should be included in the collections of all major University and research libraries as well as libraries maintained by National Labs and research centers. The information in these proceedings will be of interest to both US and foreign researchers and engineers. This conference is the principal North American Conference on cryogenic engineering. It is attended by scientists and engineers from all over the world. The papers published here have been fully refereed and cover all aspects of cryogenic engineering including: refrigeration, superconductivity, cryocoolers, air liquefaction, heat and mass transfer, insulation systems, cryostat design and space cryogenics.

Features
Readership includes engineers, scientists and students working in all areas of cryogenics and superconductivity as well as those working in areas that use cryogenics as an enabling technology (e.g. High Energy Physics, Astronomy, Space exploration, Materials science and Fusion energy). As this is an archival volume of cryogenic research it should be included in the collections of all major University and […]

Fields of interest
Low Temperature Physics; Engineering Thermodynamics, Heat and Mass Transfer; Strongly Correlated Systems, Superconductivity

Target groups
Research

Type of publication
Proceedings

Available
439,00 €

Popular Science

100 große Sprünge

Die bedeutendsten Entdeckungen und Erfindungen der Menschheit


Contents
Medizin für die Bildung

Ein Weg aus der Krise

Was kann die Bildung von der Medizin lernen?
- Sehr viel! So die überraschende Antwort dieses Buchs. Denn es gibt für die Bildung ebenso einen Weg aus der Krise wie für den entzündeten Blinddarm: indem man die richtigen Diagnosen stellt und die richtigen Therapien sorgfältig erforscht. Damit unsere Kinder gut durch die Schule kommen, sollten wir nicht auf politische Reformen hoffen, sondern auf das Wissen über Lernen und Lernerfolg.<p/p>

Features
Was kann die Bildung von der Medizin lernen?
- Sehr viel! So die überraschende Antwort dieses Buchs. Denn es gibt für die Bildung ebenso einen Weg aus der Krise wie für den entzündeten Blinddarm: indem man die richtigen Diagnosen stellt und die richtigen Therapien sorgfältig erforscht. Damit unsere Kinder gut durch die Schule kommen, sollten wir nicht auf politische Reformen hoffen, sondern auf das Wissen über L-[c/p>

Contents

Fields of interest
Popular Science; Psychology (general); Education (general)

Target groups
Popular/general

Type of publication
Popular science

Available
2010. XII, 276 S. 56 Abb. Hardcover
18,64 €
ISBN 978-3-8274-2677-2

Psychology

Neuropsychology of the Sense of Agency

M. Balconi, Catholic University of Milan, Italy (Ed.)

From Consciousness to Action

Two related fields, the psychological and neuropsychological ones, provide an exhaustive overview of the complex issue of agency and self-agency. The cognitive and neuropsychological correlates are here considered as two sides of the same coin, since we have the main scope to find a correspondence between the hardware (cerebral processes) and the software (cognitive processes) of the representation of agency. All living system self-regulates, or, within any living system, there is a need of communication among the different parts of that system. This can include a unit as small as a cell, a plant, or animal, or even a more complex organism. For example, one’s systems are regulating one’s temperature: regulation is a property of the living system. Accordingly, in order to act it is necessary for organisms to be able to distinguish between self and other, whatever this ability is learned or is a part of the process of action. The predominant account on explaining the sense of agency of our actions is [...] 

Features
The complex issues of agency and self-agency have been examined by researchers in the related fields of psychology and neuropsychology. This volume approaches the cognitive and neuropsychological correlates as two sides of the same coin, with the aim of establishing a correspondence between the hardware (cerebral processes) and software (cognitive processes) of the representation of agency. All living systems [...] 

Contents

Fields of interest
Neuropsychology; Neuroscience; Cognitive Psychology; Psychiatry

Target groups
Research

Type of publication
Monograph

Available
2010. XVI, 196 p. 30 Illus. Hardcover
89,95 €

Kognitive Verhaltenstherapie bei Hypochondrie und Krankheitsangst


Features
Hypochondrie und Krankheitsangst: Angst vor Krank - krank vor Angst? Die Angst vor Tod und Tod kennt jeder, es sind Urängste des Menschen. Aber zuweilen nehmen diese Krankheitsängste Formen an, bei denen Betroffene sich kaum auf ihren Alltag konzentrieren können und sich nur noch durch ärztliche Rückversicherung vorübergehend beruhigen können. Massive und andauernde Krankheitsängste sind eine [...] 

Contents

Fields of interest
Psychotherapy and Counseling; Clinical Psychology; Behavioral Therapy; Psychotherapy; Health Psychology

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XII, 244 S. 18 Abb. Mit CD-ROM. Hardcover
37,34 €
ISBN 978-3-642-12118-0
The Practice of Functional Analytic Psychotherapy

Since the earliest years of its development, Functional Analytic Psychotherapy (FAP) has been hailed for its clinical innovation and transformative power with clients across the range of disorders. Building on the foundations of their earlier volumes about this versatile therapy, the editors of The Practice of Functional Analytic Psychotherapy bring together noted clinicians and researchers to explain in depth how FAP can be used in conjunction with a broad spectrum of therapeutic approaches, and with diverse client populations. The hallmarks of the method, including therapist sensitivity and responding to client behavior in the moment, courage, mindfulness, acceptance, and egalitarianism, inform a wide array of interventions and strategies, among them. Integrating FAP with other treatments, including cognitive behavioral therapy, acceptance and commitment therapy, dialectical behavior therapy, behavioral activation, psychodynamic therapies, and feminist therapies. Applying FAP across[..]

Features
Since the earliest years of its development, Functional Analytic Psychotherapy (FAP) has been hailed for its clinical innovation and transformative power with clients across the range of disorders. Building on the foundations of their earlier volumes about this versatile therapy, the editors of The Practice of Functional Analytic Psychotherapy bring together noted clinicians and researchers to explain in depth how FAP can be used in conjunction with a broad spectrum of therapeutic approaches, and with diverse client populations. The hallmarks of the method, including therapist sensitivity and responding to client behavior in the moment, courage, mindfulness, acceptance, and egalitarianism, inform a wide array of interventions and strategies, among them. Integrating FAP with other treatments, including cognitive behavioral therapy, acceptance and commitment therapy, dialectical behavior therapy, behavioral activation, psychodynamic therapies, and feminist therapies. Applying FAP across[..]

Fields of interest
Clinical Psychology; Psychiatry

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XVI, 272 p. Hardcover
89,95 €

Relational Competence Theory

Relational competence—the set of traits that allow people to interact with each other effectively—enjoys a long history of being recorded, studied, and analyzed. Accordingly, Relational Competence Theory (RCT) complements theories that treat individuals’ personality and functioning individually by placing the individual into full family and social context. The ambitious volume Relational Competence Theory: Research and Mental Health Applications opens out the RCT literature with emphasis on its applicability to interventions, and updates the state of research on RCT, examining what is robust and verifiable both in the lab and the clinic. The authors begin with the conceptual and empirical bases for the theory, and sixteen models demonstrate the range of RCT concerns and their clinical relevance, including: Socialization settings for relational competence. The ability to control and regulate the self. Relationship styles. Intimacy and negotiation. The use of practice exercises in[..]

Features
Relational competence—the set of traits that allow people to interact with each other effectively—enjoys a long history of being recorded, studied, and analyzed. Accordingly, Relational Competence Theory (RCT) complements theories that treat individuals’ personality and functioning individually by placing the individual into full family and social context. The ambitious volume Relational Competence Theory[..]

Fields of interest
Personality and Social Psychology; Psychotherapy

Target groups
Research

Type of publication
Monograph

Available
2010. XII, 326 p. 20 illus., 10 in color. Hardcover
119,95 €
ISBN 978-1-4419-5664-4

Building Healthy Communities for Positive Youth Development

The Healthy Communities • Healthy Youth (HC • HY) project has provided grassroots support for the creation of robust, welcoming environments not only for children and adolescents at risk but for all youth. Building Healthy Communities for Positive Youth Development explains the Developmental Assets framework in depth and demonstrates how eight local initiatives across the country have adapted and implemented it to fit the unique cultures and resources of their neighborhoods and the needs and strengths of their young people. Stakeholders collaborating in the process include parents, educators, politicians, service providers, law enforcement, volunteers, and—as active participants instead of merely recipients of services—youth themselves. In this visionary book, the authors provide readers with a flexible, living blueprint for promoting the well-being of children and teenagers. Areas of coverage include: Core themes of the eight HC • HY initiatives. The use of an asset-based common language[..]

Features
The Healthy Communities • Healthy Youth (HC • HY) project has provided grassroots support for the creation of robust, welcoming environments not only for children and adolescents at risk but for all youth. Building Healthy Communities for Positive Youth Development explains the Developmental Assets framework in depth and demonstrates how eight local initiatives across the country have adapted and[..]

Contents

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

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2010. 240 p. (The Search Institute Series on Developmentally Attentive Community and Society, Vol. 7) Hardcover
89,95 €
ISBN 978-1-4419-5743-6
Today’s consumer can send a company a DNA sample and receive a detailed set of genetic test results in return all without ever visiting a health care provider. Although knowing one’s personal risk for serious disease may lead some individuals to make more informed health choices, an ever-growing set of questions remains: Are predictive genetic tests meaningful? Can the results be harmful as well as helpful? In what ways can genetic information be used by health care providers to predict disease risk and optimize medical management within concerned families? Most important, how might the landscape of genetic testing affect the care of children’s health? Although there are no easy answers, the Handbook of Genomics and the Family details in one authoritative volume the challenges entailed by the latest genetic advances and offers insights into the potential translation of this knowledge in pediatric and family practice and public health. This timely and comprehensive reference introduces readers to[...] Features

Today’s consumer can send a company a DNA sample and receive a detailed set of genetic test results in return all without ever visiting a health care provider. Although knowing one’s personal risk for serious disease may lead some individuals to make more informed health choices, an ever-growing set of questions remains: Are predictive genetic tests meaningful? Can the results be harmful as well as helpful? In [...] Contents


Fields of interest

Child and School Psychology; Psychiatry; Pediatrics; Human Genetics; Medicine (general)

Target groups

Professional/practitioner

Type of publication

Handbook

Available


249.00 €

---

2010. 148 p. (Revue de Synthèse, 0) Softcover

22,75 €

---

Social Sciences

C. Arvanitopoulos, Pantheon University, Athens, Greece; K.E. Botsiou, The Constantinos Karamanlis Institute for Democracy, Athens, Greece (Eds.)

The Constantinos Karamanlis Institute for Democracy Yearbook 2010

2010 marks a turning point for international politics. The impact of the global crisis is reflected in the readiness of both national governments and international organisations to rebuild relations between state and market within a safer regulatory framework. New models of development gained ground during the crisis: investments in new energy technologies, medical research, education, security and employment. In Europe, novel ideas interact with major institutional changes put into effect by the Lisbon Treaty. A wide range of policies, from the field of European security to the problems of migration and from EU enlargement to Euro-American cooperation, are affected by the changes on all these levels. The Constantinos Karamanlis Institute for Democracy Yearbook 2010 addresses vital aspects of the European and international agenda, bringing together prominent scholars and policymakers from a variety of national backgrounds.

Features

2010 marks a turning point for international politics. The impact of the global crisis is reflected in the readiness of both national governments and international organisations to rebuild relations between state and market within a safer regulatory framework. New models of development gained ground during the crisis: investments in new energy technologies, medical research, education, security and employment. [...] Contents


Fields of interest

Social Sciences (general); History of Science; Chinese; Humanities; Political Philosophy

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available

2010. 148 p. (Revue de Synthèse, 0) Softcover

22,75 €

---

Travail et savoirs techniques dans la Chine prémoderne

Face aux transformations de la société chinoise, dans un pays où l’action collective est soumise de très longue date à un État bureaucratisé, étudier la formation des savoirs techniques, c’est se donner un angle pertinent pour saisir les liens que l’État et la société créent et reconfigurent sans cesse. Ce numéro traite de la transmission et de l’expertise lettrée. Le prochain analysera les trajectoires des experts.

Features

Face aux transformations de la société chinoise, dans un pays où l’action collective est soumise de très longue date à un État bureaucratisé, étudier la formation des savoirs techniques, c’est se donner un angle pertinent pour saisir les liens que l’État et la société créent et reconfigurent sans cesse. Ce numéro traite de la transmission et de l’expertise lettrée. Le prochain analysera les trajectoires des experts.

Contents

Frédéric Obringer, Wu Young: les épisodes postéleniales. Une figure d’expert médical à la fin des Ming.- Bing Zhao, Administration, savoir technique et reconnaissance impériale, Tang Ying (1682-1756).- Lucia Candelise, George Soulé de Morant, le premier expert français en acupuncture.- Éric Brian, Cent dix ans de renouvellements incessants, Note sur l’étude de la Revue de synthèse de 1900 à 2010.- Yves Gingras, Naming without necessity. On the genealogy and uses of the label “historical epistemology”.- Philippe Minard, Révolution industrielle et divergence[...]

Fields of interest

Social Sciences (general); History of Science; Chinese; Humanities; Political Philosophy

Target groups

Professional/practitioner

Type of publication

Monograph

Available
Oceanic Migration
Paths, Sequence, Timing and Range of Prehistoric Migration in the Pacific and Indian Oceans

Oceanic Migration studies the prehistoric peopling of the Pacific. It uses science and mathematics to expand the research base of Pacific prehistory and casts new light on this final human expansion. It explores the fundamental roles of oceanography and of global climate change in determining the paths, sequence, timing and range of Spice Island-based maritime migrations across a quarter of the globe. The book is of interest to Pacific prehistorians, oceanographers and American anthropologists concerned with the diffusionist debate. For oceanographers it presents the new idea of the role of the West Pacific Warm Pool and of three of its four major currents in determining the evolution of voyaging in two oceans. For diffusionists it provides new chronological and technological contexts in which the issue of diffusionism needs to be reconsidered. For prehistorians it creates a paradigm shift by establishing a new time depth and mechanism for Polynesian exploration, offers a new view of...[]

Contents

Fields of interest
Human Geography; Cities, Countries, Regions; Political Science

Target groups
Research

Type of publication
Contributed volume

Available
2010. XIV, 438 p. 28 illus., 14 in color. Hardcover

Spatial and Social Disparities
Inequality is one of the major problems of the contemporary world. Significant geographical disparities exist within nations of the developed world, as well as between these countries and those referred to as the ‘South’ in the Bruntland Report. Issues of equity and deprivation must be addressed in view of sustainable development. However, before policymakers can remove the obstacles to a fairer world, it is essential to understand the nature of inequality, both in terms of its spatial and socio-demographic characteristics. This second volume in the series contains population studies that examine the disparities evident across geographical space in the UK and between different individuals or groups. Topics include demographic and social change, deprivation, happiness, cultural consumption, ethnicity, gender, employment, health, religion, education and social values. These topics and the relationships between them are explored using secondary data from censuses, surveys or administrative records. [•][•]

Features
Inequality is one of the major problems of the contemporary world. Significant geographical disparities exist within nations of the developed world, as well as between these countries and those referred to as the ‘South’ in the Bruntland Report. Issues of equity and deprivation must be addressed in view of sustainable development. However, before policymakers can remove the obstacles to a fairer world, it...[•][•]

Contents

Fields of interest
Demography; Population Economics; Public Health; Quality of Life Research

Target groups
Research

Type of publication
Contributed volume

Available
Ageing in Advanced Industrial States
Riding the Age Waves - Volume 3

Population growth slowed across the world in the last decades of the 20th century, changing substantially our view of the future. The 21st century is likely to see the end to world population growth and become the century of population aging, marked by low fertility and ever-increasing life expectancy. These trends have prompted many to predict a gloomy future caused by an unprecedented economic burden of population aging. In response, industrialized nations will need to implement effective social and economic policies and programs. This is the final volume in a series of three. The papers included explore many examples and strengthen the basis for effective economic and social policies by investigating the economic, social, and demographic consequences of the transformations in the structures of populations and family. These consequences include changes in economic behavior, both in labor and financial markets, and with regard to saving and consumption, and intergenerational transfers of money and care.

Features
Population growth slowed across the world in the last decades of the 20th century, changing substantially our view of the future. The 21st century is likely to see the end to world population growth and become the century of population aging, marked by low fertility and ever-increasing life expectancy. These trends have prompted many to predict a gloomy future caused by an [...]
Numerical Analysis for Statisticians

Every advance in computer architecture and software tempts statisticians to tackle numerically harder problems. To do so intelligently requires a good working knowledge of numerical analysis. This book equips students to craft their own software and to understand the advantages and disadvantages of different numerical methods. Issues of numerical stability, accurate approximation, computational complexity, and mathematical modeling share the limelight in a broad yet rigorous overview of those parts of numerical analysis most relevant to statisticians. In this second edition, the material on optimization has been completely rewritten. There is now an entire chapter on the MM algorithm in addition to more comprehensive treatments of constrained optimization, penalty and barrier methods, and model selection via the lasso. There is also new material on the Cholesky decomposition, Gram-Schmidt orthogonalization, the QR decomposition, the singular value decomposition, and reproducing kernel Hilbert [...]”

Fields of interest
Statistical Theory and Methods; Statistics for Life Sciences, Medicine, Health Sciences; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences

Target groups
Research

Type of publication
Proceedings

Available
2010. XXV, 239 p. (Contributions to Statistics) Softcover

99,95 €
ISBN 978-3-7908-2409-4

k RANGE - University of California, Los Angeles, CA, USA

Statistische Versuchsplanung

Design of Experiments (DoE)


Features

Fields of interest
Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Quality Control, Reliability, Safety and Risk; Measurement Science, Instrumentation; Bioinformatics

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XVI, 604 p. (Statistics and Computing) Hardcover

89,95 €
ISBN 978-1-4419-5944-7

K. Lange, University of California, Los Angeles, CA, USA

Statistikische Versuchsplanung

Design of Experiments (DoE)


Features

Fields of interest
Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Quality Control, Reliability, Safety and Risk; Measurement Science, Instrumentation; Bioinformatics

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2010. XV, 320 S. (VDI-Buch) Hardcover

84,07 €
ISBN 978-3-642-05492-1

K. Siebertz, Aldenhofen, Deutschland; D. van Bebber, Aachen, Deutschland; Th. Hochkirchen, Vaal, Niederlande
E.A. Suess, California State University, East Bay, Hayward, CA, USA; B.E. Trumbo, California State University, East Bay, Hayward, CA, USA

**Introduction to Probability Simulation and Gibbs Sampling with R**

The first seven chapters use R for probability simulation and computation, including random number generation, numerical and Monte Carlo integration, and finding limiting distributions of Markov Chains with both discrete and continuous states. Applications include coverage probabilities of binomial confidence intervals, estimation of disease prevalence from screening tests, parallel redundancy for improved reliability of systems, and various kinds of genetic modeling. These initial chapters can be used for a non-Bayesian course in the simulation of applied probability models and Markov Chains. Chapters 8 through 10 give a brief introduction to Bayesian estimation and illustrate the use of Gibbs samplers to find posterior distributions and interval estimates, including some examples in which traditional methods do not give satisfactory results. WinBUGS software is introduced with a detailed explanation of its interface and examples of its use for Gibbs sampling for Bayesian estimation. No previous [...]
Yes, please send me:

<table>
<thead>
<tr>
<th>Copies</th>
<th>ISBN</th>
<th>€/£</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All € and £ prices are net prices subject to local VAT, e.g. in Germany 7% VAT for books and 19% VAT for electronic products. Pre-publication pricing: Unless otherwise stated, pre-pub prices are valid through the end of the third month following publication, and therefore are subject to change. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted.