Just Released New Books January 2012

All Titles, All Languages

Sorted by author and title within the main subject
**A Master of Science History**

*Essays in Honor of Charles Coulston Gillispie*

New essays in science history ranging across the entire field and related in most instance to the works of Charles Gillispie, one of the field’s founders.

**Features**
New essays in science history ranging across the entire field and related in most instance to the works of Charles Gillispie, one of the field’s founders.

**Contents**

**Fields of interest**
Humanities; Chemistry (general); Entomology; Fields of interest

**Target groups**
Upper undergraduate

**Type of publication**
Contributed volume

**Usually dispatched within 3 to 5 business days**


99.95 €
ISBN 978-94-007-2626-0

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**Biomedicine**

*The Rise of Post-Hegemonic Regionalism*

*The Case of Latin America*

This book offers a timely analysis, and a novel and nuanced argument about post-neoliberal models of regional governance in non-European contexts. It provides the first in-depth, empirically-driven analysis of current models of regional governance in Latin America that emerged out of the crisis of liberalism in the region. It contributes to comparative studies of the contemporary global political economy as it advances current literature on the topic by analysing distinctive, overlapping and conflicting trajectories of regionalism in Latin America. The book critically explores models of transformative regionalism and specific dimensions articulating those models beyond neoliberal consensus-building. As such it contests the overstated case of integration as converging towards global capitalism. It provides an analytical framework that not only examines the ‘what, how, who and why’ in the emergence of a specific form of regionalism but sets the ground for addressing two relevant questions that will[…]

**Features**
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**Contents**

**Fields of interest**
Regional and Cultural Studies; Political Science, general

**Target groups**
Research

**Type of publication**
Contributed volume

**Usually dispatched within 3 to 5 business days**

2012, XVII, 194 p. 5 illus. (United Nations University Series on Regionalism, Vol. 4) Hardcover

99.95 €

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**Ancient DNA**

*Methods and Protocols*

Research into ancient DNA began more than 25 years ago with the publication of short mitochondrial DNA sequence fragments from the quagga, an extinct relative of the zebra. Ancient DNA research really gained momentum following the invention of PCR, which allowed millions of copies to be made of the few remaining DNA molecules preserved in fossils and museum specimens. In Ancient DNA: Methods and Protocols expert researchers in the field describe many of the protocols that are now commonly used to study ancient DNA. These include instructions for setting up an ancient DNA laboratory, extraction protocols for a wide range of different substrates, details of laboratory techniques including PCR and NGS library preparation, and suggestions for appropriate analytical approaches to make sense of the sequences obtained. Written in the highly successful Methods in Molecular Biology™ series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents,[…]

**Features**
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**Contents**
- Setting Up An Ancient DNA Laboratory.- A Phenol-Chloroform Protocol for Extracting DNA from Ancient Samples.-DNA Extraction of Ancient Animal Hard Tissue Samples via Adsorption to Silica Particles.-Case Study: Recovery of ancient nuclear DNA from Toe Pads of the Extinct Passenger Pigeon.-Extraction of DNA from Paleofeces.-DNA Extraction from Keratin and Chitin.-Case Study: Ancient sloth DNA Recovered from Hairs Preserved in Paleofeces.-Ancient DNA Extraction from Soils and Sediments.-DNA Extraction from Fossil Eggshells.-Ancient DNA Extraction from Plants.-DNA Extraction from[…]
Appetite Control

The volume 'Appetite Control' provides a comprehensive description of the mechanisms controlling food intake, and thereby energy balance, in the mammalian organism. During the last decade, research in this area has produced a remarkable wealth of information and has characterized the function of numerous peptides, transmitters, and receptors in appetite control. Dysfunction of these circuits leads to obesity, a growing health concern. However, the plethora of mechanistic information is in marked contrast to an almost complete lack of anti-obesity drugs that meet the safety standards required for the chronic therapy of morbid obesity. Consequently, ongoing research aims to identify additional targets and agents for a pharmacological intervention. Thus, the mechanisms of appetite control as well as all agents interfering with its control are of considerable practical interest. The authors of the volume are distinguished scientists who are leading experts in the field, and who have contributed[...]

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Contents

Fields of interest
Pharmacology / Toxicology; Neurosciences; Human Physiology; Endocrinology

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days


339,00 €
Prepublication price
ISBN 978-3-642-24715-6

Experimental Pharmacology, Vol. 209) Hardcover
2012. X, 474 p. 126 illus., 19 in color. (Handbook of Research

Target groups
Physiology; Endocrinology
Pharmacology / Toxicology; Neurosciences; Human

Nutrient sensing.- Part 4. Agents modifying food

From the contents.- Preface.- Part 1. The
neuroendocrine, hypothalamic circuitry regulating

Fields of interest
Pharmacology / Toxicology; Neurosciences; Human Physiology; Endocrinology

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days


339,00 €
Prepublication price
ISBN 978-3-642-24715-6

Atlas of Genetic Diagnosis and Counseling

Dr. Chen shares his almost 40 years of clinical genetics practice in a comprehensive pictorial atlas of almost 250 genetic disorders, malformations, and malformation syndromes. The author provides a detailed outline for each disorder, describing its genetics, basic defects, clinical features, diagnostic tests, and counseling issues, including recurrence risk, prenatal diagnosis, and management. Numerous color photographs of prenatal ultrasounds, imagnings, cytogenetics, and postmortem findings illustrate the clinical features of patients at different ages, patients with varying degrees of severity, and the optimal diagnostic strategies. The disorders cited are supplemented by case histories and diagnostic confirmation by cytogenetics, biochemical, and molecular techniques, when available. The Atlas of Genetic Diagnosis and Counseling will help all physicians to understand and recognize genetic diseases and malformation syndromes and better evaluate, counsel, and manage affected patients. In this new[...]

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Contents

Fields of interest
Human Genetics; Cytogenetics; Molecular Medicine; Pathology

Target groups
Professional/practitioner

Type of publication
Reference work

Online orders shipping within 2-3 days.

2012. LX, 2224 p. 2472 illus., 2018 in color. In 3 volumes, not available separately. Hardcover

519,00 €

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Type of publication
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Online orders shipping within 2-3 days.

2012. LX, 2224 p. 2472 illus., 2018 in color. eReference. In 3 volumes, not available separately.

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Bacteria and Cancer

Bacterial infections cause substantial morbidity and mortality in cancer patients. These infections always remained enigmatic due to initial reluctance of cancer researchers in understanding their etiologic potential. Etiological association of bacteria with cancer gained credibility after discovery of carcinoenic potential of Helicobacter pylori. Moreover, other suspected associations including Salmonella typhi and gallbladder cancer, Streptococcus bovis and colon cancer, Chlamydia psittaci and ocular adnexal lymphoma and Chlamydia pneumoniae with lung cancer, etc. are looking for a legitimate appraisal to unravel their etiologic potential without prejudice. In contrary, bacteria also show protective role in certain types of cancer. Certain agents derived from bacteria are successfully in practice for the management of cancer. The integrate association of bacteria and cancer is evident in both positive and negative aspects. The role of bacteria in cancer etiology and treatment is vigorously[...]

Features

Bacterial infections cause substantial morbidity and mortality in cancer patients. These infections always remained enigmatic due to initial reluctance of cancer researchers in understanding their etiologic potential. Etiological association of bacteria with cancer gained credibility after discovery of carcinoenic potential of Helicobacter pylori. Moreover, other suspected associations including Salmonella typhi [...]
**Cardiovascular Development**

Methods and Protocols

Congenital heart disease is the leading cause of infant death and affects approximately one in every 100 babies born in the United States. The study of cardiovascular development has acquired new momentum in the last twenty years due to the advancement of modern molecular biology and new available equipment and techniques. In Cardiovascular Development: Methods and Protocols expert researchers in the field in the field detail many of the methods which are now commonly used in the field of cardiovascular development research. These include methods and technique for using different organisms for cardiovascular developmental research, using cell and molecular biology methods to study cardiovascular development, as well as other available techniques for cardiovascular development research. Written in the highly successful Methods in Molecular Biology™ series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible.[...]

**Clinical Use of Anti-infective Agents**

A Guide on How to Prescribe Drugs Used to Treat Infections

This book was designed as a reference tool for pharmacists involved in the treatment of patients with infections. It is clinically oriented and designed to help students in all medical disciplines, and especially pharmacists and students of pharmacy who need information on choosing the correct drug, dose, and method of administration of an agent to patients with infectious diseases. Nurse practitioners and clinical microbiologists who need to understand the use of anti-infective agents in patients will also find this volume useful.

**Cochlear Mechanics**

Introduction to a Time Domain Analysis of the Nonlinear Cochlea

The field of cochlear mechanics has received an increasing interest over the last few decades. In the majority of these studies, the researchers use linear systems analysis or linear approximations of the nonlinear (NL) systems. Even though it has been clear that the intact cochlea operates nonlinearly, lack of tools for proper nonlinear analysis, and widely available tools for linear analysis still lead to inefficient and possibly incorrect interpretation of the biophysics of the cochlea. An example is the presumption that a change in cochlear stiffness at hair cell level must account for the observed change in tuning (or frequency mapping) due to prestin application. Hypotheses like this need to be addressed in a tutorial that is lucid enough to analyze and explain basic differences. Cochlear Mechanics presents a useful and mathematically justified/approachable in the main part of the text, an approach that will be elucidated with clear examples. The book will be useful to scientists in[...]

**Contents**

Part I Anatomy and Function of the Linear Cochlea.- 1 Historical Introduction.- 2 Developments from 1950 to 1980.- 3 Emerging Cochlear Mechanics.- Part II Anatomy and Function of the Nonlinear Cochlea.- 4 Nonlinear Auditory Phenomena (I) knowledge around 1980.- 5 Modeling the Nonlinear Cochlea.- Part III Results and Open Issues.- 6 Results.- 7 Applications and perspective.- Part IV Appendices.- Index

**Fields of interest**

Neurosciences; Otorhinolaryngology; Biophysics and Biological Physics; Biomedical Engineering

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. XI, 181 p. 63 illus. Hardcover

99,95 €


2012. XIV, 261 p. 66 illus. Hardcover

139,95 €

ISBN 978-1-4419-6116-7
### Controlled Genetic Manipulations

The current demand for the development of techniques for controlled genetic manipulations is driven by the anatomical and physiological complexity of the brain and by the need for experimental models that can address this complexity through selective manipulation of defined components of the system: specific neuronal populations or selected synapses. In Controlled Genetic Manipulations, expert researchers present detailed chapters to supply basic technical information about controlled genetic manipulations and to provide examples of creative implementation of this methodology when addressing a unique biological problem. Some chapters of the book describe the most recent developments in the basic methodology, which includes use of Cre-recombinase, methods for delivery of genetic material into the brain and the use of optogenetics, whereas other chapters focus on applying these techniques to addressing particular biological questions like structural and functional mapping of neuronal circuits.

#### Contents
- Introduction
- Genetic Manipulations, expert researchers
- Fields of interest
- Target groups
- Type of publication
- Usually dispatched within 3 to 5 business days

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<th>Contents</th>
<th>Fields of interest</th>
<th>Target groups</th>
<th>Type of publication</th>
<th>Usually dispatched within 3 to 5 business days</th>
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### Epigenetic Epidemiology

The exploding field of epigenetics is challenging the dogma of traditional Mendelian inheritance. Epigenetics plays an important role in shaping who we are and contributes to our prospects of health and disease. While early epigenetic research focused on plant and animal models and in vitro experiments, population-based epidemiological studies increasingly incorporate epigenetic components. The relevance of epigenetic marks, such as DNA methylation, genomic imprinting, and histone modification for disease causation has yet to be fully explored. This book covers the basic concepts of epigenetic epidemiology, discusses challenges in study design, analysis, and interpretation, epigenetic laboratory techniques, the influence of age and environmental factors on shaping the epigenome, the role of epigenetics in the developmental origins hypothesis, and provides the state of the art on the epigenetic epidemiology of various health conditions including childhood syndromes, cancer, infectious diseases.

#### Features
- The exploding field of epigenetics is challenging the dogma of traditional Mendelian inheritance.
- Epigenetics plays an important role in shaping who we are and contributes to our prospects of health and disease.
- While early epigenetic research focused on plant and animal models and in vitro experiments, population-based epidemiological studies increasingly incorporate epigenetic components.

#### Contents
- Introduction
- The Human Epigenome
- Considerations in the Design, Conduct, and Interpretation of Studies in Epigenetic Epidemiology
- Laboratory methods in epigenetic epidemiology
- Biostatistical methods in epigenetic epidemiology
- Epigenome changes during development
- The role of epigenetics in the developmental origins of health and disease
- Epigenetics and assisted reproductive technology
- Imprinting disorders of early childhood
- The utility of twins for epigenetic analysis
- Changes in the epigenetic profile with age
- Influence of environmental factors

#### Fields of interest
- Cancer Research; Epidemiology; Human Genetics

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### Epigenetic Regulation of Lymphocyte Development

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

#### Features
- Previous observations, generated by many in the field, have provided a first glimpse into the epigenetic mechanisms that underpin lymphocyte and myeloid development.
- We are only now beginning to merge the multitude of observations into a common framework. At the same time it has become more difficult for the individual mind to comprehend more than a tiny focused fraction of it.

#### Contents
- Introduction
- Genetic Manipulations, expert researchers
- Fields of interest
- Target groups
- Type of publication
- Usually dispatched within 3 to 5 business days

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<th>ISBN 978-3-662-42102-4</th>
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2012, X, 190 p. 16 illus., 16 in color. (Current Topics in Microbiology and Immunology, Vol. 356) Hardcover

139,95 €
Expression Profiling in Neuroscience

Transcriptomics and proteomics, studying the profile of the expression of nucleic acids and proteins respectively, are increasingly applied to gain a mechanistic insight into a wide spectrum of investigation, and the use of expression profiling studies for the central nervous system and brain function aids in the understanding of neurodegenerative disorders and tumor development mechanisms. In Expression Profiling in Neuroscience, expert researchers provide a survey of the most commonly used approaches in the field and scan the different ways of studying the central nervous system/brain environment through expression profiling. The first part addresses the gene expression profiling of the brain at a large scale or to a specific cell type such as blood-brain barrier endothelium. Then, the second part describes the protein expression studies and the different technologies applied. Written for the popular Neuromethods series, chapters include corresponding background information, tested laboratory[…]

Contents

Fields of interest
Neurosciences; Proteomics

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 74 p. 15 illus., 6 in color. (SpringerBriefs in Microbiology) Softcover
49,95 € ISBN 978-3-642-24979-2

Fibrinolytic Bacterial Enzymes with Thrombolytic Activity

Stress, high blood pressure, smoking, pollution, fast foods, overweight, excessive travelling, surgery, less movement are common features in our modern life. These features are risky for blood clotting disorders. According to WHO, over 29% of the total mortalities worldwide are due to thrombosis. By the year, 2020 cardiovascular diseases (CVDs) may cause an estimated 25 million deaths per year, thus antithrombotic therapy is of great interest. The available thrombolytic agents such as urokinase are highly expensive, antigenic, quite unspecific, pyretogenic and hemorrhagic. Therefore, the production of fibrinolysing enzymes, which rapidly dissolve thrombi within the vascular tree, without the detriments by microorganisms, as described in this book, is the desirable aim of today’s research.

Features
Stress, high blood pressure, smoking, pollution, fast foods, overweight, excessive travelling, surgery, less movement are common features in our modern life. These features are risky for blood clotting disorders. According to WHO, over 29% of the total mortalities worldwide are due to thrombosis. By the year, 2020 cardiovascular diseases (CVDs) may cause an estimated 25 million deaths per year, thus […]

Fields of interest
Medical Microbiology; Hematology; Cardiology; Human Physiology

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. XII, 74 p. 15 illus., 6 in color. (SpringerBriefs in Microbiology) Softcover
49,95 € ISBN 978-3-642-24979-2

Fuzziness

Structural Disorder in Protein Complexes

Detailed characterization of fuzzy interactions will be of central importance for understanding the diverse biological functions of intrinsically disordered proteins in complex eukaryotic signaling networks. In this volume, Peter Tompa and Monika Fuxreiter have assembled a series of papers that address the issue of fuzziness in molecular interactions. These papers provide a broad overview of the phenomenon of fuzziness and provide compelling examples of the central role played by fuzzy interactions in regulation of cellular signaling processes and in viral infectivity. These contributions summarize the current state of knowledge in this new field and will undoubtedly stimulate future research that will further advance our understanding of fuzziness and its role in biomolecular interactions.

Features
Detailed characterization of fuzzy interactions will be of central importance for understanding the diverse biological functions of intrinsically disordered proteins in complex eukaryotic signaling networks. In this volume, Peter Tompa and Monika Fuxreiter have assembled a series of papers that address the issue of fuzziness in molecular interactions. These papers provide a broad overview of the phenomenon of […]

Contents
Fuzzy Complexes: A More Stochastic View of Protein Function. - Dynamic Fuzziness During Linker Histone Action. - Protein Flexibility in Regulation of Cell Proliferation: Advantages for Signaling and Opportunities for Novel Therapeutics. - Interplay Between Protein Order, Disorder and Oligomericity in Receptor Signaling. - Consequences of Fuzziness in the NFkB/IkBa Interaction. - Roles for Intrinsic Disorder and Fuzziness in Generating Context Specific Function in Ultrabithorax, a Hox Transcription Factor. - Molecular Recognition by the EWS Transcriptional Activation Domain. - The Measles Virus[…]

Fields of interest
Biomedicine (general); Molecular Medicine

Target groups
Research

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

2012. XX, 190 p. 50 illus., 4 in color. (Advances in Experimental Medicine and Biology, Vol. 725) Hardcover
139,95 € ISBN 978-1-4614-0658-7
### JIMD Reports - Case and Research Reports, 2011/3

JIMD Reports publishes case and short research reports in the area of inherited metabolic disorders. Case reports highlight some unusual or previously unrecorded feature relevant to the disorder, or serve as an important reminder of clinical or biochemical features of a Mendelian disorder.

**Features**

- JIMD Reports publishes case and short research reports in the area of inherited metabolic disorders. Case reports highlight some unusual or previously unrecorded feature relevant to the disorder, or serve as an important reminder of clinical or biochemical features of a Mendelian disorder.

**Contents**

- Different Case Reports.

**Fields of interest**

- Human Genetics; Metabolic Diseases; Pediatrics; Human Physiology

**Target groups**

- Research

**Type of publication**

- Contributed volume

**Usually dispatched within 3 to 5 business days**

2012, VII, 139 p. 37 illus., 13 in color. (JIMD Reports, Vol. 3) Softcover

99,95 €

ISBN 978-3-642-24935-8

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### Mucosal Vaccines

**Modern Concepts, Strategies, and Challenges**

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

**Features**

- Most human pathogens utilize mucosal surfaces to access the host. This volume is focused on the development of vaccines which generate immune effectors capable of blocking mucosal entry or peripheral pathogen spread. A critical first step in the design of mucosal vaccines is the selection of administration route. Not all mucosal immunization routes are created equally when it comes to eliciting immune...

**Contents**


**Fields of interest**

- Vaccine; Immunology; Antibodies

**Target groups**

- Research

**Type of publication**

- Handbook

**Usually dispatched within 3 to 5 business days**

2012, XII, 699 p. 44 illus., 24 in color. (Handbook of Experimental Pharmacology, Vol. 208) Hardcover

399,00 €

Prepublication price valid until April 30, 2012

288,15 €

ISBN 978-3-642-23273-2

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### Muscarinic Receptors

Muscarnic acetylcholine receptors have played a key role in the advancement of knowledge of pharmacology and neurotransmission since the inception of studies in these fields, and the effects of naturally occurring drugs acting on muscarinic receptors were known and exploited for both therapeutic and non-therapeutic purposes for hundreds of years before the existence of the receptors themselves was recognized. This volume presents a broad yet detailed review of current knowledge of muscarinic receptors that will be valuable both to long-time muscarinic investigators and to those new to the field. It describes the detailed insights that have been obtained on the structure, function, and cell biology of muscarinic receptors. This volume also describes physiological analyses of muscarinic receptors and their roles in regulating the function of the brain and of a variety of peripheral tissues. This volume shows how the study of muscarinic receptors continues to provide new and surprising insights not...

**Features**

- Muscarinic acetylcholine receptors have played a key role in the advancement of knowledge of pharmacology and neurotransmission since the inception of studies in these fields, and the effects of naturally occurring drugs acting on muscarinic receptors were known and exploited for both therapeutic and non-therapeutic purposes for hundreds of years before the existence of the receptors themselves was...

**Fields of interest**

- Pharmacology / Toxicology; Human Physiology; Cell Biology; Endocrinology; Neurobiology

**Target groups**

- Research

**Type of publication**

- Handbook

**Usually dispatched within 3 to 5 business days**

2012, XIII, 499 p. 44 illus., 24 in color. (Handbook of Experimental Pharmacology, Vol. 208) Hardcover

399,00 €

Prepublication price valid until April 30, 2012

288,15 €

ISBN 978-3-642-23273-2
Neuronal Noise

Neuronal Noise combines experimental, theoretical and computational results to show how noise is inherent to neuronal activity, and how noise can be important for neuronal computations. The book covers many aspects of noise in neurons, with an emphasis on the largest source of noise: synaptic noise. It provides students and young researchers with an overview of the important methods and concepts that have emerged from research in this area. It also provides the specialist with a summary of the large body of sometimes contrasting experimental data, and different theories proposed to explore the computational power that various forms of ‘noise’ can confer to neurons.

Features

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Contents


Fields of interest

Neurosciences; Neurobiology

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 458 p. 203 illus., 1 in color. (Springer Series in Computational Neuroscience, Vol. 8) Hardcover

149,95 €
ISBN 978-0-387-79019-0

Non-fibrillar Amyloidogenic Protein Assemblies - Common Cytotoxins Underlying Degenerative Diseases

Amyloid-forming proteins are implicated in over 30 human diseases. The proteins involved in each disease have unrelated sequences and dissimilar native structures, but they all undergo conformational alterations to form fibrillar polymers. The fibrillar assemblies accumulate progressively into disease-specific lesions in vivo. Substantial evidence suggests these lesions are the end state of aberrant protein folding whereas the actual disease-causing culprits likely are soluble, non-fibrillar assemblies preceding the aggregates. The non-fibrillar protein assemblies range from small, low-order oligomers to spherical, annular, and protofibrillar species. Oligomeric species are believed to mediate various pathogenic mechanisms that lead to cellular dysfunction, cytotoxicity, and cell loss, eventuating in disease-specific degeneration and systemic morbidity. The particular pathologies thus are determined by the afflicted cell types, organs, systems, and the proteins involved. Evidence suggests that the...

Features

Aberrant protein folding and self-assembly underlie over 30 human diseases called amyloidoses, for which currently there is no cure. The diseases range from tissue-specific to systemic and from genetic to sporadic. Some of the most devastating amyloidoses are those that affect the central nervous system (CNS), such as Alzheimer’s disease (AD), Parkinson’s disease (PD), prionoses (e.g., mad-cow disease), and [...]

Contents

Reproductive Health and Cancer in Adolescents and Young Adults

Reproductive medicine is a growing field with new technology emerging faster than we can assess consumer's perceptions of—to the number of cancer survivors are growing and there is a great need to attend to their quality of life—this book addresses the needs of males and females, identifies effective communication strategies and proactive measures for health care professionals and researchers to use as well as identifying gaps in the literature where more research is needed.

Features
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Contents

Fields of interest
Cancer Research; Oncology; Reproductive Medicine; Health and Quality of Life; Sexual Behavior; Medical Education

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


149,95 €
ISBN 978-94-007-2491-4

Ricin and Shiga Toxins
Pathogenesis, Immunity, Vaccines and Therapeutics

In May of 2011, Western Europe experienced a severe outbreak of Shiga toxin (Stx)-producing E. coli (STEC) that culminated in more than 3200 cases and 39 deaths. While Stx is not the only virulence factor associated with STEC, it is certainly the primary determinant associated with the onset of hemolytic uremic syndrome (HUS). At the present time, there are no clinically approved measures to neutralize Stx in individuals suffering from STEC infection. Nor are there any preventative or therapeutics for ricin toxin. Although incidents of ricin exposure are largely unheard of, federal agencies and public health officials consider it a significant threat. It is well documented that domestic and international terrorist groups have stockpiled, and in some cases weaponized ricin with the intent of releasing it into the public sphere and causing panic, illness and/or death on a local, regional, or possibly national scale. The chapters, written by leading experts in the field, are organized so as to...

Features
The intent of this volume of Current Topics in Microbiology and Immunology was to bring together a collection of in-depth and cutting-edge reviews that highlight our current understanding of the biology of ricin and Shiga toxin (Stx), with the long term goal of advancing the development of countermeasures against these toxic agents. In May of 2011, Western Europe experienced a severe outbreak of...

Contents

Fields of interest
Pharmacology / Toxicology

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XI, 276 p. 30 illus., 22 in color. (Current Topics in Microbiology and Immunology, Vol. 357) Hardcover

139,95 €
ISBN 978-3-642-27469-5

Signaling Pathways and Molecular Mediators in Metastasis

This work presents the most advanced discoveries from translational research laboratories directly involved in identifying molecules and signalling pathways that play an instrumental role in metastasis. In contrast to other works, conventionally focused on a single type of tumour, the various chapters in this book provide a broad perspective of the similarities and discrepancies among the dissemination of several solid malignancies. Through recurrent and overlapping references to molecular mechanisms and mediators, the readers will gain knowledge of the common ground in metastasis from a single source. Finally, an introductory chapter provides a clinical perspective of the problems presented by metastatic tumours for diagnosis and treatment. The work presented here is directed to researchers in tumour biology with a developing interest in metastatic dissemination as well as medical and graduate students seeking to expand and integrate the notions acquired in basic cancer biology and oncology courses.

Features
This work presents the most advanced discoveries from translational research laboratories directly involved in identifying molecules and signalling pathways that play an instrumental role in metastasis. In contrast to other works, conventionally focused on a single type of tumour, the various chapters in this book provide a broad perspective of the similarities and discrepancies among the dissemination of...

Contents

Fields of interest
Cancer Research; Oncology; Gene Function; Receptors; Cytokines and Growth Factors

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


139,95 €
ISBN 978-94-007-2557-7
Stress Challenges and Immunity in Space

From Mechanisms to Monitoring and Preventive Strategies

Stress of either psychological or physical nature can activate and/or paralyse humans’ innate and adaptive immunity. However, adequate immunity is crucial to the maintenance of health on earth and in space. During space flight, human physiology and health are challenged by complex environmental stressors which might be at their most pronounced during lunar or interplanetary missions. While previous publications have addressed the physiological changes that occur during space flight, this book goes further, by adopting an interdisciplinary approach to analyze the complex interaction of living conditions in space, the immune system, and astronauts’ health. It is explained how such analysis of the consequences of stress for the immune system may help in preventing, diagnosing, and counteracting immune-related alterations in health on earth as well as in space.

Features
Stress of either a psychological or a physical nature can activate and/or paralyse humans’ innate or adaptive immunity. However, adequate immunity is crucial to the maintenance of health on earth and in space. During space flight, human physiology and health are challenged by complex environmental stressors (confinement, gravitation, oxygen tension, radiation) which might be at their most pronounced during [..]

Contents

Fields of interest
Human Physiology; Medicine (general); Immunology; Neurosciences

Target groups
Research

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

2012, XIII, 469 p. 74 illus., 50 in color. Hardcover

179,95 €
ISBN 978-3-642-22271-9

Structure-Based Drug Discovery

The last decade has seen the confluence of several enabling technologies that have allowed protein crystallographic methods to live up to their true potential. Taken together, the numerous recent advances have made it possible to tackle difficult biological targets with a high probability of success: intact bacterial ribosomes have been structurally elucidated, as well as eukaryotic trans-membrane proteins like the potassium channel and GPCRs. It is now possible for medicinal chemists to have access to structural information on their latest small molecule candidates bound to the therapeutic target within days of compound synthesis, allowing structure guided ligand optimization to occur in ‘real time’. Structure-Based Drug Discovery presents an array of methods used to generate crystal structures of biological macromolecules, how to leverage the structural information to design novel ligands anew, and how to iteratively optimize hits and convert them to leads. Written in the successful Methods in[..]

Features
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Contents
The Utility of Structural Biology in Drug Discovery.- Generic Construct Design and Recombinant Protein Expression for Structural Biology.- Purification of Proteins for Crystallographic Applications.- Protein Crystallization for Structure-Based Drug Design.- X-Ray Sources and High-Throughput Data Collection Methods.- The Use of Molecular Graphics in Structure-Based Drug Design.- Crystallographic Fragment Screening.- The Role of Enzymology in a Structure-Based Drug Discovery Program: Bacterial DNA Gyrase.- Leveraging Structural Information for the Discovery of New Drugs: Computational[..]

Fields of interest
Pharmacology / Toxicology; Medicinal Chemistry

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days.

2012, IX, 385 p. 130 illus., 5 in color. (Methods in Molecular Biology, Vol. 841) Hardcover

109,95 €
ISBN 978-1-61779-519-0

Systems Biology in Biotech & Pharma

A Changing Paradigm

The US is currently well ahead of the rest of the world in the development and application of SB and its principles especially as they pertain to basic medical research and development. This lead is largely due to its earlier start in the academic arena. However, there is evidence of rapid development in both the UK/EU and Japan, and the gap is narrowing, particularly in the UK. From an industrial point of view, the Pharmaceutical Industry based in the US and UK can capitalize on these opportunities and gain the benefits of this technology. Many educational institutions (particularly their medical divisions) at present are heavily business-oriented, realize that in this particular industrial environment, that every dollar counts.

Features
Systems Biology (SB) is a suite of technologies and methodologies that resulted, conceptually from the merging of two basic paradigms, reductionism and holism. It represents a combination of reductionist and holistic approaches to the relationships among the elements of a system, with the goal of identifying its emergent properties and defining, quantitatively, molecular, cellular, tissue, organ and whole[..]

Contents
The Biology of Subcellular Nitric Oxide

This book fills in a gap in the NO literature. Recent progress in the field of NO-biology shows that NO is generated within distinct cell compartments, including specific plasma membrane regions, mitochondria, chloroplasts, peroxisomes, the Golgi-complex and intracellular membrane systems. NO synthesis plays specific roles in these compartments and, in turn, cell organelles also control intracellular NO levels. This monograph focuses on the roles played by the subcellular NO-signaling microdomains in the prokaryote-, fungus-, plant- and animal cells and shows how NO behaves as an intracellular signal in distinct cellular environments. This monograph also provides a summary of our knowledge on how NO synthesis came through evolution to be associated with organelles and subcellular compartments. Promotes the novel ideas that some functions of NO and its associations with subcellular units have been conserved during the evolution of the cell. A special chapter is dedicated to the biomedical relevance.

Features

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Contents

- Foreword - Preface - Part I General Concepts - Introduction Part II Nitric Oxide Synthesis in Prokaryote Cells - 2 Nitric Oxide is a Bioproduc - In Prokaryote - Part III Nitric Oxide Synthesis in Plant Organelles - 3 Nitric Oxide Synthesis in the Chloroplast - 4 NO Synthesis in Leaf Peroxosomes and Plant-Type Mitochondria - Part IV At the Edge of the Plant and Animal Kingdom - 5 NO Synthesis in Subcellular Compartments of Fungi - Part V Nitric Oxide Synthesis in Animal Cells - 6 Harboring of NOS to the Cell Membrane - 7 The Golgi System - 8 Phagosomes -

Fields of interest

Biomedicine (general); Molecular Medicine; Cell Biology; Animal Biochemistry; Plant Biochemistry; Zoology

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XVI, 209 p. 64 illus., 14 in color. Hardcover

139,95 €

ISBN 978-94-007-2818-9

Treatment and Prevention of Malaria

Antimalarial Drug Chemistry, Action and Use

Malaria has defeated previous efforts at eradication and remains a massive global public health problem despite being readily preventable and treatable. It is a devastating disease that also extracts huge economic costs from the poorest countries in endemic regions. Starting with an overview of the disease and its current political, financial and technical context, this Milestones in Drug Therapy volume describes the history, chemistry, mechanisms of action and resistance, preclinical and clinical use, pharmacokinetics and safety and tolerability of the current range of antimalarial drugs. There is particular emphasis on artemisinins and related peroxides, as these drugs have now become the frontline treatment for malaria. Next generation antimalarials, molecular markers for detecting resistance, the importance of diagnostics and disease prevention are also covered in detail.

Features

Malaria has defeated previous efforts at eradication and remains a massive global public health problem despite being readily preventable and treatable. It is a devastating disease that also extracts huge economic costs from the poorest countries in endemic regions. Starting with an overview of the disease and its current political, financial and technical context, this Milestones in Drug Therapy volume describes the history, chemistry, mechanisms of action and resistance, preclinical and clinical use, pharmacokinetics and safety and tolerability of the current range of antimalarial drugs. There is particular emphasis on artemisinins and related peroxides, as these drugs have now become the frontline treatment for malaria. Next generation antimalarials, molecular markers for detecting resistance, the importance of diagnostics and disease prevention are also covered in detail.

Contents

- Antimalarial drugs and the control and elimination of malaria - 4-Aminoquinolines: chloroquine, amodiaquine and next generation analogues - Cinchona alkaloids: quinine and quinidine - 8-Aminoquinolines: primaquine and tafenoquine - Other 4-arylaminophenylamines, amyl alcohols and phenanthrenes: melofloxine, lumefantrine, halofantrine, piperaquine and pyronaridine - Antifolates: pyrimethamine, proguanil, sulphadoxine and dapsone - Naphthoquinones: atovaquone, and other antimalarials targeting mitochondrial functions - Non-antifolate antibiotics: clindamycin, doxycycline, azithromycin and -

Fields of interest

Pharmacology / Toxicology; Infectious Diseases; Parasitology; Immunology; Drug Resistance

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. X, 315 p. 63 illus., 6 in color. (Milestones in Drug Therapy) Hardcover

169,95 €

ISBN 978-3-0348-0217-8

Twenty Years of G-CSF

Clinical and Nonclinical Discoveries

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

Features

Granulocyte colony-stimulating factor (G-CSF or GCSF) is a secreted glycoprotein that stimulates the proliferation and differentiation of granulocyte precursor cells, and induces mobilization of peripheral blood progenitor cells from the bone marrow. Development of recombinant human G-CSF has had a profound impact on the treatment of many diseases, including severe chronic neutropenia and cancer, and has [...]
**Chemistry**

K. Rissanen, University of Jyväskylä, Jyväskylä, Finland (Ed.)

**Advanced X-ray Crystallography**


**Features**


**Contents**


**Fields of interest**

Analytical Chemistry; Physical Chemistry; Crystallography

**Target groups**

Research

**Type of publication**

Reviews

**Usually dispatched within 3 to 5 business days**


189.95 €
ISBN 978-3-642-25528-1

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**Alkaloid Synthesis**


**Features**


**Contents**


**Fields of interest**

Inorganic Chemistry; Biotechnology; Analytical Chemistry

**Target groups**

Research

**Type of publication**

Reviews

**Usually dispatched within 3 to 5 business days**


229.00 €
ISBN 978-3-642-25528-1

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**Assessing the Functional Structure of Molecular Transporters by EPR Spectroscopy**

In his thesis, Matthias Junk takes an innovative approach to assess the local structure and dynamics of biological and synthetic amphiphilic macromolecules capable of transporting small molecules. Replacing the latter with stable radicals, he uses state-of-the-art electron paramagnetic resonance (EPR) spectroscopy to describe the highly relevant transport function from the viewpoint of the guest molecules. Such, he demonstrates that the functional structure of human serum albumin in solution significantly differs from its crystal structure – a consequence of the protein’s adaptability to host various endogenous compounds and drug molecules. Further, he shows that the thermal collapse of thermoresponsive hydrogels and dendronized polymers leads to static and dynamic heterogeneities on the nanoscale. These heterogeneities bear consequences for the material’s hosting properties and enable unforeseen complex catalytic functionalities.

**Features**

In his thesis, Matthias Junk takes an innovative approach to assess the local structure and dynamics of biological and synthetic amphiphilic macromolecules capable of transporting small molecules. Replacing the latter with stable radicals, he uses state-of-the-art electron paramagnetic resonance (EPR) spectroscopy to describe the highly relevant transport function from the viewpoint of the guest molecules.

**Contents**

Electron Paramagnetic Resonance Theory. - The Functional Structure of Human Serum Albumin. - Copper Complexes of Star-Shaped Cholic Acid Oligomers with 1,2,3-Triazole Moieties. - Nano-Inhomogeneities in Structure and Reactivity of Thermoresponsive Hydrogels. - Thermoresponsive Spin-Labeled Hydrogels as Separable DNP Polarizing Agents. - Local Nanoscopic Heterogeneities in Thermoresponsive Dendronized Polymers

**Fields of interest**

Polymer Sciences; Spectroscopy / Spectrometry; Soft and Granular Matter, Complex Fluids and Microfluidics; Physical Chemistry

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012, XVI, 212 p. 105 illus., 25 in color. (Springer Theses) Hardcover

99.95 €
ISBN 978-3-642-25134-4
Biomedical Applications of Polymeric Nanofibers

Multiscale Fibrous Scaffolds in Regenerative Medicine, by Sowmya Srinivasan, R. Jayakumar, K. P. Chenzhnniza, erica J. Levorson, Antonio G. Mikos and Shantikumar V. Nair; Stem Cells and Nanostructures for Advanced Tissue Regeneration, by Molamah P. Prabhakaran, J. Venugopal, Laleh Ghasemi-Mobarakeh, Dan Kai Guorui Jin and Seeram Ramakrishna; Creating Electrospun Nanofiber-Based Biomimetic Scaffolds for Bone Regeneration, by Eleni Katsanevakis, Xuejun Wen and Ning Zhang; Synthetic/Biopolymer Nanofibrous Composites as Dynamic Tissue Engineering Scaffolds, by J. A. Kluge and R. L. Mauck; Electrospun Fibers as Substrates for Peripheral Nerve Regeneration, by Jörg Mey, Gary Brook, Dorothy Hudder and Andreas Kriebel; Highly Aligned Polymer Nanofiber Structures: Fabrication and Applications in Tissue Engineering, by Vince Beachley, Eleni Katsanevakis, Ning Zhang, Xuejun Wen; Electrospinning of Biocompatible Polymers and Their Potential in Biomedical Applications, by Pitt Supaphol, Orawan[...].

Features
Multiscale Fibrous Scaffolds in Regenerative Medicine, by Sowmya Srinivasan, R. Jayakumar, K. P. Chenzhnniza, erica J. Levorson, Antonio G. Mikos and Shantikumar V. Nair; Stem Cells and Nanostructures for Advanced Tissue Regeneration, by Molamah P. Prabhakaran, J. Venugopal, Laleh Ghasemi-Mobarakeh, Dan Kai Guorui Jin and Seeram Ramakrishna; Creating Electrospun Nanofiber-Based Biomimetic Scaffolds for Bone [...]
Chemical Transformations of Vinylidenecyclopropanes

Modern organic synthesis has paid much attention to the chemistry of small carbocycles. Vinylidenecyclopropanes (VDCPs), which have strained cyclopropyl group connected with an allene moiety and yet are thermally stable and reactive substances in organic chemistry, are versatile intermediates in organic synthesis. In this volume, Dr. Lixiong Shao, Dr. Jianmei Lu and Prof. Dr. Min Shi review their investigations on the chemistry of VDCPs, mainly including the preparation, the reactivities upon treatment with Lewis or Brønsted acid, as well as transition metal catalysts and some other miscellaneous analogues. The contributions aroused a renaissance of cationic intermediates in the chemistry of VDCPs.

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Contents
Introduction.- Lewis or Brønsted acid-mediated transformations of VDCPs.- Transition metal-catalyzed transformation of VDCPs.- Miscellaneous analogues.- Concluding remarks and perspectives of VDCPs.

Fields of interest
Catalysis; Organometallic Chemistry

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012, X, 69 p. 83 illus., 6 in color. (SpringerBriefs in Molecular Science) Softcover

49,95 €
ISBN 978-3-642-27572-2

Chemistry for Sustainable Development

Sustainable chemistry relies on chemists using resources more efficiently to minimize carbon footprints, to foster the eradication of solvents in organic chemistry, and delivering processes which lead to harmony between chemistry and the environment. Topics featured include: low-waste chemical processes; recovery and safe disposal of waste products; chemistry without solvents and solutions; energy loss prevention in chemical processes; chemical methods of synthetic fuel production; chemical aspects of safety; naturally occurring indicators of global environmental changes. This book covers all areas of physical, organic, and inorganic chemistry and will be of interest to all those engaged in the field.

Features
Chemistry for Sustainable Development is a collection of selected papers by participants of the International Conference on Pure and Applied Chemistry (ICPAC 2010) on the theme of “Chemistry for Sustainable Development” held in Mauritius in July 2010. In light of the significant progresses and challenges in the development and implementation of green and sustainable chemistry, this volume [...]
Fluorescent Proteins II
Application of Fluorescent Protein Technology

Fluorescent proteins are intimately connected to research in the life sciences. Tagging of gene products with fluorescent proteins has revolutionized all areas of biosciences, ranging from fundamental biochemistry to clinical oncology, to environmental research. The discovery of the Green Fluorescent Protein, its first, seminal application and the ingenious development of a broad palette of fluorescent proteins of other colours, was consequently recognised with the Nobel Prize for Chemistry in 2008. Fluorescent Proteins II highlights the physicochemical and biophysical aspects of fluorescent protein technology beyond imaging. It is tailor-made to meet the needs of physicists, chemists and biologists who are interested in the fundamental properties of fluorescent proteins, while also focusing on specific applications. The implementations described are cutting-edge studies and exemplify how the chemical and physical properties of fluorescent proteins can stimulate novel findings in life sciences.

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Contents

Fields of interest
Analytical Chemistry; Molecular Medicine; Medical Biochemistry; Biophysics and Biological Physics; Cell Biology; Biological Techniques

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

2012, XII, 282 p. 70 illus., 43 in color. (Springer Series on Fluorescence, Vol. 12) Hardcover
229.00 €
ISBN 978-3-642-23376-0

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

More than just coincidence connects a Tate & Lyle lawsuit and artificial sweetener to Jamaican-born Chemist Bert Fraser-Reid. From his first experience of Chemistry through his diabetic father, to his determination and drive as a Chemistry student in Canada, Fraser-Reid weaves a remarkable tale integrating science, law and autobiographical anecdotes. This book arises from the lawsuit brought by Tate & Lyle against companies accused of infringing its patents for sucralose, the sweet ingredient in the artificial sweetener SPLENDA which is made by chlorinating sugar. From a 1958 undergraduate intern witnessing the pioneering experiments on sugar chlorination, to being the 1991 recipient of the world’s premiere prize for carbohydrate chemistry, Fraser-Reid was groomed for his role as expert witness in the mentioned lawsuit. Nevertheless, it seems more than his career links Fraser-Reid to the case.

Features
More than just coincidence connects a Tate & Lyle lawsuit and artificial sweetener to Jamaican-born Chemist Bert Fraser-Reid. From his first experience of Chemistry through his diabetic father, to his determination and drive as a Chemistry student in Canada, Fraser-Reid weaves a remarkable tale integrating science, law and autobiographical anecdotes. This book arises from the lawsuit brought by Tate & [...]

Contents

Fields of interest
Carbohydrate Chemistry; Commercial Law; Food Science; Popular Science in Mathematics / Natural Science / Technology; Diabetes

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XX, 216 p. 43 illus., 10 in color. Hardcover
99.95 €
ISBN 978-3-642-22780-6
From the Molecular World
A Nineteenth-Century Science Fantasy

Hermann Kopp (1817–1892) is best remembered today as a historian of chemistry, but during his lifetime he was one of the most eminent chemists of his day, and one of the earliest pioneers of physical chemistry. Late in his career he wrote an endearing fantasy about personified molecules. Published in 1882, Aus der Molecular-Welt (From the Molecular World) portrayed the intimate details of what might actually be happening in the sub-microscopic world; the atoms and molecules we meet there have agency, personalities, sometimes even dialog. Filled with appealing tropes, humor, and whimsical asides, Kopp’s short book provided an examination of the chemistry and physics of his day that was always light-hearted on the surface, but often surprisingly profound. Properly interpreted, the book provides a revealing tour of nineteenth-century debates concerning chemical theory. It is here translated into English, richly annotated, and equipped with an illuminating preface by a leading historian of.[...]

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Contents
Introduction: The Molecular World of Hermann Kopp.- A Brief Biography.- Scientific work.- The making of the Molecular World.- The reception.- Concluding reflections.- References.-

Fields of interest
Physical Chemistry; History of Science; History and Philosophical Foundations of Physics

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. VII, 105 p. 1 illus. in color. (SpringerBriefs in History of Chemistry) Softcover

49,95 €
ISBN 978-3-642-27415-2

Green Technologies in Food Production and Processing

This book will review the current status of the agriculture and agri-food sector in regard to green processing and provide strategies that can be used by the sector to enhance the use of environmentally-friendly technologies for production, processing. The book will look at the full spectrum from farm to fork beginning with chapters on life cycle analysis and environmental impact assessment of different agri-food sectors. This will be followed by reviews of current and novel on-farm practices that are more environmentally-friendly, technologies for food processing that reduce chemical and energy use and emissions as well as novel analytical techniques for R&D and QA which reduce solvent, chemical and energy consumption. Technologies for waste treatment, reducing, reusing, recycling", and better water and energy stewardship will be reviewed. In addition, the last section of the book will attempt to look at technologies and processes that reduce the generation of process-induced toxins (e.g., trans[...]

Features
As we move into the future, decisions on food purchases will increasingly be influenced not only by price and quality but by social and environmental factors, such as the sustainability of technologies used for food production and processing and their environmental and health impacts. Growing consumer awareness about the impact of processing and production practices on the environment, the high energy.[...]

Contents

Fields of interest
Food Science

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XVIII, 681 p. 102 illus., 30 in color. (Food Engineering Series) Hardcover

199,95 €

Handbook of Computational Chemistry

The role the Handbook of Computational Chemistry is threefold. It is primarily intended to be used as a guide that navigates the user through the plethora of computational methods currently in use; it explains their limitations and advantages; and it provides various examples of their important and varied applications. This reference work is presented in three volumes. Volume I introduces the different methods used in computational chemistry. Basic assumptions common to the majority of computational methods based on molecular, quantum, or statistical mechanics are outlined and special attention is paid to the limits of their applicability. Volume II portrays the applications of computational methods to model systems and discusses in detail molecular structures, the modelling of various properties of molecules and chemical reactions. Both ground and excited states properties are covered in the gas phase as well as in solution. This volume also describes Nanomaterials and covers topics such as.[...]

Features
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Contents
Theory and Methodology.- Applications of computational methods to model systems.- Solid state materials and nanomaterials.- Biomolecules.

Fields of interest
Theoretical and Computational Chemistry; Nanotechnology; Computer Applications in Life Sciences; Theoretical, Mathematical and Computational Physics

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days

2012. XX, 1430 p. In 3 volumes, not available separately. Hardcover

699,00 €
ISBN 978-94-007-0710-8
**Handbook of Computational Chemistry**

The role the Handbook of Computational Chemistry is threefold. It is primarily intended to be used as a guide that navigates the user through the plethora of computational methods currently in use; it explains their limitations and advantages; and it provides various examples of their important and varied applications. This reference work is presented in three volumes. Volume I introduces the different methods used in computational chemistry. Basic assumptions common to the majority of computational methods based on molecular, quantum, or statistical mechanics are outlined and special attention is paid to the limits of their applicability. Volume II portrays the applications of computational methods to model systems and discusses in detail molecular structures, the modelling of various properties of molecules and chemical reactions. Both ground and excited states properties are covered in the gas phase as well as in solution. This volume also describes Nanomaterials and covers topics such as [..]

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**Contents**

**Fields of interest**
Theoretical and Computational Chemistry; Nanotechnology; Computer Applications in Life Sciences; Theoretical, Mathematical and Computational Physics

**Target groups**
Research

**Type of publication**
Handbook

**Online orders shipping within 2-3 days.**

2012. XX, 1430 p. Print + eReference. In 3 volumes, not available separately. Hardcover

874,00 €  

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**Handbook of Computational Chemistry**

The role the Handbook of Computational Chemistry is threefold. It is primarily intended to be used as a guide that navigates the user through the plethora of computational methods currently in use; it explains their limitations and advantages; and it provides various examples of their important and varied applications. This reference work is presented in three volumes. Volume I introduces the different methods used in computational chemistry. Basic assumptions common to the majority of computational methods based on molecular, quantum, or statistical mechanics are outlined and special attention is paid to the limits of their applicability. Volume II portrays the applications of computational methods to model systems and discusses in detail molecular structures, the modelling of various properties of molecules and chemical reactions. Both ground and excited states properties are covered in the gas phase as well as in solution. This volume also describes Nanomaterials and covers topics such as [..]

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**Contents**

**Fields of interest**
Theoretical and Computational Chemistry; Nanotechnology; Computer Applications in Life Sciences; Theoretical, Mathematical and Computational Physics

**Target groups**
Research

**Type of publication**
Handbook

**Online orders shipping within 2-3 days.**

2012. XX, 1430 p. Print + eReference. In 3 volumes, not available separately.

699,00 €  

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**Handbuch der gefährlichen Güter. Transport- und Gefahrenklassen Neu**

Das Handbuch der gefährlichen Güter ist das Standardwerk für den Transport von Gefahrgütern. Es gibt Informationen zu nationalen und internationalen Transportvorschriften und zu Notfallmaßnahmen bei Unfällen mit gefährlichen Gütern, die im Hommel enthalten sind würden die GHS-Kennzeichnungen mit aufgenommen: Signalworte, Piktogramme, sowie die neuen Gefahrenhinweise (H-Statements) und Sicherheitshinweise (P-Statements), die zukünftig die R- und S-Sätze ablösen werden.

**Features**
Das Handbuch der gefährlichen Güter ist das Standardwerk für den Transport von Gefahrgütern. Es gibt Informationen zu nationalen und internationalen Transportvorschriften und zu Notfallmaßnahmen bei Unfällen mit gefährlichen Gütern sowie Hinweise für die ärztliche Erstbehandlung von Personen. Für alle Gefahrgüter, die im Hommel enthalten sind würden die GHS-Kennzeichnungen mit aufgenommen: [..]

**Fields of interest**
Safety in Chemistry / Dangerous Goods; Emergency Medicine, Public Law

**Target groups**
Professional/practitioner

**Type of publication**
Loose-leaf publication

**Online orders shipping within 2-3 days.**

2012. 816 S. (Transport- und Gefahrenklassen) Ring binder

186,87 €  
ISBN 978-3-642-25064-4
In this thesis Colm Duffy reviews the chemistry and biology of stable lipoxin analogues. Colm has prepared for the first time ever a pyridine-containing LXA4 analogue in enantiomerically pure form. Biological evaluation determined that both epimers at the benzylic position suppress key cytokines known to be involved in inflammatory disease, with the (R)-epimer proving most efficacious. Moreover the author developed an excellent route to a related thiophene-containing analogue that also showed interesting biological activity. Both routes have inspired further work in the synthesis of further heteroaromatic analogues for biological evaluation.

**Features**
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**Contents**
Introduction.- Recent advances in the chemistry and biology of stable synthetic Lipoxin analogues.- Synthesis of Heck coupling partner for the preparation of heteroaromatic Lipoxin A4 analogues.- Synthesis and biological evaluation of pyridine-containing Lipoxin A4 analogues.- Thiophene-containing Lipoxin A4 analogues: synthesis and their effect on the production of key cytokines.- Towards the synthesis of various heteroaromatic Lipoxin A4 analogues.

**Fields of interest**
Bioorganic Chemistry; Biochemistry; Medicinal Chemistry; Catalysis

**Target groups**
Research

**Type of publication**
Monograph

**Online orders shipping within 2-3 days.**

2012. XXI, 127 p. 192 illus., 6 in color. (Springer Theses) Hardcover

99,95 €
ISBN 978-3-642-24631-9
Late Transition Metal-Carboryne Complexes

Synthesis, Structure, Bonding, and Reaction with Alkenes and Alkynes

Zaozao Qiu shows in this thesis that transition metals can mediate or catalyze the cycloaddition or coupling reactions of carbonyl with alkynes or alkynes to afford benzocarboranes, alkynylcarboranes or dihydrobenzocarboranes. These reactions afford benzocarboranes, alkynylcarboranes or dihydrobenzocarboranes, and are powerful strategies to assemble useful complex molecules in a single operation. Carboryanes have many applications in medicine. However, their unique structures make derivatization difficult and the limited efficient synthetic methods to obtain functional carboryne materials have restricted applications of carborynes within a narrow scope. This work breaks a new ground in metal-carboryne chemistry and will have a significant impact on synthetic, cluster and materials chemistry.

Features

In this thesis, Zaozao Qiu shows that transition metals can mediate or catalyze cycloaddition and coupling reactions of carbonyls with alkynes or alkynes. These reactions afford benzocarboranes, alkynylcarboranes or dihydrobenzocarboranes, and are powerful strategies to assemble useful complex molecules in a single operation from very simple precursors. Carboryanes have many applications in medicine. [...]
Liquid Crystals
Materials Design and Self-assembly


Features

Contents

Fields of interest
Physical Chemistry; Materials Science (general); Condensed Matter Physics

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

2012, XI, 410 p. 221 illus., 64 in color. (Topics in Current Chemistry, Vol. 318) Hardcover
299,00 €
ISBN 978-3-642-27590-6

Mass Spectrometry of Polymers – New Techniques


Features

Fields of interest
Polymer Sciences; Analytical Chemistry; Characterization and Evaluation of Materials; Physical Chemistry

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

2012, XII, 201 p. 94 illus. (Advances in Polymer Science, Vol. 248) Hardcover
189,95 €
ISBN 978-3-642-28040-5

Modern Charge-Density Analysis

Modern Charge-Density Analysis focuses on state-of-the-art methods and applications of electron-density analysis. It is a field traditionally associated with understanding chemical bonding and the electrostatic properties of matter. Recently, it has also been related to predictions of properties and responses of materials (having an organic, inorganic or hybrid nature as in modern materials and bio-science, and used for functional devices or biomaterials). Modern Charge-Density Analysis is inherently multidisciplinary and written for chemists, physicists, crystallographers, material scientists, and biochemists alike. It serves as a useful tool for scientists already working in the field by providing them with a unified view of the multifaceted charge-density world. Additionally, this volume facilitates the understanding of scientists and PhD students planning to enter the field by acquainting them with the most significant and promising developments in this area.

Features
Modern Charge-Density Analysis focuses on state-of-the-art methods and applications of electron-density analysis. It is a field traditionally associated with understanding chemical bonding and the electrostatic properties of matter. Recently, it has also been related to predictions of properties and responses of materials (having an organic, inorganic or hybrid nature as in modern materials and bio-science, and used for functional devices or biomaterials). Modern Charge-Density Analysis is inherently multidisciplinary and written for chemists, physicists, crystallographers, material scientists, and biochemists alike. It serves as a useful tool for scientists already working in the field by providing them with a unified view of the multifaceted charge-density world. Additionally, this volume facilitates the understanding of scientists and PhD students planning to enter the field by acquainting them with the most significant and promising developments in this area.

Fields of interest
Theoretical and Computational Chemistry; Crystallography; Materials Science (general); Organic Chemistry; Inorganic Chemistry; Physical Chemistry

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XXIII, 783 p. 229 illus., 181 in color. Hardcover
199,95 €
Molecular Electronic Structures of Transition Metal Complexes I


Features

Fields of interest
Inorganic Chemistry

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

2012, XV, 215 p. 79 illus., 40 in color. (Structure and Bonding, Vol. 142) Hardcover

189,95 €
ISBN 978-3-642-27369-8

Molecular Electronic Structures of Transition Metal Complexes II


Features
Peptide-Based Materials

Synthesis of Polypeptides by Ring-Opening Polymerization of α-Amino Acid N-Carboxyanhydrides, by Jianjun Cheng and Timothy J. Deming.

Features
Synthesis of Polypeptides by Ring-Opening Polymerization of α-Amino Acid N-Carboxyanhydrides, by Jianjun Cheng and Timothy J. Deming.

Contents
Synthesis of Polypeptides by Ring-Opening Polymerization of α-Amino Acid N-Carboxyanhydrides, by Jianjun Cheng and Timothy J. Deming.

Fields of interest
Polymer Sciences; Biomaterials; Biochemistry

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

189.95 €
ISBN 978-3-642-27138-0

Photosensitizers in Medicine, Environment, and Security

This book addresses the synthesis of photosensitizers, the main emphasis being on the new methods of synthesis such as microwave, sonochemistry and the use of ionic liquids. It also addresses the photochemistry and photophysics of the photosensitizers alone and in combination with nanoparticles, the use of the photosensitizers in environmental control, safety and medicine. It discusses the common structures of the photosensitizers which are beneficial to these applications.

Features
Photosensitizers in Medicine, Environment, and Security provides a throughout overview of photosensitizers, detailing their chemistry, properties and applications with a special focus on tetrapyrrolic compounds. The design of photosensitizers (including the theoretical chemistry contribution) as well as recently developed synthetic methods are presented together with their photophysical and [...]

Contents
Design and conception of photosensitizers. - Recent developments in the synthesis of porphyrin and phthalocyanine photosensitizers and related systems. - The contribution of theoretical chemistry to the drug design in photodynamic therapy. - Photochemical and photophysical characterization. - Sensitization of singlet oxygen formation in aqueous media. - The use of phthalocyanines and related complexes in photodynamic therapy. - Combination Therapy: Complexing of QDs with tetrapyrrols and other dyes. - Exogenously induced endogenous Photosensitizers. - Photocatalytic degradation of pollutants[...]

Fields of interest
Organic Chemistry; Medicinal Chemistry; Environment (general)

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 662 p. 687 illus., 110 in color. Hardcover
189,95 €
Practical Aspects of Computational Chemistry I
An Overview of the Last Two Decades and Current Trends

Practical Aspects of Computational Chemistry describes the progress made during the last two decades by researchers in theoretical methodologies. The huge variety of applications to problems of chemical interest is presented. Since progress in nanomaterials and associated fields have also been made within the last two decades, this volume provides an extensive and exhaustive description of how existing methodologies have been tailored to this new research area. This volume is divided into various sections covering different areas such as theoretical developments and their applications to biological systems, nanomaterials, nanotechnology, and structure-activity correlation. Practical Aspects of Computational Chemistry is aimed at physical scientists, materials scientists and biological scientists who have an interest in novel computational methodologies and their applications.

Features
Practical Aspects of Computational Chemistry I: An Overview of the Last Two Decades and Current Trends gathers the advances made within the last 20 years by well-known experts in the area of theoretical and computational chemistry and physics. The title itself reflects the celebration of the twentieth anniversary of the "Conference on Current Trends in Computational Chemistry (CCTCC)" to which all authors have [—].

Contents

Fields of interest
Theoretical and Computational Chemistry; Theoretical, Mathematical and Computational Physics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XV, 680 p. 231 illus., 138 in color. Hardcover
169,95 €
ISBN 978-3-642-21621-3

Pyrethroids
From Chrysanthemum to Modern Industrial Insecticide


Progress and Future of Pyrethroids, by Yoshio Katsuma Pyrethrin Biosynthesis and Its Regulation in Chrysanthemum cinerariaefolium, by Kazuhiko Matsuda Recent Advances of Pyrethroids for Household Use, by Kazuya Ujihara, Tatsuya Mori and Noritada Matsuo The Biological Activity of a Novel Pyrethroid: Metofluthrin, by Masayo Sugano and Takao Ishiwatari Advances in the Mode of Action of Pyrethroids, J. Marshall Clark and Steven B. Symington Mammal Toxicology of Synthetic Pyrethroids, by Ryozo Tsuji, Tomoya Yamada and Satoshi Kawamura Biotransformation and Enzymatic [...] Fields of interest
Biorganic Chemistry; Plant Biochemistry; Environmental Chemistry

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

189,95 €
ISBN 978-3-642-27345-2

Specific Intermolecular Interactions of Organic Compounds

Prof. Baev presents in his book the development of the thermodynamic theory of specific intermolecular interactions for a wide spectrum of organic compounds: ethers, ketones, alcohols, carboxylic acids, and hydrocarbons. The fundamentals of an unconventional approach to the theory of H-bonding and specific interactions are formulated based on a concept of pentacoordinate carbon atoms. New types of hydrogen bonds and specific interactions are substantiated and on the basis of the developed methodology their energies are determined. The system of interconnected quantitative characteristics of the stability of specific intermolecular interactions is presented. The laws of their transformations are discussed and summarized. The new concept of the extra stabilizing effect of isomeric methyl groups on the structure and stability of organic molecules is introduced and the destabilization action on specific interactions is outlined.

Features
Prof. Baev presents in his book the development of the thermodynamic theory of specific intermolecular interactions for a wide spectrum of organic compounds: ethers, ketones, alcohols, carboxylic acids, and hydrocarbons. The fundamentals of an unconventional approach to the theory of H-bonding and specific interactions are formulated based on a concept of pentacoordinate carbon atoms. New types of hydrogen bonds and specific interactions are substantiated and on the basis of the developed methodology their energies are determined. The system of interconnected quantitative characteristics of the stability of specific intermolecular interactions is presented. The laws of their transformations are discussed and summarized. The new concept of the extra stabilizing effect of isomeric methyl groups on the structure and stability of organic molecules is introduced and the destabilization action on specific interactions is outlined.

Features
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Fields of interest
Theoretical and Computational Chemistry; Organic Chemistry; Physical Chemistry; Industrial Chemistry / Chemical Engineering

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVIII, 434 p. 157 illus. Hardcover
139,95 €
ISBN 978-3-642-21621-3
Synthetic Biodegradable Polymers


Selen Metal Complexes as Catalysts for the Synthesis of Polycarbonates from Cyclic Ethers and Carbon Dioxide, by Donald J. Darensbourg Material Properties of Poly(Propylene Carbonates), by Gerrit A. Luinstra and Endres Borchardt Poly(3-Hydroxybutyrate) from Carbon Monoxide, by Robert Reichardt and Bernhard Rieger Ecoflex® and Ecovio® Biodegradable, Performance-Enabling Plastics, by K. O. Siegenthaler, A. [...] Fields of interest Polymer Sciences, Medicinal Chemistry, Pharmacy, Biochemistry, Electrochemistry Target groups Research Type of publication Reviews Usually dispatched within 3 to 5 business days


299,00 € ISBN 978-3-642-27153-3

Z. Shuai, Tsinghua University, Beijing, China; L. Wang, University of Mons, Belgium; C. Song, Tsinghua University, Beijing, China

Theory of Charge Transport in Carbon Electronic Materials

Mechanism of charge transport in organic solids has been an issue of intensive interests and debates for over 50 years, not only because of the applications in printing electronics, but also because of the great challenges in understanding the electronic processes in complex systems. With the fast developments of both electronic structure theory and the computational technology, the dream of predicting the charge mobility is now gradually becoming a reality. This volume describes recent progresses in Prof. Shuai’s group in developing computational tools to assess the intrinsic carrier mobility for organic and carbon materials at the first-principles level. According to the electron-phonon coupling strength, the charge transport mechanism is classified into three different categories, namely, the localized hopping model, the extended band model, and the polaron model. For each of them, a corresponding theoretical approach is developed and implemented into typical examples.

Features

Mechanism of charge transport in organic solids has been an issue of intensive interests and debates for over 50 years, not only because of the applications in printing electronics, but also because of the great challenges in understanding the electronic processes in complex systems. With the fast developments of both electronic structure theory and the computational technology, the dream of predicting the [...] Contents


Fields of interest Theoretical and Computational Chemistry; Optical and Electronic Materials; Semiconductors; Computer Applications in Chemistry; Characterization and Evaluation of Materials Target groups Research Type of publication Brief Usually dispatched within 3 to 5 business days

2012, IX, 90 p. 59 illus., 23 in color. (SpringerBriefs in Molecular Science) Softcover

49,95 € ISBN 978-3-642-25075-0

X.-Y. Sun, ETH Zurich, Switzerland

Total Synthesis of Plakortide E and Biomimetic Synthesis of Plakortone B

In his thesis, Xiaoyu Sun conducts the first total synthesis of all possible stereoisomers of plakortide E and also confirms the absolute configuration of natural plakortide E. Xiaoyu Sun subsequently converts Plakortone E methyl ester to plakortone B in a biomimetic conversion. Construction and functionalization of cyclic peroxides are notoriously difficult due to the very low O-O bond dissociation energy. Plakortide E is isolated from the Jamaican marine sponge platorits halichondrioids and contains a five-membered peroxide ring, with oxygen atoms linked to tertiary C4 and C6 centers. The methodology used for synthesizing highly substituted cyclic peroxides is novel and useful, and not only extends the field of Pd-catalyzed reactions, but also provides a convenient synthetic approach for the preparation of the 1,2-dioxolanes series. Plakortide E and plakortone B are bioactive, which means that the synthetic studies on them and their analogs are pivotal in drug discovery.

Features

In his thesis, Xiao-yu Sun conducts the first total synthesis of all possible stereoisomers of plakortide E and also confirms the absolute configuration of natural plakortide E. Xiao-yu Sun subsequently converts Plakortide E methyl ester to plakortone B in a biomimetic conversion. Construction and functionalization of cyclic peroxides are notoriously difficult due to the very low O-O bond dissociation energy. [...] Contents

Introduction. - Results and Discussion. - Conclusion. - Experimental Section. - References. - Appendix I. - Appendix II.

Fields of interest Organic Chemistry; Medicinal Chemistry; Catalysis Target groups Research Type of publication Monograph Usually dispatched within 3 to 5 business days

2012, XIV, 220 p. 308 illus., 12 in color. (Springer Theses) Hardcover

99,95 € ISBN 978-3-642-27194-6
Ultrasonic Coal-Wash for De-Ashing and De-Sulfurization

Experimental Investigation and Mechanistic Modeling

This study focuses on the physical aspects of ultrasonic de-ashing and de-sulfurization, such as cavitation, streaming and their combined effects. Ambedkar Balraj proposes an ultrasound-assisted coal particle breakage mechanism and explores aqueous and solvent-based ultrasonic techniques for de-ashing and de-sulfurization. Ambedkar designs a Taguchi L-27 fractional-factorial matrix to assess the individual effects of key process variables. In this volume he also describes process optimization and scale-up strategies. The author provides a mechanism-based model for ultrasonic reagent-based coal de-sulfurization, proposes a flow diagram for ultrasonic methods of high-throughput coal-wash and discusses the benefits of ultrasonic coal-wash. Coal will continue to be a major fuel source for the foreseeable future and this study helps improve its use by minimising ash and sulfur impurities.

Features
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Contents

Features
Table of Contents

Contents

Fields of interest
Physical Chemistry; Applied and Technical Physics; Optical and Electronic Materials

Type of publication
Research

Usually dispatched within 3 to 5 business days

249.00 €
ISBN 978-3-642-27283-7

Unimolecular and Supramolecular Electronics II

Chemistry and Physics Meet at Metal-Molecule Interfaces


Features

Contents

Fields of interest
Physical Chemistry; Applied and Technical Physics; Optical and Electronic Materials

Type of publication
Research

Usually dispatched within 3 to 5 business days

229.00 €
ISBN 978-3-642-27397-1
A Primer of Multicast Routing

Whereas unicast routing determines a path from one source node to one destination node, multicast routing determines a path from one source to many destinations, or from many sources to many destinations. We survey multicast routing methods for when the set of destinations is static, and for when it is dynamic. While most of the methods we review are tree-based, some non-tree methods are also discussed. We survey results on the shape of multicast trees, delay constrained multicast routing, aggregation of multicast traffic, inter-domain multicast, and multicast virtual private networks. We focus on basic algorithmic principles, and mathematical models, rather than implementation level protocol details. Many historically important methods, even if not currently used, are reviewed to give perspective on the evolution of multicast routing.

Features

Whereas unicast routing determines a path from one source node to one destination node, multicast routing determines a path from one source to many destinations, or from many sources to many destinations. We survey multicast routing methods for when the set of destinations is static, and for when it is dynamic. While most of the methods we review are tree-based, some non-tree methods are also discussed. We [...]

Contents


Fields of interest

Computer Communication Networks; Communications Engineering; Networks

Target groups

Professional/practitioner

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012, X, 117 p. 58 illus. (SpringerBriefs in Computer Science) Softcover

39,95 €

Abgründe der Informatik

Geheimnisse und Gemeinheiten

Adaptive Multimedia Retrieval. Context, Exploration and Fusion
8th International Workshop, AMR 2010, Linz, Austria, August 17-18, 2010. Revised Selected Papers

This book constitutes the refereed proceedings of the 8th International Conference on Adaptive Multimedia Retrieval, AMR 2010, held in Linz, Austria, in August 2010. The 14 revised full papers and the invited contribution presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on Context-based personalization; media information fusion; video retrieval; audio and music retrieval; adaptive similarities; and finding and organizing.

Features
This book constitutes the refereed proceedings of the 8th International Conference on Adaptive Multimedia Retrieval, AMR 2010, held in Linz, Austria, in August 2010. The 14 revised full papers and the invited contribution presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on Context-based personalization; media information fusion; video [-]

Fields of interest
Information Systems Applications (incl.Internet); Information Storage and Retrieval; Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision; Database Management; Multimedia Information Systems

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

46,00 €
ISBN 978-3-642-27168-7

Advanced Agent Technology

AAMAS Workshops 2011, AMPLE, AOSE, ARMS, DOCM³AS, ITMAS, Taipei, Taiwan, May 2-6, 2011. Revised Selected Papers

This book constitutes the thoroughly refereed post-workshop proceedings of 5 workshops held at the 10th International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2011, in Taipei, Taiwan, May 2-6, 2011. The 37 revised full papers presented together with 1 invited paper were carefully reviewed and selected from numerous submissions. The papers are organized in sections on the workshops Agent-Based Modeling for Policy Engineering (AMPLE), Agent-Oriented Software Engineering (AOSE), Autonomous Robots and Multirobot Systems (ARMS), Data Oriented Constructive Mining and Multi-Agent Simulation, Massively Multi-Agent Systems: Models, Methods and Tools (DOCM³AS), and Infrastructures and Tools for Multiagent Systems (ITMAS).

Features
This book constitutes the thoroughly refereed post-workshop proceedings of 5 workshops held at the 10th International Conference on Autonomous Agents and Multiagent Systems, AAMAS 2011, in Taipei, Taiwan, May 2-6, 2011. The 37 revised full papers presented together with 1 invited paper were carefully reviewed and selected from numerous submissions. The papers are organized in sections on the workshops [-]

Fields of interest
Artificial Intelligence (incl. Robotics); Computers and Society; Computer Communication Networks; Data Mining and Knowledge Discovery; User Interfaces and Human Computer Interaction; Business Information Systems

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XX, 506 p. 162 illus. (Lecture Notes in Artificial Intelligence, Vol. 7068) Softcover
70,00 €
ISBN 978-3-642-27215-8

Advanced Intelligent Computing

Theories and Applications

7th International Conference, ICIC 2011, Zhengzhou, China, August 11-14, 2011. Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Conference on Intelligent Computing, ICIC 2011, held in Zhengzhou, China, in August 2011. The 94 revised full papers presented were carefully reviewed and selected from 832 submissions. The papers are organized in topical sections on intelligent computing in scheduling; local feature descriptors for image processing and recognition; combinatorial and numerical optimization; machine learning theory and methods; intelligent control and automation; knowledge representation/reasoning and expert systems; intelligent computing in pattern recognition; intelligent computing in image processing; intelligent computing in computer vision; biometrics with applications to individual security/forensic sciences; modeling, theory, and applications of positive systems; sparse manifold learning methods and applications; advances in intelligent information processing.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Conference on Intelligent Computing, ICIC 2011, held in Zhengzhou, China, in August 2011. The 94 revised full papers presented were carefully reviewed and selected from 832 submissions. The papers are organized in topical sections on intelligent computing in scheduling; local feature descriptors for image [-]

Fields of interest
Artificial Intelligence (incl. Robotics); Pattern Recognition; Information Systems Applications (incl.Internet); Image Processing and Computer Vision; Computation by Abstract Devices; User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XXIII, 729 p. (Lecture Notes in Artificial Intelligence, Vol. 6839) Softcover
87,00 €
ISBN 978-3-642-25945-2
Advances in Software Engineering Techniques

4th IFIP TC 2 Central and East European Conference on Software Engineering Techniques, CEE-SET 2009, Krakow, Poland, October 12-14, 2009. Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 4th IFIP TC2 Central and East European Conference on Software Engineering Techniques, CEE-SET 2009, held in Krakow, Poland, in October 2009. The 19 revised full papers presented were carefully reviewed and selected from 63 submissions. The papers are organized in topical sections on software architectures and development; modelling and formal methods in software development; measurements, testing, and quality of software.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the 4th IFIP TC2 Central and East European Conference on Software Engineering Techniques, CEE-SET 2009, held in Krakow, Poland, in October 2009. The 19 revised full papers presented were carefully reviewed and selected from 63 submissions. The papers are organized in topical sections on software architectures and development; [...]}

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


60,00 €
ISBN 978-3-642-28037-5

Agents and Data Mining Interaction

7th International Workshop, ADMI 2011, Taipei, Taiwan, May 2-6, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-workshop proceedings of the 7th International Workshop on Agents and Data Mining Interaction, ADMI 2011, held in Taipei, Taiwan, in May 2011 in conjunction with AAMAS 2011, the 10th International Joint Conference on Autonomous Agents and Multiagent Systems. The 11 revised full papers presented were carefully reviewed and selected from 24 submissions. The papers are organized in topical sections on agents for data mining; data mining for agents; and agent mining applications.

Features
This book constitutes the thoroughly refereed post-workshop proceedings of the 7th International Workshop on Agents and Data Mining Interaction, ADMI 2011, held in Taipei, Taiwan, in May 2011 in conjunction with AAMAS 2011, the 10th International Joint Conference on Autonomous Agents and Multiagent Systems. The 11 revised full papers presented were carefully reviewed and selected from 24 submissions. The [...]}

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XIII, 361 p. 112 illus. (Lecture Notes in Artificial Intelligence, Vol. 7103) Softcover

54,00 €
ISBN 978-3-642-27608-8

Algorithmen und Datenstrukturen


Features
Dieses bestens eingeführte Lehrbuch wendet sich an Studierende der Informatik in Grund- und Hauptstudium. Es behandelt gut verständlich alle Themen, die üblicherweise in der Standardvorlesung "Algorithmen und Datenstrukturen" vermittelt werden. Die einzelnen Algorithmen werden theoretisch fundiert dargestellt; ihre Funktionsweise wird ausführlich anhand vieler Beispiele erläutert. Zusätzlich zur [...]}

Contents

Fields of interest
Theory of Computation

Target groups
Upper undergraduate

Type of publication
German textbook

Usually dispatched within 3 to 5 business days

2012. XX, 780 S. 340 Abb. Softcover

46,68 €
ISBN 978-3-8274-2803-5
Analysis of Rare Categories

In many real-world problems, rare categories (minority classes) play essential roles despite their extreme scarcity. The discovery, characterization and prediction of rare categories of rare examples may protect us from fraudulent or malicious behavior, aid scientific discovery, and even save lives. This book focuses on rare category analysis, where the majority classes have smooth distributions, and the minority classes exhibit the compactness property. Furthermore, it focuses on the challenging cases where the support regions of the majority and minority classes overlap. The author has developed effective algorithms with theoretical guarantees and good empirical results for the related techniques, and these are explained in detail. The book is suitable for researchers in the area of artificial intelligence, in particular machine learning and data mining.

Features
In many real-world problems, rare categories (minority classes) play essential roles despite their extreme scarcity. The discovery, characterization and prediction of rare categories of rare examples may protect us from fraudulent or malicious behavior, aid scientific discovery, and even save lives. This book focuses on rare category analysis, where the majority classes have smooth distributions, and the minority classes exhibit the compactness property.

Contents
Introduction - Survey and Overview - Rare Category Detection - Rare Category Characterization - Unsupervised Rare Category Analysis - Conclusion and Future Directions.

Fields of interest
Artificial Intelligence (incl. Robotics); Data Mining and Knowledge Discovery; Computational Intelligence; Data Structures, Cryptology and Information Theory

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, VIII, 135 p. 43 illus., 10 in color. (Cognitive Technologies) Hardcover

79,95 €
ISBN 978-3-642-22812-4

Autonomous Search

Decades of innovations in combinatorial problem solving have produced better and more complex algorithms. These new methods are better since they can solve larger problems and address new application domains. They are also more complex, which means that they are hard to reproduce and often harder to fine-tune to the peculiarities of a given problem. This last point has created a paradox where efficient tools are out of reach of practitioners. Autonomous search (AS) represents a new research field defined to precisely address the above challenge. Its major strength and originality consist in the fact that problem solvers can now perform self-improvement operations based on analysis of the performances of the solving process -- including short-term reactive reconfiguration and long-term improvement through self-analysis of the performance, offline tuning and online control, and adaptive control and supervised control. Autonomous search "crosses the chasm" and provides engineers and practitioners with [...] Features
Decades of innovations in combinatorial problem solving have produced better and more complex algorithms. These new methods are better since they can solve larger problems and address new application domains. They are also more complex, which means that they are hard to reproduce and often harder to fine-tune to the peculiarities of a given problem. This last point has created a paradox where efficient tools [...] Contents
An Introduction to Autonomous Search - Part I - Offline Configuration - Evolutionary Algorithm Parameters and Methods to Tune Them - Automated Algorithm Configuration and Parameter Tuning - Case-Based Reasoning for Autonomous Constraint Solving - Learning a Mixture of Search Heuristics - Part II - Online Control - An Investigation of Reinforcement Learning for Reactive Search Optimization - Adaptive Operator Selection and Management in Evolutionary Algorithms - Parameter Adaptation in Ant Colony Optimization - Part III - New Directions and Applications - Continuous Search in Constraint [...] Fields of interest
Artificial Intelligence (incl. Robotics); Mathematics of Computing; Computational Intelligence; Theory of Computation; Control

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XVII, 307 p. 72 illus., 29 in color. Hardcover

99,95 €
ISBN 978-3-642-21433-2

Bio-Inspired Computing and Applications

7th International Conference on Intelligent Computing, ICIC2011, Zhengzhou, China, August 11-14, 2011, Revised Papers

The three-volume set LNCS 6838, LNAI 6839, and LNBI 6840 constitutes the thoroughly refereed post-conference proceedings of the 7th International Conference on Intelligent Computing, ICIC 2011, held in Zhengzhou, China, in August 2011. This volume contains 93 revised full papers, from a total of 281 presentations at the conference - carefully reviewed and selected from 832 initial submissions. The papers address all issues in Advanced Intelligent Computing, especially Methodologies and Applications, including theories, methodologies, and applications in science and technology. They include a range of techniques such as artificial intelligence, pattern recognition, evolutionary computing, informatics theories and applications, computational neuroscience and bioscience, soft computing, human computer interface issues, etc.

Features
The three-volume set LNCS 6838, LNAI 6839, and LNBI 6840 constitutes the thoroughly refereed post-conference proceedings of the 7th International Conference on Intelligent Computing, ICIC 2011, held in Zhengzhou, China, in August 2011. This volume contains 93 revised full papers, from a total of 281 presentations at the conference - carefully reviewed and selected from 832 initial submissions. The papers [...] Fields of interest
Artificial Intelligence (incl. Robotics); Pattern Recognition; Information Systems Applications (incl.Internet); Image Processing and Computer Vision; Computation by Abstract Devices; User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012, XXIII, 713 p. (Lecture Notes in Bioinformatics, Vol. 6840) Softcover

87,00 €
ISBN 978-3-642-24552-7

7th International Conference on Intelligent Computing, ICIC2011, Zhengzhou, China, August 11-14, 2011, Revised Papers

The three-volume set LNCS 6838, LNAI 6839, and LNBI 6840 constitutes the thoroughly refereed post-conference proceedings of the 7th International Conference on Intelligent Computing, ICIC 2011, held in Zhengzhou, China, in August 2011. This volume contains 93 revised full papers, from a total of 281 presentations at the conference - carefully reviewed and selected from 832 initial submissions. The papers [...] Fields of interest
Artificial Intelligence (incl. Robotics); Pattern Recognition; Information Systems Applications (incl.Internet); Image Processing and Computer Vision; Computation by Abstract Devices; User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012, XXIII, 713 p. (Lecture Notes in Bioinformatics, Vol. 6840) Softcover

87,00 €
ISBN 978-3-642-24552-7
CGAL Arrangements and Their Applications
A Step-by-Step Guide
Arrangements of curves constitute fundamental structures that have been intensively studied in computational geometry. Arrangements have numerous applications in a wide range of areas – examples include geographic information systems, robot motion planning, statistics, computer-assisted surgery and molecular biology. Implementing robust algorithms for arrangements is a notoriously difficult task, and the CGAL arrangements package is the first robust, comprehensive, generic and efficient implementation of data structures and algorithms for arrangements of curves. This book is about how to use CGAL two-dimensional arrangements to solve meaningful problems – for example, finding the minimum-area triangle defined by a set of points, planning the motion of a robot.

Features
Arrangements of curves constitute fundamental structures that have been intensively studied in computational geometry. Arrangements have numerous applications in a wide range of areas – examples include geographic information systems, robot motion planning, statistics, computer-assisted surgery and molecular biology. Implementing robust algorithms for arrangements is a notoriously difficult task, and the [...] Features

Contents

Fields of interest
Computer Imaging, Vision, Pattern Recognition and Graphics; Geometry; Appl. Mathematics / Computational Methods of Engineering

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Online orders shipping within 2-3 days.
Collaborative Financial Infrastructure Protection

The Critical Infrastructure Protection Survey recently released by Symantec found that 53% of interviewed IT security experts from international companies experienced at least ten cyber attacks in the last five years, and financial institutions were often subject to some of the most sophisticated and large-scale cyber attacks and frauds. The book by Baldoni and Chockler analyzes the structure of software infrastructures found in the financial domain, their vulnerabilities to cyber attacks and the existing protection mechanisms. It then shows the advantages of sharing information among financial players in order to detect and quickly react to cyber attacks. Various aspects associated with information sharing are investigated from the organizational, cultural and legislative perspectives. The presentation is organized in two parts: Part I explores general issues associated with information sharing in the financial sector and is intended to set the stage for the vertical IT middleware solution.

Features
The Critical Infrastructure Protection Survey recently released by Symantec found that 53% of interviewed IT security experts from international companies experienced at least ten cyber attacks in the last five years, and financial institutions were often subject to some of the most sophisticated and large-scale cyber attacks and frauds. The book by Baldoni and Chockler analyzes the structure of software infrastructures found in the financial domain, their vulnerabilities to cyber attacks and the existing protection mechanisms. It then shows the advantages of sharing information among financial players in order to detect and quickly react to cyber attacks. Various aspects associated with information sharing are investigated from the organizational, cultural and legislative perspectives. The presentation is organized in two parts: Part I explores general issues associated with information sharing in the financial sector and is intended to set the stage for the vertical IT middleware solution.

Contents

Fields of interest
Computer communication networks; systems and data security; business information systems; management of computing and information systems; computer applied in administrative data processing.

Target groups
Research.

Type of publication
Monograph.

Usually dispatched within 3 to 5 business days.

2012. XXII, 224 p. 45 illus. Hardcover

79.95 €
ISBN 978-3-642-20419-7

Combinatorial Algorithms

22th International Workshop, IWOCA 2011, Victoria, Canada, July 20-22, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-workshop proceedings of the 22nd International Workshop on Combinatorial Algorithms, IWOCA 2011, held in Victoria, BC, Canada, in July 2011. The 30 revised full papers presented were carefully reviewed and selected from a total of 71 submissions. A broad variety of topics in combinatorics and graph theory are addressed, such as combinatorics on words, string algorithms, codes, Venn diagrams, set partitions, Hamiltonian & Eulerian properties, graph drawing, colouring, dominating sets, spanning trees, and others.

Features
This book constitutes the thoroughly refereed post-workshop proceedings of the 22nd International Workshop on Combinatorial Algorithms, IWOCA 2011, held in Victoria, BC, Canada, in July 2011. The 30 revised full papers presented were carefully reviewed and selected from a total of 71 submissions. A broad variety of topics in combinatorics and graph theory are addressed, such as combinatorics on words.

Fields of interest
Discrete mathematics in computer science; algorithm analysis and problem complexity; mathematical logic and formal languages; data structures; symbolic and algebraic manipulation.

Target groups
Research.

Type of publication
Proceedings.

Online orders shipping within 2-3 days.


54,00 €
ISBN 978-3-642-25010-1

Computation, Physics and Beyond

International Workshop on Theoretical Computer Science, WTCS 2012, Dedicated to Cristian S. Calude on the Occasion of His 60th Birthday, Auckland, New Zealand, February 21-24, 2012, Revised Selected and Invited Papers

This Festschrift volume has been published in honor of Cristian Calude on the occasion of his 60th birthday and contains contributions from invited speakers and regular papers presented at the International Workshop on Theoretical Computer Science, WTCS 2012, held in Auckland, New Zealand, in February 2012. Cristian Calude has made a significant contribution to research in computer science theory. Along with early work by Chaitin, Kučera, Kurtz, Solovay, and Terwijn his papers published in the mid-1990s jointly with Khourisatov, Hertling, and Wang laid the foundation for the development of modern theory of algorithmic randomness. His work was essential for establishing the leading role of New Zealand in this area. The research interests of Cristian Calude are reflected in the topics covered by the 32 papers included in this book, namely: algorithmic information theory, algorithms, automata and formal languages, computer and natural sciences, computability and applications, logic and applications.

Features
This Festschrift volume has been published in honor of Cristian Calude on the occasion of his 60th birthday and contains contributions from invited speakers and regular papers presented at the International Workshop on Theoretical Computer Science, WTCS 2012, held in Auckland, New Zealand, in February 2012. Cristian Calude has made a significant contribution to research in computer science theory.

Contents
The Art of Reaching the Age of Sixty.- Calude as Father of One of the Computer Science Journals.- Random Semicomputable Reals Revisited.- Constructing the In nite Primitive of Two Projections.- Bounded Randomness.- A Note on Blum Static Complexity Measures.- A Program-Size Complexity Measure for Mathematical Problems and Conjectures.- On Degrees of Randomness and Genetic Randomness.- Hartmanis-Stearns Conjecture on Real Time and Transcendence.- Learning Families of Closed Sets in Matroids.- Invariance and Universality of Complexity.- Demuth’s Path to Randomness (extended abstract).- Correcting...
Computer Aided Systems Theory --
EUROCAST 2011

13th International Conference, Las Palmas de Gran Canaria, Spain, February 6-11, 2011, Revised Selected Papers, Part I

The two-volume proceedings, LNCS 6927 and LNCS 6928, constitute the papers presented at the 13th International Conference on Computer Aided Systems Theory, EUROCAST 2011, held in February 2011 in Las Palmas de Gran Canaria, Spain. The total of 160 papers presented were carefully reviewed and selected for inclusion in the books. The contributions are organized in topical sections on concepts and formal tools; software applications; computation and simulation in modelling biological systems; intelligent information processing; heurist problem solving; computer aided systems optimization; model-based system design, simulation, and verification; computer vision and image processing; modelling and control of mechatronic systems; biomimetic software systems; computer-based methods for clinical and academic medicine; modelling and design of complex digital systems; mobile and autonomous transportation systems; traffic behaviour, modelling and optimization; mobile computing platforms and technologies; and [...] Features
The two-volume proceedings, LNCS 6927 and LNCS 6928, constitute the papers presented at the 13th International Conference on Computer Aided Systems Theory, EUROCAST 2011, held in February 2011 in Las Palmas de Gran Canaria, Spain. The total of 160 papers presented were carefully reviewed and selected for inclusion in the books. The contributions are organized in topical sections on concepts and formal [...] Fields of interest
Simulation and Modeling; Artificial Intelligence (incl. Robotics); Pattern Recognition; Image Processing and Computer Vision; Computer Imaging, Vision, Pattern Recognition and Graphics; Computer-Aided Engineering (CAD, CAE) and Design Target groups
Research Type of publication
Proceedings

Online orders shipping within 2-3 days.

62,00 € ISBN 978-3-642-27653-8

R. Moreno Díaz, Universidad de Las Palmas de Gran Canaria, Spain; F. Pichler, Johannes Kepler University, Linz, Austria; A. Quesada Arencibia, Universidad de Las Palmas de Gran Canaria, Spain (Eds.)
Conquering Complexity

Software has long been perceived as complex, at least within Software Engineering circles. We have been living in a recognised state of crisis since the first NATO Software Engineering conference in 1968. Time and again we have been proven unable to engineer reliable software as easily/cheaply as we imagined. Cost overruns and expensive failures are the norm. The problem is fundamentally one of complexity: software is fundamentally complex because it must be precise. Problems that appear to be specified quite easily in plain language become far more complex when written in a more formal notation, such as computer code. Comparisons with other engineering disciplines are deceptive. One cannot easily increase the factor of safety of software in the same way that one could in building a steel structure, for example. Software is typically built assuming perfection, often without adequate safety nets in case the unthinkable happens. In such circumstances it should not be surprising to find out that [...]
Data Security and Security Data
27th British National Conference on Databases, BNCOD 27, Dundee, UK, June 29 - July 1, 2010. Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 27th British National Conference on Databases, BNCOD 27, held in Dundee, UK, in June 2010. The 10 revised full papers and 6 short papers, presented together with 3 invited papers, 1 best paper of the associated event on Teaching, Learning and Assessment of Databases (TLAD), and 2 PhD forum best papers were carefully reviewed and selected from 42 submissions. Special focus of the conference has been "Data Security and Security Data" and so the papers cover a wide range of topics such as data security, privacy and trust, security data, data integration and interoperability, data management for ubiquitous and mobile computing, data mining and information extraction, data modelling and architectures, data provenance, dataspaces, data streaming, databases and the grid, distributed information systems, electronic commerce, enterprise systems, heterogeneous databases, industrial applications, infrastructures and systems. [...] Features

Fields of interest
Database Management; Information Storage and Retrieval; Information Systems Applications (incl.Internet); Information Systems and Communication Service; Systems and Data Security; Data Structures

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-25703-2

Distributed Computing and Internet Technology

This book constitutes the refereed proceedings of the 8th International Conference on Distributed Computing and Internet Technology, ICDCIT 2012, held in Bhubaneswar, India, in February 2012. The 17 full papers presented together with 15 short papers in this volume were carefully reviewed and selected from 89 submissions. In addition the book contains the full versions of 6 invited talks. The papers range over a spectrum of issues related to the theme, covering theoretical foundations, computational tools, and societal applications. State of the art techniques like game theoretic ones are used by authors for analyzing conceptual problems.

Features

Fields of interest
Computer Communication Networks; Information Systems Applications (incl.Internet); Management of Computing and Information Systems; Information Storage and Retrieval; Data Encryption; Logics and Meanings of Programs

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-28072-6

Empirical Software Engineering and Verification
International Summer Schools, LASER 2008-2010, Elba Island, Italy, Revised Tutorial Lectures

Software engineering, is widely recognized as one of today's most exciting, stimulating, and profitable research areas, with a significant practical impact on the software industry and academia. The LASER school, held annually since 2004 on Elba Island, Italy, is intended for professionals from industry (engineers and managers) as well as university researchers, including PhD students. This book contains selected lecture notes from the LASER summer schools 2008-2010, which focused on concurrency and correctness in 2008, software testing in 2009, and empirical software engineering in 2010.

Features

Fields of interest
Software Engineering; Logics and Meanings of Programs; Programming Languages, Compilers, Interpreters; Programming Techniques; Mathematical Logic and Formal Languages; Management of Computing and Information Systems

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-25230-3
<table>
<thead>
<tr>
<th>Type of publication</th>
<th>Encyclopedia of Parallel Computing</th>
<th>Encyclopedia of Parallel Computing</th>
<th>Engineering Secure Software and Systems</th>
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<tr>
<td><strong>Fields of interest</strong></td>
<td>Programming Languages, Compilers, Interpreters, Processor Architectures, System Performance and Evaluation, Special Purpose and Application-Based Systems, Software Engineering / Programming and Operating Systems</td>
<td>Programming Languages, Compilers, Interpreters, Processor Architectures, System Performance and Evaluation, Special Purpose and Application-Based Systems, Software Engineering / Programming and Operating Systems</td>
<td><strong>Target groups</strong> Research, Type of publication Research, Proceedings Online orders shipping within 2-3 days.</td>
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<td><strong>Features</strong></td>
<td>Containing over 300 entries in an A-Z format, the Encyclopedia of Parallel Computing provides easy, intuitive access to relevant information for professionals and researchers seeking access to any aspect within the broad field of parallel computing. Topics for this comprehensive reference were selected, written, and peer-reviewed by an international pool of distinguished researchers in the field.</td>
<td>Containing over 300 entries in an A-Z format, the Encyclopedia of Parallel Computing provides easy, intuitive access to relevant information for professionals and researchers seeking access to any aspect within the broad field of parallel computing. Topics for this comprehensive reference were selected, written, and peer-reviewed by an international pool of distinguished researchers in the field.</td>
<td>This book constitutes the refereed proceedings of the 4th International Symposium on Engineering Secure Software and Systems, ESSoS 2012, held in Eindhoven, The Netherlands, in February 2012. The 7 revised full papers presented together with 7 idea papers were carefully reviewed and selected from 53 submissions. The full papers present new research results in the field of engineering secure software and systems, whereas the idea papers give crisp expositions of interesting, novel ideas in the early stages of development.</td>
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<td><strong>Online orders shipping</strong></td>
<td>46,00 €</td>
<td>1,500,00 €</td>
<td>2012, XII, 151 p. 37 illus. (Security and Cryptology, Vol. 7159) Softcover</td>
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**Encyclopedia of Parallel Computing**

Containing over 300 entries in an A-Z format, the Encyclopedia of Parallel Computing provides easy, intuitive access to relevant information for professionals and researchers seeking access to any aspect within the broad field of parallel computing. Topics for this comprehensive reference were selected, written, and peer-reviewed by an international pool of distinguished researchers in the field. The Encyclopedia is broad in scope, covering machine organization, programming languages, algorithms, and applications. Within each area, concepts, designs, and specific implementations are presented. The highly-structured essays in this work comprise synonyms, a definition and discussion of the topic, bibliographies, and links to related literature. Extensive cross-references to other entries within the Encyclopedia support efficient, user-friendly searches for immediate access to useful information. Key concepts presented in the Encyclopedia of Parallel Computing include: laws and metrics; specific [...]

**Features**

Containing over 300 entries in an A-Z format, the Encyclopedia of Parallel Computing provides easy, intuitive access to relevant information for professionals and researchers seeking access to any aspect within the broad field of parallel computing. Topics for this comprehensive reference were selected, written, and peer-reviewed by an international pool of distinguished researchers in the field. [...]

**Contents**


**Fields of interest**

Programming Languages, Compilers, Interpreters, Processor Architectures, System Performance and Evaluation, Special Purpose and Application-Based Systems, Software Engineering / Programming and Operating Systems

**Target groups**

Research

**Type of publication**

Encyclopedia
Eternal Systems

First International Workshop, EternalS 2011, Budapest, Hungary, May 3, 2011, Revised Selected Papers

This book constitutes the refereed post-proceedings of the First International Workshop on Eternal Systems, EternalS 2011, held in Budapest, Hungary, in May 2011. The workshop aimed at creating the conditions for mutual awareness and cross-fertilization among broad ICT areas such as learning systems for knowledge management and representation, software systems, networked systems and secure systems, by focusing on their shared objectives such as adaptation, evolvability and flexibility for the development of long living and versatile systems. The 6 revised full papers and 4 short papers presented were carefully reviewed and selected from 15 submissions. They are organized in topical sections on software and secure systems, machine learning for software systems, and ontology and knowledge representations.

Features

This book constitutes the refereed post-proceedings of the First International Workshop on Eternal Systems, EternalS 2011, held in Budapest, Hungary, in May 2011. The workshop aimed at creating the conditions for mutual awareness and cross-fertilization among broad ICT areas such as learning systems for knowledge management and representation, software systems, networked systems and secure systems, by focusing on their shared objectives such as adaptation, evolvability and flexibility for the development of long living and versatile systems. The 6 revised full papers and 4 short papers presented were carefully reviewed and selected from 15 submissions. They are organized in topical sections on software and secure systems, machine learning for software systems, and ontology and knowledge representations.

Fields of interest

Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet); Information Storage and Retrieval; Computer Communication Networks; Algorithm Analysis and Problem Complexity

Target groups

Research

Type of publication

Proceedings

Online orders shipping within 2-3 days.

2012. VIII, 128 p. 45 illus. (Communications in Computer and Information Science, Vol. 255) Softcover

56.00 €
ISBN 978-3-642-28032-0

Financial Cryptography and Data Security

15th International Conference, FC 2011, Gros Islet, St. Lucia, February 28 - March 4, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 15th International Conference on Financial Cryptography and Data Security, FC 2011, held in Gros Islet, St. Lucia, in February/March 2011. The 16 revised full papers and 10 revised short papers presented were carefully reviewed and selected from 65 initial submissions. The papers cover all aspects of securing transactions and systems and feature current research focusing on fundamental and applied real-world deployments on all aspects surrounding commerce security, as well as on systems security and inter-disciplinary efforts.

Features

This book constitutes the thoroughly refereed post-conference proceedings of the 15th International Conference on Financial Cryptography and Data Security, FC 2011, held in Gros Islet, St. Lucia, in February/March 2011. The 16 revised full papers and 10 revised short papers presented were carefully reviewed and selected from 65 initial submissions. The papers cover all aspects of securing transactions and systems and feature current research focusing on fundamental and applied real-world deployments on all aspects surrounding commerce security, as well as on systems security and inter-disciplinary efforts.

Fields of interest

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

Target groups

Research

Type of publication

Proceedings

Online orders shipping within 2-3 days.


54.00 €
ISBN 978-3-642-27575-3

Foundations and Practice of Security


This book constitutes the carefully refereed and revised selected papers of the 4th Canada-France MITACS Workshop on Foundations and Practice of Security, FPS 2011, held in Paris, France, in May 2011. The book contains a revised version of 10 full papers, accompanied by 3 keynote addresses, 2 short papers, and 5 ongoing research reports. The papers were carefully reviewed and selected from 30 submissions. The topics covered are pervasive security and threshold cryptography; encryption, cryptanalysis and automatic verification; and formal methods and networks security.

Fields of interest

Data Encryption; Software Engineering; Management of Computing and Information Systems; Computer Communication Networks; Algorithm Analysis and Problem Complexity; Logics and Meanings of Programs

Target groups

Research

Type of publication

Proceedings

Online orders shipping within 2-3 days.

2012. XIII, 253 p. 58 illus. (Security and Cryptology, Vol. 6888) Softcover

46.00 €
ISBN 978-3-642-27900-3
From the Web to the Grid and Beyond

Computing Paradigms Driven by High-Energy Physics

Born after World War II, large-scale experimental high-energy physics (HEP) has found itself limited ever since by available accelerator, detector and computing technologies. Accordingly, HEP has made significant contributions to the development of these fields, more often than not driving their innovations. The invention of the World Wide Web at CERN is merely the best-known example out of many. This book is the first comprehensive account to trace the history of this pioneering spirit in the field of computing technologies. It covers everything up to and including the present-day handling of the huge demands imposed upon grid and distributed computing by full-scale LHC operations – operations which have for years involved many thousands of collaborating members worldwide and accordingly provide the original and natural testbed for grid computing concepts. This book takes the reader on a guided tour encompassing all relevant topics, including programming languages, software engineering, large-[

Features
Born after World War II, large-scale experimental high-energy physics (HEP) has found itself limited ever since by available accelerator, detector and computing technologies. Accordingly, HEP has made significant contributions to the development of these fields, more often than not driving their innovations. The invention of the World Wide Web at CERN is merely the best-known example out of many. This book [...]}

Graph Drawing


This volume constitutes the refereed proceedings of the 19th International Symposium on Graph Drawing, GD 2010, held in Eindhoven, The Netherlands, during September 2011. The 34 revised full papers presented together with 3 revised short and 6 poster papers were carefully reviewed and selected from 88 submissions. Furthermore, the proceedings contain the abstracts of two invited talks and to commemorate Kozo Sugiyama and his pioneering research in graph drawing, the proceedings include an obituary. A unique and fun part of the symposium is the Graph Drawing Contest, which is part of the Graph Drawing Challenge. This year was the 18th edition. A report on the contest is included at the end of the proceedings.

Features
This volume constitutes the refereed proceedings of the 19th International Symposium on Graph Drawing, GD 2010, held in Eindhoven, The Netherlands, during September 2011. The 34 revised full papers presented together with 3 revised short and 6 poster papers were carefully reviewed and selected from 88 submissions. Furthermore, the proceedings contain the abstracts of two invited talks and to commemorate [...]}

Fields of interest
Discrete Mathematics in Computer Science; Mathematical Applications in Computer Science; Algorithm Analysis and Problem Complexity; Models and Principles; Symbolic and Algebraic Manipulation; User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


62,00 €
ISBN 978-3-642-25877-0

Grid and Pervasive Computing Workshops

International Workshops, S3E, HWTS, Doctoral Colloquium, Held in Conjunction with GPC 2011, Oulu, Finland, May 11-13, 2011. Revised Selected Papers

This book constitutes the carefully refereed post-conference proceedings of two International Workshops: Self-Managing Solutions for Smart Environments, S3E 2011; and the workshop on Health and Well-being Technologies and Services for Elderly, HWTS 2011; as well as a Doctoral Colloquium, held in conjunction with, GPC 2011, in Oulu, Finland, in May 2011. The 19 revised full papers presented together with 3 revised lecture were carefully reviewed and selected from 26 submissions and focus on the topics self-managing solutions for smart environments; health and well-being technologies, and services for elderly. The topics of the doctoral colloquium papers had a wide scope and they represented different viewpoints and sub-disciplines inside the ICT field.

Features
This book constitutes the carefully refereed post-conference proceedings of two International Workshops: Self-Managing Solutions for Smart Environments, S3E 2011; and the workshop on Health and Well-being Technologies and Services for Elderly, HWTS 2011; as well as a Doctoral Colloquium, held in conjunction with, GPC 2011, in Oulu, Finland, in May 2011. The 19 revised full papers presented together with 1 [...]}

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-27915-7
Guide to Reliable Distributed Systems

Building High-Assurance Applications and Cloud-Hosted Services

This book describes the key concepts, principles and implementation options for creating high-assurance cloud computing solutions. The guide starts with a broad technical overview and basic introduction to cloud computing, looking at the overall architecture of the cloud, client systems, the modern Internet and cloud computing data centers. It then delves into

The core challenges of showing how reliability and fault-tolerance can be abstracted, how the resulting questions can be solved, and how the solutions can be leveraged to create a wide range of practical cloud applications. The author’s style is practical, and the guide should be readily understandable without any special background. Concrete examples are often drawn from real-world settings to illustrate key insights. Appendices show how the most important reliability models can be formalized, describe the API of the Isis2 platform, and offer more than 80 problems at varying levels of difficulty.

Features

This Guide to Reliable Distributed Systems describes the key concepts, principles and implementation options for creating high-assurance cloud computing solutions. In combination with the Isis2 software platform, the text offers a practical path to success in this vital emerging area. Opening with a broad technical overview, the guide then delves into the core challenges of how reliability and fault-tolerance can be abstracted, how the resulting questions can be solved, and how the solutions can be leveraged to create a wide range of practical cloud applications. The author’s style is practical, and the guide should be readily understandable without any special background. Concrete examples are often drawn from real-world settings to illustrate key insights. Appendices show how the most important reliability models can be formalized, describe the API of the Isis2 platform, and offer more than 80 problems at varying levels of difficulty.

Contents


Fields of interest

Computer System Implementation; Operating Systems; Information Systems Applications (incl.Internet); Performance and Reliability

Target groups

Professional/practitioner

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. X01, 730 p. 138 illus. (Texts in Computer Science) Hardcover

69,95 €


Guide to Software Development

Designing and Managing the Life Cycle

This book addresses how best to make build vs. buy decisions, and what effect such decisions have on the software development life cycle (SDLC). Offering an integrated approach that includes important management and decision practices, the text explains how to create successful solutions that fit user and customer needs, by mixing different SDLC methodologies. Features: provides concrete examples and effective case studies; focuses on the skills and insights that distinguish successful software implementations; covers management issues as well as technical considerations, including how to deal with political and cultural realities in organizations; identifies many new alternatives for how to manage and model a system using sophisticated analysis tools and advanced management practices; emphasizes how and when professionals can best apply these tools and practices, and what benefits can be derived from their application; discusses searching for vendor solutions, and vendor contract considerations.

Features

The challenge of improving the quality and process of implementing enterprise software has only become more complex, and software products for enterprise resource planning (ERP) often fail to provide quicker and more cost-effective solutions. Furthermore, the decision whether to make or buy software is not a simple one: This Guide to Software Development addresses the problem of how best to [...]
Image Registration: Principles, Tools and Methods

This book presents a thorough and detailed guide to image registration, outlining the principles and reviewing state-of-the-art tools and methods. The book begins by identifying the components of a general image registration system, and then describes the design of each component using various image analysis tools. The text reviews a vast array of tools and methods, not only describing the principles behind each tool and method, but also measuring and comparing their performances using synthetic and real data. Features: discusses similarity/dissimilarity measures, point detectors, feature extraction/selection and homogeneous/heterogeneous descriptors; examines robust estimators, point pattern matching algorithms, transformation functions, and image resampling and blending; covers principal axes methods, hierarchical methods, optimization-based methods, edge-based methods, model-based methods, and adaptive methods; includes a glossary, an extensive list of references, and an appendix on PCA.

Features

Image registration is the process of finding correspondence between all points in two images of a scene – a process with numerous applications in computer vision and image analysis. This comprehensive text/reference presents a thorough and detailed guide to image registration, outlining the principles and reviewing state-of-the-art tools and methods. The book begins by identifying the components of a […]

Contents


Fields of interest

Image Processing and Computer Vision; Pattern Recognition

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XVIII, 445 p. 194 illus., 63 in color. (Advances in Computer Vision and Pattern Recognition) Hardcover

99.95 €
Information Security Technology for Applications

15th Nordic Conference on Secure IT Systems, NordSec 2010, Espoo, Finland, October 27-29, 2010, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 15th Nordic Conference on Secure IT Systems, NordSec 2010, held at Aalto University in Espoo, Finland in October 2010. The 13 full papers and 3 short papers presented were carefully reviewed and selected from 37 submissions. The volume also contains 1 full-paper length invited talk and 3 revised selected papers initially presented at the OWASP AppSec Research 2010 conference. The contributions cover the following topics: network security; monitoring and reputation; privacy; policy enforcement; cryptography and protocols.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the 15th Nordic Conference on Secure IT Systems, NordSec 2010, held at Aalto University in Espoo, Finland in October 2010. The 13 full papers and 3 short papers presented were carefully reviewed and selected from 37 submissions. The volume also contains 1 full-paper length invited talk and 3 revised selected papers initially presented at the OWASP AppSec Research 2010 conference. The contributions cover the following topics: network security; monitoring and reputation; privacy; policy enforcement; cryptography and protocols.

Fields of interest
Systems and Data Security; Data Structures, Cryptology and Information Theory; Coding and Information Theory; Data Encryption; Information Systems Applications (incl.Internet); e-commerce / e-business

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012, X, 289 p. 73 illus. (Security and Cryptology, Vol. 7127) Softcover

46.00 €
ISBN 978-3-642-27936-2

Innovative Computing Technology

First International Conference, INCT 2011, Tehran, Iran, December 13-15, 2011, Proceedings

This book constitutes the proceedings of the First International Conference on Innovative Computing Technology, INCT 2011, held in Tehran, Iran, in December 2011. The 40 revised papers included in this book were carefully reviewed and selected from 121 submissions. The contributions are organized in topical sections on software; Web services and service architecture; computational intelligence; data modeling; multimedia and image segmentation; natural language processing; networks; cluster computing; and discrete systems.

Features
This book constitutes the proceedings of the First International Conference on Innovative Computing Technology, INCT 2011, held in Tehran, Iran, in December 2011. The 40 revised papers included in this book were carefully reviewed and selected from 121 submissions. The contributions are organized in topical sections on software; Web services and service architecture; computational intelligence; data modeling; multimedia and image segmentation; natural language processing; networks; cluster computing; and discrete systems.

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. Approx. 430 p. 201 illus. (Communications in Computer and Information Science, Vol. 241) Softcover

72.00 €
ISBN 978-3-642-27336-0

Interactive 3D Multimedia Content

Models for Creation, Management, and Search and Presentation

The book describes recent research results in the areas of modelling, creation, management and presentation of interactive 3D multimedia content. The book describes the current state of the art in the field and identifies the most important research and design issues. Consecutive chapters address these issues. These are: database modelling of 3D content, security in 3D environments, describing interactivity of content, searching content, visualization of search results, modelling mixed reality content, and efficient creation of interactive 3D content. Each chapter is illustrated with example applications based on the proposed approach. The final chapter discusses some important ethical issues related to the widespread use of virtual environments in everyday life. The book provides ready to use solutions for many important problems related to the creation of interactive 3D multimedia applications and will be a primary reading for researchers and developers working in this domain.

Features
The widespread use of interactive 3D multimedia technologies, including virtual reality (VR) and augmented reality (AR), has been recently enabled by significant progress in computing hardware performance, increasing availability of versatile input-output devices, as well as rapid growth in the available network bandwidth. Remote access to 3D/VR/AR content, enabled by development of 3D content...

Contents

Fields of interest
User Interfaces and Human Computer Interaction; Multimedia Information Systems; Computer Graphics; Models and Principles

Target groups
Research

Type of publication
Contribution volume

Usually dispatched within 3 to 5 business days

2012. V, 296 p. 97 illus, 91 in color. Hardcover

99.95 €
Introduction to Computer Graphics

Using Java 2D and 3D

This book is an essential tool for second-year undergraduate students and above, providing clear and concise explanations of the basic concepts of computer graphics, and enabling the reader to immediately implement these concepts in Java 2D and/or 3D with only elementary knowledge of the programming language. Features: provides an ideal, self-contained introduction to computer graphics, with theory and practice presented in integrated combination; presents a practical guide to basic computer graphics programming using Java 2D and 3D; includes new and expanded content on the integration of text in 3D, particle systems, billboard behaviours, dynamic surfaces, the concept of level of detail, and the use of functions of two variables for surface modelling; contains many pedagogical tools, including numerous easy-to-understand example programs and end-of-chapter exercises; supplies useful supplementary material, including additional exercises, solutions, and program examples, at an associated website.

Features
A basic understanding of the key techniques in computer graphics can open the door to this exciting field and its many applications. This easy-to-follow textbook/reference introduces the fundamental concepts of computer graphics, integrating both technical background and theory with practical examples and applications throughout. Thoroughly revised and updated, this new edition continues to present a [...]

Contents

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

Target groups
Lower undergraduate

Type of publication
Undergraduate textbook

Introduction to Video and Image Processing

Building Real Systems and Applications

This textbook presents the fundamental concepts and methods for understanding and working with images and video in an unique, easy-to-read style which ensures the material is accessible to a wide audience. Exploring more than just the basics of image processing, the text provides a specific focus on the practical design and implementation of real systems for processing video data. Features: includes more than 100 exercises, as well as C-code snippets of the key algorithms; covers topics on image acquisition, color images, point processing, neighborhood processing, morphology, BLOB analysis, segmentation in video, tracking, geometric transformation, and visual effects; requires only a minimal understanding of mathematics; presents two chapters dedicated to applications; provides a guide to defining suitable values for parameters in video and image processing systems, and to conversion between the RGB color representation and the HIS, HSV and YUV/YCbCr color representations.

Features
In order to build successful video processing systems, it is important to consider not only traditional image processing methods, but also techniques which account for temporal aspects. This Introduction to Video and Image Processing presents the fundamental concepts and methods in an unique, easy-to-read style which ensures the material is accessible to a wide audience. Exploring more than [...]

Contents

Fields of interest
Computer Science (general)

Target groups
Research

Type of publication
Proceedings

Knowledge Representation for Health-Care

AIME 2011 Workshop KR4HC 2011, Bled, Slovenia, July 2-6, 2011. Revised Selected Papers

This book constitutes the refereed proceedings of the Third International KR4HC 2011 workshop held in conjunction with the 13th Conference on Artificial Intelligence in medicine, AIME 2011, in Bled, Slovenia, in July 2011. The 11 extended papers presented together with 1 invited paper were carefully reviewed and selected from 22 submissions. The papers cover topics like health care knowledge sharing, health process; clinical practice guideline; and patient records, ontologies, medical costs, and clinical trials.

Features
This book constitutes the refereed proceedings of the Third International KR4HC 2011 workshop held in conjunction with the 13th Conference on Artificial Intelligence in medicine, AIME 2011, in Bled, Slovenia, in July 2011. The 11 extended papers presented together with 1 invited paper were carefully reviewed and selected from 22 submissions. The papers cover topics like health care knowledge sharing; health process; clinical practice guideline; and patient records, ontologies, medical costs, and clinical trials.

Fields of interest
Computer Science (general)

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-27696-5
LaTeX and Friends

LaTeX is a free, automated state-of-the-art typesetting system. This book teaches all the ins and outs of LaTeX which are needed to write an article, report, thesis, or book. The book teaches by example, giving many worked out examples showing input and output side by side. The book presents the most recent techniques for presenting data plots, complex graphics, and computer presentations, but does not require previous knowledge. However, it is also a reference for the more seasoned user, with pointers to modern techniques and packages. Recurring themes in the book are consistent and effective presentation, planning and development, controlling style and content, and maintenance.

Features
LaTeX is a free, automated state-of-the-art typesetting system. This book teaches all the ins and outs of LaTeX which are needed to write an article, report, thesis, or book. The book teaches by example, giving many worked out examples showing input and output side by side. The book presents the most recent techniques for presenting data plots, complex graphics, and computer presentations, but does not require [...]
Multilingual Information Retrieval

From Research To Practice

We are living in a multilingual world and the diversity in languages which are used to interact with information access systems has generated a wide variety of challenges to be addressed by computer and information scientists. The growing amount of non-English information accessible globally and the increased worldwide exposure of enterprises also necessitates the adaptation of Information Retrieval (IR) methods to new, multilingual settings. Peters, Braschler and Clough present a comprehensive description of the technologies involved in designing and developing systems for Multilingual Information Retrieval (MLIR). They provide readers with broad coverage of the various issues involved in creating systems to make accessible digitally stored materials regardless of the language(s) they are written in. Details on Cross-Language Information Retrieval (CLIR) are also covered that help readers to understand how to develop retrieval systems that cross language boundaries. Their work is divided into six[...]

Features

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

Contents


Fields of interest

Information Storage and Retrieval; User Interfaces and Human Computer Interaction; Document Preparation and Text Processing; Language Translation and Linguistics

Target groups

Research

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XVII, 217 p. 34 illus. Hardcover

69,95 €
ISBN 978-3-642-23007-3
Open Problems in Network Security
IFIP WG 11.4 International Workshop, iNetSec 2011, Lucerne, Switzerland, June 9, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the IFIP WG 11.4 International Workshop on Open Problems in Network Security, iNetSec 2011, held in Lucerne, Switzerland, in June 2011, co-located and under the auspices of IFIP SEC 2011, the 26th IFIP TC-11 International Information Security Conference. The 12 revised full papers were carefully reviewed and selected from 28 initial submissions; they are fully revised to incorporate reviewers' comments and discussions at the workshop. The volume is organized in topical sections on assisting users, malware detection, saving energy, policies, and problems in the cloud.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the IFIP WG 11.4 International Workshop on Open Problems in Network Security, iNetSec 2011, held in Lucerne, Switzerland, in June 2011, co-located and under the auspices of IFIP SEC 2011, the 26th IFIP TC-11 International Information Security Conference. The 12 revised full papers were carefully reviewed and selected from 28

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

Softcover

60,00 €
ISBN 978-3-642-27584-5

Perception and Machine Intelligence
First Indo-Japan Conference, PerMIn 2012, Kolkata, India, January 12-13, 2011, Proceedings

This book constitutes the proceedings of the First Indo-Japanese conference on Perception and Machine Intelligence, PerMIn 2012, held in Kolkata, India, in January 2012. The 41 papers, presented together with 1 keynote paper and 3 plenary papers, were carefully reviewed and selected for inclusion in the book. The papers are organized in topical sections named perception; human-computer interaction; e-nose and e-tongue; machine intelligence and application; image and video processing; and speech and signal processing.

Features
This book constitutes the proceedings of the First Indo-Japanese conference on Perception and Machine Intelligence, PerMIn 2012, held in Kolkata, India, in January 2012. The 41 papers, presented together with 1 keynote paper and 3 plenary papers, were carefully reviewed and selected for inclusion in the book. The papers are organized in topical sections named perception; human-computer interaction; e-nose and e-tongue; machine intelligence and application; image and video processing; and speech and signal processing.

Fields of interest
Computer Science (general)

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


119,95 €
ISBN 978-3-642-22803-2

Physicomimetics
Physics-Based Swarm Intelligence

Features
Standard approaches to understanding swarms rely on inspiration from biology and are generally covered by the term “biomimetics”. This book focuses on a different, complementary inspiration, namely physics. The editors have introduced the term “physicomimetics” to refer to physics-based swarm approaches, which offer two advantages. First, they capture the notion that “nature is lazy”, meaning that [...]
Principles and Practice of Multi-Agent Systems
13th International Conference, PRIMA 2010, Kolkata, India, November 12-15, 2010, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 13th International Conference on Principles and Practice of Multi-Agent Systems, PRIMA 2010, held in Kolkata, India, in November 2010. The 18 full papers presented together with 15 early innovation papers were carefully reviewed and selected from over 63 submissions. They focus on practical aspects of multiagent systems and cover topics such as agent communication, agent cooperation and negotiation, agent reasoning, agent-based simulation, mobile and semantic agents, agent technologies for service computing, agent-based system development, ServAgents workshop, IAHC workshop, and PRACSYS workshop.

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XV, 659 p. 247 illus. (Lecture Notes in Artificial Intelligence, Vol. 7057) Softcover
79.00 €
ISBN 978-3-642-25919-7

RFID Security and Privacy
7th International Workshop, RFIDSec 2011, Amherst, MA, USA, June 26-28, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-workshop proceedings of the 7th International Workshop Radio Frequency Identification: Security and Privacy Issues, RFIDSec 2011, held in Amherst, Massachusetts, USA, in June 2011. The 12 revised full papers presented were carefully reviewed and selected from 21 initial submissions for inclusion in the book. The papers focus on minimalism in cryptography, on-tag cryptography, securing RFID with physics, and protocol-level security in RFID.

Features
This book constitutes the thoroughly refereed post-workshop proceedings of the 7th International Workshop Radio Frequency Identification: Security and Privacy Issues, RFIDSec 2011, held in Amherst, Massachusetts, USA, in June 2011. The 12 revised full papers presented were carefully reviewed and selected from 21 initial submissions for inclusion in the book. The papers focus on minimalism in cryptography, [..]

Fields of interest
Computer Communication Networks; Data Encryption; Systems and Data Security; Algorithm Analysis and Problem Complexity; Management of Computing and Information Systems; Special Purpose and Application-Based Systems

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

46.00 €
ISBN 978-3-642-25285-3

SOFSEM 2012: Theory and Practice of Computer Science

This book constitutes the refereed proceedings of the 38th Conference on Current Trends in Theory and Practice of Computer Science, SOFSEM 2012, held in Spindlerův Mlýn, Czech Republic, in January 2012. The 43 revised papers presented in this volume were carefully reviewed and selected from 121 submissions. The book also contains 11 invited talks, 10 of which are in full-paper length. The contributions are organized in topical sections named: foundations of computer science; software and Web engineering; cryptography, security, and verification; and artificial intelligence.

Features
This book constitutes the refereed proceedings of the 38th Conference on Current Trends in Theory and Practice of Computer Science, SOFSEM 2012, held in Spindlerův Mlýn, Czech Republic, in January 2012. The 43 revised papers presented in this volume were carefully reviewed and selected from 121 submissions. The book also contains 11 invited talks, 10 of which are in full-paper length. The [..]

Fields of interest
Algorithm Analysis and Problem Complexity; Management of Computing and Information Systems; Special Purpose and Application-Based Systems

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

79.00 €
ISBN 978-3-642-27659-0
Scale Space and Variational Methods in Computer Vision

Third International Conference, SSVM 2011, Ein-Gedi, Israel, May 29 – June 2, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the Third International Conference on Scale Space Methods and Variational Methods in Computer Vision, SSVM 2011, held in Ein-Gedi, Israel in May/June 2011. The 24 revised full papers presented together with 44 poster papers were carefully reviewed and selected from 78 submissions. The papers are organized in topical sections on denoising and enhancement, segmentation, image representation and invariants, shape analysis, and optical flow.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the Third International Conference on Scale Space Methods and Variational Methods in Computer Vision, SSVM 2011, held in Ein-Gedi, Israel in May/June 2011. The 24 revised full papers presented together with 44 poster papers were carefully reviewed and selected from 78 submissions. The papers are organized in topical sections on [..]

Fields of interest
Image Processing and Computer Vision; Computer Graphics; Pattern Recognition; Algorithm Analysis and Problem Complexity; Data Mining and Knowledge Discovery; Computation by Abstract Devices

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


87.00 €
ISBN 978-3-642-24784-2

Security and Intelligent Information Systems

International Joint Conference, SIIS 2011, Warsaw, Poland, June 13-14, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the Joint Meeting of the 2nd Luxembourg-Polish Symposium on Security and Trust and the 19th International Conference Intelligent Information Systems, held as International Joint Conference on Security and Intelligent Information Systems, SIIS 2011, in Warsaw, Poland, in June 2011. The 29 revised full papers presented together with 2 invited lectures were carefully reviewed and selected from 60 initial submissions during two rounds of selection and improvement. The papers are organized in the following three thematic tracks: security and trust, data mining and machine learning, and natural language processing.

Features
This book constitutes the thoroughly refereed post-conference proceedings of the Joint Meeting of the 2nd Luxembourg-Polish Symposium on Security and Trust and the 19th International Conference Intelligent Information Systems, held as International Joint Conference on Security and Intelligent Information Systems, SIIS 2011, in Warsaw, Poland, in June 2011. The 29 revised full papers presented together [..]

Fields of interest
Computer Systems Organization and Communication Networks; Information Systems and Communication Service; Systems and Data Security; Artificial Intelligence (incl. Robotics); Data Encryption; Information Systems Applications (incl. Internet)

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


62.00 €
ISBN 978-3-642-25260-0

Service Placement in Ad Hoc Networks

Service provisioning in ad hoc networks is challenging given the difficulties of communicating over a wireless channel and the potential heterogeneity and mobility of the devices that form the network. Service placement is the process of selecting an optimal set of nodes to host the implementation of a service in light of a given service demand and network topology. The key advantage of active service placement in ad hoc networks is that it allows for the service configuration to be adapted continuously at run time. Service Placement in Ad Hoc Networks proposes the SPI service placement framework as a novel approach to service placement in ad hoc networks. The SPI framework takes advantage of the interdependencies between service placement, service discovery and the routing of service requests to minimize signaling overhead. The work also proposes the Graph Cost / Single Instance and the Graph Cost / Multiple Instances placement algorithms.

Features
Service provisioning in ad hoc networks is challenging given the difficulties of communicating over a wireless channel and the potential heterogeneity and mobility of the devices that form the network. In order to optimize the performance of the network over which a service host provides a service to client nodes, it is necessary to continuously adapt the logical network topology to both external (e.g., [..])

Contents

Fields of interest
System Performance and Evaluation

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days


39.95 €
ISBN 978-1-4471-2362-0
Software Quality

This book constitutes the refereed proceedings of the 4th Software Quality Days Conference (SWQD) held in Vienna, Austria, in January 2012. The selection of presentations at the conference encompasses a mixture of practical presentations and scientific papers covering new research topics. The seven scientific full papers accepted for SWQD were each peer-reviewed by three or more reviewers and selected out of 18 high-quality submissions. Further, six short papers on promising research directions were also presented and included in order to spark discussions between researchers and practitioners. The papers are organized into topical sections on software product quality; software engineering processes; software process improvement; component-based architectures; risk management; and quality assurance and collaboration.

Features
This book constitutes the refereed proceedings of the 4th Software Quality Days Conference (SWQD) held in Vienna, Austria, in January 2012. The selection of presentations at the conference encompasses a mixture of practical presentations and scientific papers covering new research topics. The seven scientific full papers accepted for SWQD were each peer-reviewed by three or more reviewers and selected out of 18 high-quality submissions. Further, six short papers on promising research directions were also presented and included in order to spark discussions between researchers and practitioners. The papers are organized into topical sections on software product quality; software engineering processes; software process improvement; component-based architectures; risk management; and quality assurance and collaboration.

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XII, 231 p. 66 illus. (Lecture Notes in Business Information Processing, Vol. 94) Softcover

46,00 €
ISBN 978-3-642-27212-7

The Semantic Web: ESWC 2011 Workshops

Workshops at the 8th Extended Semantic Web Conference, ESWC 2011, Heraklion, Greece, May 29-30, 2011, Revised Selected Papers

This volume constitutes the thoroughly refereed proceedings of 11 international workshops held as part of the 8th Extended Semantic Web Conference, ESWC 2011, in Heraklion, Crete, Greece, in May 2010. The 22 revised full papers presented were carefully reviewed and selected from a total of 75 submissions to the workshops during two rounds of reviewing and improvement. The papers are organized in topical sections on the following workshops: 1st International Workshop on eLearning Approaches for the Linked Data Age, 1st Workshop on High Performance Computing for the Semantic Web, 3rd International Workshop on Inductive Reasoning and Machine Learning for the Semantic Web, 1st Workshop on Making Sense of Microposts, 1st Workshop on Ontology and Semantic Web for Manufacturing, 1st Workshop on Question Answering over Linked Data, 4th International Workshop on RSource Discovery, 6th International Workshop on Semantic Business Process Management, 1st Workshop on Semantic Publication, 1st Workshop on [...] Features
This volume constitutes the thoroughly refereed proceedings of 11 international workshops held as part of the 8th Extended Semantic Web Conference, ESWC 2011, in Heraklion, Crete, Greece, in May 2010. The 22 revised full papers presented were carefully reviewed and selected from a total of 75 submissions to the workshops during two rounds of reviewing and improvement. The papers are organized in topical [...] Fields of interest
Information Systems and Communication Service; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet); Computer Communication Networks; Database Management; Multimedia Information Systems

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


54,00 €
ISBN 978-3-642-25952-4
Topics in Cryptology - CT-RSA 2012

The Cryptographers’ Track at the RSA Conference 2012, San Francisco, CA, USA, February 27 - March 2, 2012, Proceedings

This book constitutes the refereed proceedings of the Cryptographers’ Track at the RSA Conference 2012, CT-RSA 2012, held in San Francisco, CA, USA, in February/March 2012. The 26 revised full papers presented were carefully reviewed and selected from 113 submissions. The papers are organized in topical sections on side channel attacks, digital signatures, public-key encryption, cryptographic protocols, secure implementation methods, symmetric key primitives, and secure multiparty computation.

Features
This book constitutes the refereed proceedings of the Cryptographers’ Track at the RSA Conference 2012, CT-RSA 2012, held in San Francisco, CA, USA, in February/March 2012. The 26 revised full papers presented were carefully reviewed and selected from 113 submissions. The papers are organized in topical sections on side channel attacks, digital signatures, public-key encryption, cryptographic protocols, secure [...]
Verified Software: Theories, Tools, Experiments

This volume contains the proceedings of the 4th International Conference on Verified Software: Theories, Tools, and Experiments, VSTTE 2012, held in Philadelphia, PA, USA, in January 2012. The 20 revised full papers presented together with 2 invited talks and 2 tutorials were carefully revised and selected from 54 initial submissions for inclusion in the book. The goal of the VSTTE conference is to advance the state of the art through the interaction of theory development, tool evolution, and experimental validation. The papers address topics such as: specification and verification techniques, tool support for specification languages, tool for various design methodologies, tool integration and plug-ins, automation in formal verification, tool comparisons and benchmark repositories, combination of tools and techniques, customizing tools for particular applications, challenge problems, refinement methodologies, requirements modeling, specification languages, specification/verification case-studies,[-]

Features
This volume contains the proceedings of the 4th International Conference on Verified Software: Theories, Tools, and Experiments, VSTTE 2012, held in Philadelphia, PA, USA, in January 2012. The 20 revised full papers presented together with 2 invited talks and 2 tutorials were carefully revised and selected from 54 initial submissions for inclusion in the book. The goal of the VSTTE conference is to advance the state of the art through the interaction of theory development, tool evolution, and experimental validation. The papers address topics such as: specification and verification techniques, tool support for specification languages, tool for various design methodologies, tool integration and plug-ins, automation in formal verification, tool comparisons and benchmark repositories, combination of tools and techniques, customizing tools for particular applications, challenge problems, refinement methodologies, requirements modeling, specification languages, specification/verification case-studies,[-]

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


54,00 €
ISBN 978-3-642-27704-7

Virtual Reality and Animation for MATLAB® and Simulink® Users
Visualization of Dynamic Models and Control Simulations

About this book: Gives the reader hands on example-base experience for simulating dynamical models in MATLAB®/Simulink® and animating them in VRML. More than 150 images describe each step in the model realizations helping readers to understand them visually. Diverse examples and profound problem treatment enable the reader to animate complex dynamical problems m-files, Simulink models, VRML files and jpgs available for download provide full solutions for the end-of-chapter problems Virtual Reality and Animation for MATLAB® and Simulink®. Users demonstrates the simulation and animation of physical systems using the MATLAB® Virtual Reality Toolbox (virtual models are created in V-Realm Builder). The book is divided into two parts; the first addresses MATLAB® and the second Simulink®. The presentation is problem-based with each chapter teaching the reader a group of essential principles in the context of a step-by-step solution to a particular issue. Examples of the systems[-]

Features
Virtual Reality and Animation for MATLAB® and Simulink® Users demonstrates the simulation and animation of physical systems using the MATLAB® Virtual Reality Toolbox (virtual models are created in V-Realm Builder). The book is divided into two parts; the first addresses MATLAB® and the second Simulink®. The presentation is problem-based with each chapter teaching the reader a group of essential principles [-]

Contents

Fields of interest
Computer Science (general)

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-28075-7

WALCOM: Algorithm and Computation

This book constitutes the refereed proceedings of the 6th International Workshop on Algorithms and Computation, WALCOM 2012, held in Dhaka, Bangladesh, in February 2012. The 20 full papers presented together with 3 invited papers were carefully reviewed and selected from 50 submissions. The papers are grouped in topical sections on graph algorithms; computational geometry; approximation algorithms; graph drawing; string and data structures; and games and cryptography.

Features
This book constitutes the refereed proceedings of the 6th International Workshop on Algorithms and Computation, WALCOM 2012, held in Dhaka, Bangladesh, in February 2012. The 20 full papers presented together with 3 invited papers were carefully reviewed and selected from 50 submissions. The papers are grouped in topical sections on graph algorithms; computational geometry; approximation algorithms; graph [-]

Fields of interest
Computer Science (general)

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


99,95 €
Web Information Systems and
Technologies
7th International Conference, WEBIST 2011, Noordwijk, The Netherlands, May 6-9, 2011, Revised Selected Papers

This book contains the thoroughly refereed and revised best papers from the 7th International Conference on Web Information Systems and Technologies, WEBIST 2011, held in Noordwijkerhout, The Netherlands, in May 2011, organized by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC), in collaboration with ACM SIGMIS and co-sponsored by the Workflow Management Coalition (WFMC). The 12 papers presented in this book were carefully reviewed and selected from 156 submissions. The papers are grouped into two parts on ’Internet Technology’ and ’Web Interfaces and Applications’. In addition, the three invited presentations are also included.

Features
This book contains the thoroughly refereed and revised best papers from the 7th International Conference on Web Information Systems and Technologies, WEBIST 2011, held in Noordwijkerhout, The Netherlands, in May 2011, organized by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC), in collaboration with ACM SIGMIS and co-sponsored by the Workflow Management Coalition.

Fields of interest
Information Systems Applications (incl.Internet); Business Information Systems; e-commerce / e-business; User Interfaces and Human Computer Interaction; Software Engineering

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-28081-8

Wireless Sensor Networks

This book constitutes the refereed proceedings of the 9th European Conference on Wireless Sensor Networks, EWSN 2012, held in Trento, Italy, in February 2012. The 16 revised full papers presented were carefully reviewed and selected from 78 submissions. The papers are organized in topical sections on communication and security, system issues, reliability, localization and smart cameras, and hardware and sensing.

Features
This book constitutes the refereed proceedings of the 9th European Conference on Wireless Sensor Networks, EWSN 2012, held in Trento, Italy, in February 2012. The 16 revised full papers presented were carefully reviewed and selected from 78 submissions. The papers are organized in topical sections on communication and security, system issues, reliability, localization and smart cameras, and hardware and sensing.

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.


46,00 €
ISBN 978-3-642-28168-6

e-Business and
Telecommunications
7th International Joint Conference, ICETE, Athens, Greece, July 26-28, 2010, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Joint Conference on e-Business and Telecommunications, ICETE 2010, held in Athens, Greece, in July 2010. The 28 revised full papers presented together with 1 invited paper in this volume were carefully reviewed and selected from 422 initial submissions. They have passed two rounds of selection and improvement. According to the topics of the particular conference the papers are organized in thematical parts on data communication networking (DCNET), e-business (ICE-B), optical communication systems (OPTICS), security and cryptography (SECRYPT), signal processing and multimedia applications (SIGMAP), wireless information networks and systems (WINSYS).

Features
This book constitutes the thoroughly refereed post-conference proceedings of the 7th International Joint Conference on e-Business and Telecommunications, ICETE 2010, held in Athens, Greece, in July 2010. The 28 revised full papers presented together with 1 invited paper in this volume were carefully reviewed and selected from 422 initial submissions. They have passed two rounds of selection and improvement.

Fields of interest
Computer Communication Networks; e-commerce / e-business; Data Structures, Cryptology and Information Theory; Coding and Information Theory; Multimedia Information Systems; Algorithm Analysis and Problem Complexity

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XVI, 447 p. (Communications in Computer and Information Science, Vol. 222) Softcover

72,00 €
ISBN 978-3-642-25205-1
Earth Sciences

B. Shaw, University of Cambridge, Cambridge, UK

Active tectonics of the Hellenic subduction zone

This thesis is remarkable for the wide range of the techniques and observations used and for its insights, which cross several disciplines. It begins by solving a famous puzzle of the ancient world, which is what was responsible for the tsunami that destroyed settlements in the eastern Mediterranean in 365 AD. By radiocarbon dating of preserved marine organisms, Shaw demonstrates that the whole of western Crete was lifted out of the sea by up to 10 meters in a massive earthquake at that time, which occurred on a previously unknown fault. The author shows that the resulting tsunami would have the characteristics described by ancient writers, and uses modern GPS measurements and coastline geomorphology to show that the strain build-up near Crete requires such a tsunami earthquake about every 6,000 years - a major insight into Mediterranean tsunami hazard. A detailed seismological study of earthquakes in the Cretan arc over the last 50 years reveals other important features of its behaviour that were...[...]

Features

This thesis is remarkable for the wide range of the techniques and observations used and for its insights, which cross several disciplines. It begins by solving a famous puzzle of the ancient world, which is what was responsible for the tsunami that destroyed settlements in the eastern Mediterranean in 365 AD. By radiocarbon dating of preserved marine organisms, Shaw demonstrates that the whole of western Crete was lifted out of the sea by up to 10 meters in a massive earthquake at that time, which occurred on a previously unknown fault. The author shows that the resulting tsunami would have the characteristics described by ancient writers, and uses modern GPS measurements and coastline geomorphology to show that the strain build-up near Crete requires such a tsunami earthquake about every 6,000 years - a major insight into Mediterranean tsunami hazard. A detailed seismological study of earthquakes in the Cretan arc over the last 50 years reveals other important features of its behaviour that were...[...]

Contents


Fields of interest

Geology; Structural Geology; Natural Hazards; Historical Geology; History; Geophysics / Geodesy

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


99,95 €
ISBN 978-3-642-19387-3

Earth System Modelling - Volume 5

Tools for Configuring, Building and Running Models

Collected articles in this series are dedicated to the development and use of software for earth system modelling and aims at bridging the gap between IT solutions and climate science. The particular topic covered in this volume addresses the process of configuring, building, and running earth system models. Earth system models are typically a collection of interacting computer codes (often called components) which together simulate the earth system. Each code component is written to model some physical process which forms part of the earth system (such as the Ocean). This book is concerned with the source code version control of these code components, the configuration of these components into earth system models, the creation of executable(s) from the component source code and related libraries and the running and monitoring of the resultant executables on the available hardware.

Features

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

Contents


Fields of interest

Earth Sciences (general); Simulation and Modeling

Target groups

Research

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012. XV, 97 p. 23 illus. (SpringerBriefs in Earth System Sciences) Softcover

49,95 €
ISBN 978-3-642-23931-1
Earthquake Disasters in Latin America
A Holistic Approach

This book is an attempt to demonstrate the analytical power of the holistic approach for understanding disasters. Six major earthquakes in Latin America are used as an example: the general idea is to place disasters in a broad social and regional context. Understanding disasters is a way of understanding the social system. The idea is to show that every major disaster is unique and different. Statistical methods may be useful for purposes of risk estimation but modern disasters are ‘systemic’ and complex. In the chapter on the 2010 Chile earthquake we discuss the tsunami and why the system of tsunami alert did not work.

The introductory chapter contains some basics of seismology (plate tectonics) and earthquake engineering. The 1985 Mexico earthquake describes why geology is important. Why was Mexico City founded in a lake? Technology must be adapted to the environment, not ‘imported’ from possibly more advanced but different societies. The 1970 Peru earthquake is an example of disaster.[…]

Effective Parameters of Hydrogeological Models

Models of geological objects are tools for interpolation and extrapolation of available data in space and time continuously. Real structures of the objects are unknown, and their models and simulated results carry uncertainty which cannot be evaluated in a provable way. The real issue is obtaining effective predictions in a reasonably defined sense. This requires a knowledge of mechanisms that convert actual geological properties into effective model parameters. These mechanisms are introduced in the book. They reveal that effective parameters are not statistics but characteristics of surrounding, their models, predictive problem formulations, including mathematical models of the simulated processes, boundary conditions, monitoring networks, criteria of efficiency and even by time. Examples of evaluating and applying transformation for assigning effective parameters and solving inverse problems are presented.

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

Experimental Study of Multiphase Flow in Porous Media during CO2 Geo-Sequestration Processes

There have been numerous computer-based simulation studies carried out on the subject of CO2 geo-sequestration. However, the amount of experimental data available in the literature on this topic, especially with regards to multiphase flow characteristics of fluid-rock systems during such processes, is very limited. This research was carried out with the aim of providing a better understanding of the multiphase fluid flow characteristics of fluid-rock systems during the geo-sequestration process. The ultimate goal of this research was to experimentally evaluate the change in a number of multiphase flow characteristics of the system over time caused by the potential chemical and physical/mechanical processes occurring during deep CO2 disposal. In order to achieve this goal the effects of cyclic/alternating CO2-brine flooding, flow direction, existence of residual hydrocarbon (natural gas) and change in the reservoir stress field on the system’s multiphase flow behaviour were investigated. Until […]

Features
There have been numerous computer-based simulation studies carried out on the subject of CO2 geo-sequestration. However, the amount of experimental data available in the literature on this topic, especially with regards to multiphase flow characteristics of fluid-rock systems during such processes, is very limited. This research was carried out with the aim of providing a better understanding of the multiphase […]

Hydrogeological Models

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

Fields of interest
Geochemistry; Geology; Fluid- and Aerodynamics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. X, 184 p. 119 illus., 107 in color. (Springer Theses) Hardcover

99,95 €
ISBN 978-3-642-25040-8
**Geothermie**


**Features**

Nach einer Einführung in die Grundlagen der Geothermie werden die wichtigsten thermschen und hydraulischen Parameter in ihrer Bedeutung behandelt. Das Buch gibt einen Überblick über alle derzeit verfügbaren Nutzungssysteme der oberflächennahen und tiefen Geothermie und betrachtet diese bezüglich ihrer Effizienz und potentieller Umweltauswirkungen. Im Detail besprochen werden Planung, Bau und Betrieb von [...]  

**Contents**


**Fields of interest**

Geotechnical Engineering & Applied Earth Sciences; Renewable and Green Energy; Geotechnics, Foundations, Hydraulics; Sustainable Development

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. IX, 287 S. 137 Abb., 102 in Farbe. Hardcover

84,07 €

ISBN 978-3-642-24330-1

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**Landslide Analysis and Early Warning Systems**

**Local and Regional Case Study in the Swabian Alb, Germany**

Recent landslide events demonstrate the need to improve landslide forecasting and early warning capabilities in order to reduce related risks and protect human lives. In this thesis, local and regional investigations were carried out to analyse landslide characteristics in the Swabian Alb region, and to develop prototypic landslide early warning systems. In the local study area, an extensive hydrological and slope movement monitoring system was installed on a seasonally reactivated landslide body located in Lichtenstein-Unterhausen. Monitoring data was analysed to assess the influence of rainfall and snowmelt on groundwater conditions, and the initiation of slope movements. The coupled hydrology-slope stability model CHASM was applied to detect areas most prone to slope failures, and to simulate slope stability using a variety of input data. Subsequently, CHASM was refined and two web-based applications were developed: a technical early warning system to constantly simulate slope stability[...]

**Features**

Recent landslide events demonstrate the need to improve landslide forecasting and early warning capabilities in order to reduce related risks and protect human lives. In this thesis, local and regional investigations were carried out to analyse landslide characteristics in the Swabian Alb region, and to develop prototypic landslide early warning systems. In the local study area, an extensive hydrological[...]

**Contents**

Introduction. - Theoretical Background. - Study Area. - Data. - Methodology. - Results. - Integrative Early Warning. - Discussion. - Perspectives. - Summary. - Appendix.

**Fields of interest**

Natural Hazards; Geomorphology; Geotechnical Engineering & Applied Earth Sciences; Physical Geography

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. XXII, 260 p. 101 illus., 80 in color. (Springer Theses) Hardcover

99,95 €

ISBN 978-3-642-27525-8

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**Metals and Society**

**An Introduction to Economic Geology**

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

**Features**

"Economic Geology, The Origin and Mining of Ore Deposits" focuses not only on the nature and origin of ore deposits but also explores the economic issues that surround the exploitation of mineral resources. Topics of particular interest are the rate of exploitation of natural resources, the question of when or if these resources will be exhausted, the pollution and social disturbance that [...]  

**Contents**


**Fields of interest**

Economic Geology; Landscape, Regional and Urban Planning; Environmental Law / Policy / Ecojustice

**Target groups**

Upper undergraduate

**Type of publication**

Graduate/advanced undergraduate textbook

**Usually dispatched within 3 to 5 business days**

2012, XIII, 160 p. 61 illus., 40 in color. (Springer Geophysics, 7) Hardcover

59,95 €

ISBN 978-3-642-22995-4
Microseismic Monitoring and Geomechanical Modelling of CO2 Storage in Subsurface Reservoirs

This thesis presents an impressive summary of the potential to use passive seismic methods to monitor the sequestration of anthropogenic CO2 in geologic reservoirs. It brings together innovative research in two distinct areas – seismology and geomechanics – and involves both data analysis and numerical modelling. The data come from the Weyburn-Midale project, which is currently the largest Carbon Capture and Storage (CCS) project in the world. James Verdon's results show how passive seismic monitoring can be used as an early warning system for fault reactivation and top seal failure, which may lead to the escape of CO2 at the surface.

Features
This thesis presents an impressive summary of the potential to use passive seismic methods to monitor the sequestration of anthropogenic CO2 in geologic reservoirs. It brings together innovative research in two distinct areas – seismology and geomechanics – and involves both data analysis and numerical modelling. The data come from the Weyburn-Midale project, which is currently the largest Carbon Capture and Storage project in the world.

Contents

Fields of interest
Geophysics / Geodesy; Geology; Monitoring / Environmental Analysis; Climate Change

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VI, 183 p. 102 illus., 77 in color. (Springer Theses) Hardcover

99,95 €
ISBN 978-3-642-25387-4
Reconstructing Human-Landscape Interactions - Volume 1

Interpreting Desert and Fluvial Environments

The Holocene is unique when compared to earlier geological time in that humans begin to alter and manipulate the natural environment to their own needs. Domestication of crops and animals and the resultant intensification of agriculture lead to profound changes in the impact humans have on the environment. Conversely, as human populations began to increase geologic and climatic factors begin to have a greater impact on civilizations. To understand and reconstruct the complex interplay between humans and the environment over the past ten thousand years requires examination of multiple differing but interconnected aspects of the environment and involves geomorphology, paleoecology, geoarchaeology and paleoclimatology. These Springer Briefs volumes examine the dynamic interplay between humans and the natural environment as reconstructed by the many and varied sub-fields of the Earth Sciences.

Features
The Holocene is unique when compared to earlier geological time in that humans begin to alter and manipulate the natural environment to their own needs. Domestication of crops and animals and the resultant intensification of agriculture lead to profound changes in the impact humans have on the environment. Conversely, as human populations began to increase geologic and climatic factors begin to have a [-]

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

Fields of interest
Earth System Sciences; Geography (general); Environment (general); Science

Type of publication
Research

Usually dispatched within 3 to 5 business days

2012. VIII, 55 p. 30 illus., 6 in color. (SpringerBriefs in Earth System Sciences) Softcover

49,95 €
ISBN 978-3-642-23758-4

E. Doornbos, Delft University of Technology, Netherlands

Thermospheric Density and Wind Determination from Satellite Dynamics

The Earth’s atmosphere is often portrayed as a thin and finite blanket covering our planet, separate from the emptiness of outer space. In reality, the transition is gradual and a tiny fraction of the atmosphere gases is still present at the altitude of low orbiting satellites. The very high velocities of these satellites ensure that their orbital motion can still be considerably affected by air density and wind. This influence can be measured using accelerometers and satellite tracking techniques. The opening chapters of this thesis provide an excellent introduction to the various disciplines that are involved in the interpretation of these observations: orbital mechanics, satellite aerodynamics and upper atmospheric physics. A subsequent chapter, at the heart of this work, covers advances in the algorithms used for processing satellite accelerometry and Two-Line Element (TLE) orbit data. The closing chapters provide an elaborate analysis of the resulting density and wind products, which are[...]

Features
The Earth’s atmosphere is often portrayed as a thin and finite blanket covering our planet, separate from the emptiness of outer space. In reality, the transition is gradual and a tiny fraction of the atmosphere gases is still present at the altitude of low orbiting satellites. The very high velocities of these satellites ensure that their orbital motion can still be considerably affected by air density and [...]

Contents

Fields of interest
Atmospheric Sciences; Aerospace Technology and Astronautics; Fluid- and Aerodynamics

Type of publication
Research

Usually dispatched within 3 to 5 business days

2012. XV, 182 p. 64 illus., 16 in color. (Springer Theses) Hardcover

99,95 €
ISBN 978-3-642-25128-3

K. Satake, University of Tokyo, Japan; A. Rabinovich, Institute of Ocean Sciences, Sidney, BC, Canada; U. Kånehlig, Middle East Technical University, Ankara, Turkey; S. Tinti, University of Bologna, Italy (Eds.)

Tsunamis in the World Ocean
Past, Present and Future Volume II

The tsunami from the 1960 Chilean earthquake affected the entire Pacific Ocean and motivated the international coordination of tsunami research and warning systems around the Pacific. However, the 2004 Indian Ocean tsunami affected the entire world, and reminded that tsunamis are not a local or regional problem but a global issue. This volume contains 15 papers, mostly presented at the 24th International Tsunami Symposium held on 14-16 July 2009 in Novosibirsk, Russia. They reflect the current state of tsunami science, including studies of recent tsunamis, tsunami statistics and warning, and modeling tsunami runup and inundation.

Features
The tsunami from the 1960 Chilean earthquake affected the entire Pacific Ocean and motivated the international coordination of tsunami research and warning systems around the Pacific. However, the 2004 Indian Ocean tsunami affected the entire world, and reminded that tsunamis are not a local or regional problem but a global issue. This volume contains 15 papers, mostly presented at the [...]
**Economics**

C. Suchan, Bamberg; J. Frank, Bamberg (Eds.)

**Analyze und Gestaltung leistungsfähiger IS-Architekturen**

Modellbasierte Methoden aus Forschung und Lehre in der Praxis


**Features**


**Contents**


**Fields of interest**

Business Information Systems; Organization / Planning; Information Systems Applications (incl.Internet); Information Systems and Communication Service

**Target groups**

Professional/practitioner

**Type of publication**

Contributed volume

*Usually dispatched within 3 to 5 business days*

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**Anatomy of Global Stock Market Crashes**

An Empirical Analysis

This work is an exploration of the global market dynamics, their intrinsic natures, common trends and dynamic interlinkages during the stock market crises over the last twelve years. The study isolates different phases of crisis and differentiates between any crisis that remains confined to the region and those that take up a global dimension. The latent structure of the global stock market, the inter-regional and intra-regional stock market dynamics around the crises are analyzed to get a complete picture of the structure of the global stock market. The study further probing into the inherent nature of the global stock market in generating crisis finds the global market to be chaotic thus making the system intrinsically unstable or at best to follow knife-edge stability. The findings have significant bearing at theoretical level and on policy decisions.

**Features**

This work is an exploration of the global market dynamics, their intrinsic natures, common trends and dynamic interlinkages during the stock market crises over the last twelve years. The study isolates different phases of crisis and differentiates between any crisis that remains confined to the region and those that take up a global dimension. The latent structure of the global stock market, the [...]

**Fields of interest**

Financial Economics; Macroeconomics / Monetary Economics; Finance / Banking; Business & Economics (general)

**Target groups**

Research

**Type of publication**

Brief

*Usually dispatched within 3 to 5 business days*


49,95 €

ISBN 978-81-322-0462-6

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**Applied General Equilibrium**

An Introduction

This advanced textbook aims at providing a simple but fully operational introduction to applied general equilibrium. General equilibrium is the backbone of modern economic analysis and as such generation after generation of economics students are introduced to it. As an analytical tool in economics, general equilibrium provides one of the most complete views of an economy since it incorporates all economic agents (households, firms, government, foreign sector) in an integrated way that is compatible with microtheory and microdata. The integration of theory and data handling is required for successful modeling but it requires a double ability that is not found in standard books. With this book we aim at filling the gap and provide advanced students with the required tools, from the building of consistent and applicable general equilibrium models to the interpretation of the results that ensue from the adoption of policies. The topics include: model design, model development, computer code examples, [...]

**Features**

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**Contents**


**Fields of interest**

Economic Theory; Microeconomics; Economic Systems; Economic Policy

**Target groups**

Graduate

**Type of publication**

Graduate/advanced undergraduate textbook

*Usually dispatched within 3 to 5 business days*

2012. IX, 118 p. 5 illus., 4 in color. (Springer Texts in Business and Economics) Hardcover

69,95 €

ISBN 978-3-642-24745-3
Business Intelligence

First European Summer School, eBiSS 2011, Paris, France, July 3-8, 2011, Tutorial Lectures

Business Intelligence (BI) promises an organization the capability of collecting and analyzing internal and external data to generate knowledge and value, providing decision support at the strategic, tactical, and operational levels. Business Intelligence is now impacted by the Big Data phenomena and the evolution of society and users, and needs to take into account high-level semantics, reasoning about unstructured and structured data, and to provide a simplified access and better understanding of diverse BI tools accessible through mobile devices. In particular, BI applications must cope with additional heterogeneous (often Web-based) sources, e.g., from social networks, blogs, competitors’, suppliers’, or distributors’ data, governmental or NGO-based analysis and papers, or from research publications. The lectures held at the First European Business Intelligence Summer School (eBiSS), which are presented here in an extended and refined format, cover not only established BI technologies like data[...]

Features

Business Intelligence (BI) promises an organization the capability of collecting and analyzing internal and external data to generate knowledge and value, providing decision support at the strategic, tactical, and operational levels. Business Intelligence is now impacted by the Big Data phenomena and the evolution of society and users, and needs to take into account high-level semantics, reasoning about [...]

Contents

Data Warehouses: Next Challenges. - Data Warehouse Performance: Selected Techniques and Data Structures. - OLAP Query Personalisation and Recommendation: An Introduction.- The GoOLAP Fact Retrieval Framework. - Business Intelligence 2.0: A General Overview. - Graph Mining and Communities Detection. - Semantic Technologies and Triplestores for Business Intelligence. - Service-Oriented Business Intelligence. - Collaborative Business Intelligence.

Fields of interest

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

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Online orders shipping within 2-3 days.

2012, IX, 207 p. 44 illus. (Lecture Notes in Business Information Processing, Vol. 96) Softcover

46,00 €
ISBN 978-3-642-27357-5

China-Sourcing

Beschaffung, Logistik und Produktion in China


Features


Contents


Fields of interest

Regional Science; Industrial Organization

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


169,95 €
ISBN 978-3-642-20188-2

Congestion-Prone Services under Quality Competition

A Microeconomic Analysis

This study presents new microeconomic analyses of congestion-prone services that comprise most private and public services at the final consumption stage. It accounts for two distinctive features of congestion-prone services: the discrepancy between capacity and throughput, and service quality competition. To accommodate these features, a series of new decision-making theorems for consumers and suppliers is developed. The resulting demand and cost functions incorporate service time as the variable that reflects congestion and service quality. In market equilibrium, interactions between consumers and firms endogenously determine the industrial organization type of each firm and thus allow the coexistence of multiple industrial organization types in the same market. Efficiency of resource allocation is assessed by applying two different criteria: service quality diversity throughout the market and Pareto optimality in each submarket.

Features

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Contents


Fields of interest

Regional Science; Industrial Organization

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XVII, 424 p. 35 illus. (Advances in Spatial Science) Hardcover

46,68 €
ISBN 978-3-642-23263-3
Corporate Social Responsibility
Verantwortungsvolle Unternehmensführung in Theorie und Praxis

Dieses Standardwerk der CSR-Managementliteratur bietet eine neue Sichtweise auf das Verhältnis zwischen Unternehmen und Gesellschaft. 67 ausgewiesene Autoren aus dem gesamten deutschsprachigen Raum (Deutschland, Österreich, Schweiz und Südtirol) zeigen in 50 Beiträgen das ganze Spektrum verantwortungsvoller Unternehmensführung („Corporate Social Responsibility - CSR“) auf. Diese fundierte Gesamtsicht auf das Thema CSR liefert das Fundament für Unternehmer, Manager, sowie angehende Führungskräfte, um sowohl verantwortungsvoll zu wirtschaften als auch nachhaltig den Unternehmenswert zu steigern. Das Buch liefert mit seinen vielfältigen Beiträgen und einzigartigen Insiderwissen innovative Ansätze, wie eine konsistente CSR-Strategie im Unternehmen entwickelt und dabei gezielt Wettbewerbsvorteile generiert werden können. Mit seinem Ansatz Wirtschaft und Gesellschaft nicht als Gegensatz, sondern nachhaltiges Wirtschaften als Investition in die Zukunft zu begreifen, hat es den Anspruch einen neuen[...]

Features
Dieses Standardwerk der CSR-Managementliteratur bietet eine neue Sichtweise auf das Verhältnis zwischen Unternehmen und Gesellschaft. 67 ausgewiesene Autoren aus dem gesamten deutschsprachigen Raum (Deutschland, Österreich, Schweiz und Südtirol) zeigen in 50 Beiträgen das ganze Spektrum verantwortungsvoller Unternehmensführung („Corporate Social Responsibility - CSR“) auf. Diese fundierte Gesamtsicht auf das [...] Contents

Fields of interest
Non-Profit Enterprises/Corporate Social Responsibility, Business Strategy/Leadership, Organization / Planning

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

2012, XXV, 812 S. Hardcover
74,72 €
ISBN 978-3-642-25398-0

Design Thinking Research
Studying Co-Creation in Practice

This book summarizes the results of the second year in the Design Thinking Research Program, a joint venture of Stanford University in Palo Alto and Hasso Plattner Institute in Potsdam. The authors have taken a closer look at the issue of co-creation from different points-of-view. The concept of co-creation can also be applied to the phase in which new ideas and related thought start to influence companies, the economy, our culture, and society. The perpetual pursuit for inventions, new creations and innovations is inherent in human nature. The concept behind co-creation may sound simple, however, it is both an essential element of Design Thinking and highly complex. It is about creating positive synergies for all parties involved.

Features
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Design Thinking as Innovation Foray (Christoph Meinel and Larry Leifer) - Part I Road Maps for Design Thinking - Tele-Board: Follow the Traces of Your Design Process History (Lutz Gericke, Raja Gumienny, Christoph Meinel) - Understanding Radical Breaks (Jonathan Edelman, Avantika Agarwal, Cole Paterson, Sophia Mark, Larry Leifer) - If you want to know who you are, tell me where you are (Julia von Thienen, Christine Noweski, Ingo Raub, Christoph Meinel, Sabine Lang) - Creativity and Culture: State of the Art (Hannah Kim, Siddarth Mishra, Pamela Hinds, [...] Fields of interest
Software for VSM application - Team Syntegrity

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

Fields of interest
Organization / Planning, Business & Management Science

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XVII, 250 p. 176 illus., 8 in color. Hardcover
99,95 €
ISBN 978-3-642-22317-4

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

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XII, 277 p. 91 illus. (Understanding Innovation) Hardcover
99,95 €
ISBN 978-3-642-21642-8
Effective Strategy Execution

Improving Performance with Business Intelligence

Turbulent times create a threat for the survival of organizations while also offering new opportunities. This book uses many examples to demonstrate how an improved strategic management approach, leveraging established management concepts in conjunction with the innovative technology solutions offered by business intelligence, can lead to improved results. The book presents the three main barriers to an effective strategy execution and how they can be overcome. Creating a shared understanding of the strategy on all levels of the organization using a Value ScoreCardTM and following the Strategic Alignment ProccessTM enables organizations to measure and monitor performance. The Strategic Alignment Remote ControlTM is presented as the ultimate tool for managers to remain in control of their business.

Seven Case Studies from different industries across the globe provide examples how the organizational performance can be improved. They include companies like Daimler, Tetra-Pak, Würth, Germany’s Federal[…]

Features

Turbulent times create a threat for the survival of organizations while also offering new opportunities. This book uses many examples to demonstrate how an improved strategic management approach, leveraging established management concepts in conjunction with the innovative technology solutions offered by business intelligence, can lead to improved results. The book presents the three main barriers to an […]

Contents

1 Management Challenges in Dynamic Business Environments. – 2 The Strategic Alignment Process. - 3 Preparation for Strategy Execution. - 4 Strategy Execution. - 5 Outlook. - 6 Case Studies. – Index. – Notes. – Bibliography. – Glossary. - About the Authors.

Fields of interest

Operation Research / Decision Theory; Management/Business for Professionals; Business Information Systems; Information Systems Applications

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 228 p. 62 illus. (Management for Professionals) Hardcover

49,95 €
ISBN 978-3-642-19204-3

Electoral Systems

Paradoxes, Assumptions, and Procedures

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

Features

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Contents


Fields of interest

Game Theory / Mathematical Methods; Political Science, general; Game Theory, Economics, Social and Behavior. Sciences; Political Philosophy; Constitutional Law

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 351 p. 45 illus. (Studies in Choice and Welfare) Hardcover

99,95 €
ISBN 978-3-642-20440-1

Empirical Modelling in Regional Science

Towards a Global Time-Space-Structural Analysis

Economic agents interact in structural relationships through time and space. This work starts from the empirical observation that all three dimensions, namely time, space, and structural functional forms, are important for an integrative framework of modern empirical analysis in regional science. The work thus aims at combining up-to-date econometric tools from the fields of spatial econometrics, panel time-series analysis and structural simultaneous equation modelling to analyze the different research questions at hand.

Most of the topics dealt within this work start from a concrete empirical problem, while problem solving also aims at generating some new knowledge in a methodological way, e.g. by the complementary use of Monte Carlo simulation studies to compare the empirical performance of different estimators for specific data samples. Following a first introductory chapter, the work is structured in three parts addressing major issues in building up a stylized regional economic model such as[…]

Features

Economic agents interact in structural relationships through time and space. This work starts from the empirical observation that all three dimensions, namely time, space, and structural functional forms, are important for an integrative framework of modern empirical analysis in regional science. The work thus aims at combining up-to-date econometric tools from the fields of spatial econometrics, panel […]

Contents


Fields of interest

Regional Science; Economic Geography; Statistics for Business, Economics, Mathematical Finance, Insurance

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


99,95 €
ISBN 978-3-642-22900-8
Freight Forwarder's Intermediary Role in Multimodal Transport Chains

A Social Network Approach

In this book, the business of international freight forwarding is examined from both a theoretical and empirical point of view with a special emphasis on multimodal transport chains, including sea or air transport operations. In such contexts, the freight forwarder is always considered "The Architect of Transport", but this intermediary role seems to be largely neglected in research to date. Therefore, relevant concepts from economic theory and economic sociology are employed to produce both an intermediary and a network perspective of freight forwarding in order to provide a better understanding of this kind of transportation business. Furthermore, its intermediary role in such inherent network structures is explored by mapping relationship patterns in a stylized model framework applied to a questionnaire-based sample collected among freight forwarders engaged in such multimodal transport chains in Germany (especially from Hamburg, Bremen and Bremerhaven) as well as in Austria in 2003.

Features

In this book, the business of international freight forwarding is examined from both a theoretical and empirical point of view with a special emphasis on multimodal transport chains, including sea or air transport operations. In such contexts, the freight forwarder is always considered "The Architect of Transport", but this intermediary role seems to be largely neglected in research to date. Therefore, relevant concepts from economic theory and economic sociology are employed to produce both an intermediary and a network perspective of freight forwarding in order to provide a better understanding of this kind of transportation business. Furthermore, its intermediary role in such inherent network structures is explored by mapping relationship patterns in a stylized model framework applied to a questionnaire-based sample collected among freight forwarders engaged in such multimodal transport chains in Germany (especially from Hamburg, Bremen and Bremerhaven) as well as in Austria in 2003.

Contents


Fields of interest

Production / Logistics; International Economics; Organization / Planning; Business & Management Science

Target groups

Graduate

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

H.-J. Schramm, WU Wirtschaftsuniversität Wien, Austria
Führung im Projekt


Features
Projektleiter müssen tagtäglich Führungsaufgaben wahrnehmen. Studien zeigen, dass immer wieder Projekte scheitern, weil Projektleiter ihre Führungsverantwortung für das Projektteam und ihre Projektmitarbeiter nicht oder nicht genügend wahrnehmen. Denn mehr noch als Linienmanager führen Projektleiter ihr Team mehr durch Persönlichkeit und Führungskompetenz und weniger durch disziplinarische Führungsgewalt. [...] 

Contents

Fields of interest
Personnel Management; Management/Business for Professionals; Business & Management Science

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days
2012. VIII, 242 S. 35 Abb. Hardcover
42,01 €
ISBN 978-3-642-22625-0

Information Strategy Design and Practices

Information Strategy Design and Practices develops a framework for designing information technology strategy for an organization. Beyond this, it establishes an approach to not only implement it, but sustain it. The framework explains how IT strategy should have an alignment to business to reap the benefits of business. The book contains five case studies in different domains: retail, real estate development, IT product development, development sector, and education sector. These case studies have been applied to different countries, providing a global prospective to this emerging trend.

Features
Information Strategy Design and Practices illustrates approaches for designing and implementing information strategy. While it gives details of different theoretical concepts related to information strategy, it also provides live examples from different corporations as to how project goals can be achieved through effective information strategy. The book also illustrates ‘people focused’ frameworks [...] 

Contents

Fields of interest
Business Information Systems; Information Systems and Communication Service; Business Strategy/Leadership

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days
2012. XXI, 342 p. 101 illus., 79 in color. Hardcover
139,95 €

Information and Communication Technologies in Tourism 2012


The papers presented in this volume advance the state of the art in social media and Web 2.0, electronic tourism marketing, web site and search engine optimization, technology adoption and diffusion, online communities, tourism management and decision support, eLearning, mobile technologies and applications in tourism, recommender systems, e-intermediaries and networks in tourism, customer research in e-tourism and user generated content. The volume collects research papers of prominent scholars from around the world with a disciplinary background in the fields of social or computer sciences. The book covers among the most significant topics within the study field of electronic tourism and, likewise, addresses academics and practitioners interested in latest advancements in the electronic travel and tourism domain.

Features
The papers presented in this volume advance the state of the art in social media and Web 2.0, electronic tourism marketing, web site and search engine optimization, technology adoption and diffusion, online communities, tourism management and decision support, eLearning, mobile technologies and applications in tourism, recommender systems, e-intermediaries and networks in tourism, customer research in [...] 

Contents

Fields of interest
Business Information Systems

Target groups
Professional/practitioner

Type of publication
Proceedings

Online orders shipping within 2-3 days.

2012. XIV, 530 p. 87 illus. Softcover
169,95 €
ISBN 978-3-7091-1141-3
Innovation Communities
Teamworking of Key Persons - A Success Factor in Radical Innovation

Self-organising networks have become the dominant innovators of complex technologies and radical innovation. The growing need for co-operation to ensure innovation success calls for a broader understanding of what makes innovation projects successful and requires new concepts. The book introduces the new concept of "innovation communities", defining them as informal networks of like-minded individuals who act as innovation promoters or champions. These key figures come from various companies and organisations and will team up in a project-related fashion, jointly promoting a certain innovation, product or idea either on one or across different levels of an innovation system. The publication presents findings from surveys that demonstrate that networks of champions are a success factor in radical innovation. Five case studies of noteworthy innovation projects illustrate why the collaboration of champions can make innovation projects more successful. Furthermore, the book presents hands-on methods and [...] Features
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Fields of interest
Technology Management; Entrepreneurship; R & D / Technology Policy

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XX, 337 p. 44 illus., 41 in color. Hardcover
129,95 € ISBN 978-3-642-22127-9

Innovation Policy and Governance in High-Tech Industries
The Complexity of Coordination

The book examines the conditions for successful high-technology policy from theoretical and empirical perspectives. It enhances the predominant national systems of innovation approach to innovation policy with concepts based on new developments in the governance of complex systems and processes. The conceptual framework of complex networks and systems is used to examine national policy approaches in countries that have created environments conducive to high-technology industries as well as individual high-technology sectors, such as biotechnology, alternative energy, and aerospace. Theoretical and empirical contributions are synthesised into lessons for high-tech policy and further research.

Features
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Fields of interest
R & D / Technology Policy; Technology Management; Political Science, general

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XVIII, 304 p. 32 illus. Hardcover
99,95 € ISBN 978-3-642-12562-1

International Trade Policies and Climate Change Governance

This work offers a synthesis of the current approaches toward an integration of international trade and climate change, with a view to fostering potential improvements in policies and institutions affecting these. A number of pragmatic measures are proposed with reference to the WTO and the United Nations Framework Convention on Climate Change (UNFCCC) regimes, which are expected to contribute toward enhanced climate change governance, as well as promoting international trade.

Features
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Fields of interest
International Economics; Climate Change; Political Science, general; Private International Law; International Economics; Climate Change; Political Science, general; Private International Law; Environmental Economics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, VIII, 53 p. (SpringerBriefs in Economics) Softcover
49,95 € ISBN 978-3-642-25251-8
Korean Science and Technology in an International Perspective

South Korea has attained spectacular economic success in recent decades. It has reached the status of a Newly Advanced Economy, with challenges increasingly mirroring those faced by other advanced economies. These include the necessary upgrading of the labor force, the frictions of switching to a national system of innovation adapted to leadership in R&D, market-based economic policies that reflect the government’s difficulties in foreseeing future technological developments, and the consequences of social change for the innovation system and policy-making. In the forthcoming book the parallel challenges for innovation and technology for the Republic of Korea and other advanced economies will be analyzed more thoroughly with an international perspective in mind. This comparison and international benchmarking will allow policymakers and scholars to better appreciate how much the country has already moved into the circle of globally leading economies and what can be done to consolidate and strengthen.[…]

Features

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Contents


Fields of interest

R & D / Technology Policy; Economic Policy; International Economics

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. X, 288 p. 56 illus. Hardcover

99,95 €
ISBN 978-3-7908-2752-1

Management kreativitätsintensiver Prozesse

Theorien, Methoden, Software und deren Anwendung in der Fernsehindustrie


Features


Contents


Fields of interest

Media Management; Organization / Planning; Management/Business for Professionals; Project Management

Target groups

Professional/practitioner

Type of publication

Monograph

Online orders shipping within 2-3 days.

2012. X. 390 p. Spiral binding
39,95 €
Market Risk and Financial Markets Modeling

The current financial crisis has revealed serious flaws in models, measures and, potentially, theories, that failed to provide forward-looking expectations for upcoming losses originated from market risks. The Proceedings of the Perm Winter School 2011 propose insights on many key issues and advances in financial markets modeling and risk measurement aiming to bridge the gap. The key addressed topics include: hierarchical and ultrametric models of financial crashes, dynamic hedging, arbitrage free modeling the term structure of interest rates, agent based modeling of order flow, asset pricing in a fractional market, hedge funds performance and many more.

Features

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Contents

Financial Market and Systemic Risks.- On the development of master in finance & it program in a perm state national research university.- Questions of top management to risk management.- Estimation of market resiliency from high-frequency mixes shares trading data.- Market liquidity measurement and econometric modeling.- Modeling of russian equity market microstructure (MICEX, HYDR case).- Asset pricing in a fractional market under transaction costs.- Influence of behavioral finance on the share market.- Hedging with futures: multivariate dynamic conditional correlation GARCH.- A note[...]

Fields of interest

Financial Economics; Finance / Banking; Statistics for Business, Economics, Mathematical Finance, Insurance; Cognitive Psychology

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

Marktforschung

Ein einführendes Lehr- und Übungsbuch


Features

Das Buch führt in komprimierter und verständlicher Form in die wichtigsten Bereiche der Marktforschung ein. Es vermittelt durch einen ausgewogenen Kompromiss zwischen wissenschaftlicher Präzision und Einfachheit des mathematischen Formalismus ein besonders klares Grundverständnis für den Planungsprozess der Marktforschung. Aufbauend auf wissenschaftstheoretischen Grundzügen und einer Einführung in die [...]

Contents

Aufgaben und wissenschaftstheoretische Grundzüge der Marktforschung.- Einführung in die Erforschung des Konsumentenverhaltens.- Die Phasen und Methoden der Marktforschung im Überblick.- Marktforschung am Point-of-Sale.

Fields of interest

Marketing; Management/Business for Professionals; Business & Economics (general)

Target groups

Lower undergraduate

Type of publication

German textbook

Usually dispatched within 3 to 5 business days

2012. XV, 341 S. 70 Abb. (Springer-Lehrbuch) Softcover

21,45 €

ISBN 978-3-642-24344-8

Modeling for Decision Support in Network-Based Services

The Application of Quantitative Modeling to Service Science

This book originated from several recent workshops and related activities conducted by the IFIP Working Group 7.6 on “Optimization-Based Computer Aided Modeling and Design.” This group has been active for 20 years with the stated objective of developing “high-performance computer-aided systems to support modeling, decision analysis, optimization and multi-criteria decision making.” Recently, the group has turned its attention to the application of modeling and optimization to service science, management and engineering (SSME). SSME is still a young research field searching for its theoretical underpinnings, and one which offers many opportunities for analytical modeling to not only advance the understanding, but also to help form the foundation of a new discipline. This book is the result of the group’s introductory foray into the application of quantitative modeling to the nascent field of service science with special emphasis on the network aspects of services. The 11 papers presented are[...]

Features

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Modelling Value

Selected Papers of the 1st International Conference on Value Chain Management

The publication contains a selection of the best double-blind reviewed papers presented, discussed and revised by participants of the 1st International Conference on Value Chain Management in Austria, Steyr, May 2011. The Value Chain Management (VCM) Conference presents scientific insights relevant to management as well as their translation into the practice of management. The conference focus is on the demand chain i.e. sales, production, purchasing, logistics, performance measurement and customer value management. The authors present analytical and conceptual articles as well as empirical studies showing multidisciplinary and intercultural approaches towards solving relevant open problems.

Features
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Contents

Fields of interest
Marketing; Procurement; Production / Logistics; Operation Research / Decision Theory

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012, XXI, 418 p. 99 illus. (Contributions to Management Science, O) Hardcover

139,95 €
ISBN 978-3-7908-2746-0

New Corporate Governance

Successful Board Management Tools

Martin Hilb presents an innovative and integrated approach to the theory and practice of corporate governance. Central to this approach is a set of instruments developed and tested by the author that can be used by boards to offer effective strategic direction and control to their organizations. The board instruments can be readily applied to the selection, review, remuneration and development of board members, and for conducting board self-evaluations. This new approach to corporate governance is based on four guiding principles: keep it situational, keep it strategic, keep it integrated, and keep it controlled. Together, these principles form the basis of an integrated approach to all key aspects of corporate governance. The main arguments in each section are supported by conceptual models, practical board tools or case studies, making the book ideally suited to board members, senior managers and postgraduate students.

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

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XII, 237 p. 118 illus. Hardcover

44,95 €
ISBN 978-3-642-23594-8
Nonlinear Dynamics in Equilibrium Models

Chaos, Cycles and Indeterminacy

Optimal growth theory studies the problem of efficient resource allocation over time, a fundamental concern of economic research. Since the 1970s, the techniques of nonlinear dynamical systems have become a vital tool in optimal growth theory, illuminating dynamics and demonstrating the possibility of endogenous economic fluctuations. Kazuo Nishimura’s seminal contributions on business cycles, chaotic equilibria and indeterminacy have been central to this development, transforming our understanding of economic growth, cycles, and the relationship between them. The subjects of Kazuo’s analysis remain of fundamental importance to modern economic theory. This book collects his major contributions in a single volume. Kazuo Nishimura has been recognized for his contributions to economic theory on many occasions, being elected fellow of the Econometric Society and serving as an editor of several major journals.

Features

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Contents


Fields of interest

Economic Growth

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XI, 454 p. 43 illus. Hardcover

139,95 €
ISBN 978-3-642-22396-9

Operative Transportation Planning

Solutions in Consumer Goods Supply Chains

Transportation management in today’s consumer goods industry can be characterized by a high proportion of outsourced transportation services. Due to rising freight costs consumer goods manufacturers are seeking opportunities to increase the efficiency of their transportation network. This book presents an operational transportation planning problem typical of the consumer goods industry focusing on a network of suppliers, production facilities and warehouses. With respect to the large share of outsourcing in these networks a detailed analysis of freight costs based on contractual agreements is provided. From this analysis a number of opportunities for efficiency gains are identified and consolidated in an operative transportation planning problem that is numerically investigated. Furthermore, an overview of processes and organizational requirements in transportation management is given with special focus on the integration of existing commercial Transportation Management Systems (TMS).

Features

Transportation management in today’s consumer goods industry can be characterized by a high proportion of outsourced transportation services. Due to rising freight costs consumer goods manufacturers are seeking opportunities to increase the efficiency of their transportation network. This book presents an operational transportation planning problem typical of the consumer goods industry focusing on a […]

Fields of interest

Production / Logistics; Organization / Planning; Operation Research / Decision Theory

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XIV, 220 p. 95 illus. (Contributions to Management Science) Hardcover

99,95 €
ISBN 978-3-7908-2791-0

Optimization of Temporal Networks under Uncertainty

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

Features

Many decision problems in Operations Research are defined on temporal networks, that is, workflows of time-consuming tasks whose processing order is constrained by precedence relations. For example, temporal networks are used to model projects, computer applications, digital circuits and production processes. Optimization problems arise in temporal networks when a decision maker wishes to determine a […]

Fields of interest

Operation Research / Decision Theory; Game Theory / Mathematical Methods; Optimization; Operations Research, Mathematical Programming

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


99,95 €
ISBN 978-3-642-23426-2
Performance Measurement with the Balanced Scorecard
A Practical Approach to Implementation within SMEs

Do we really know the critical phenomena that are linked to how enterprises function and the dynamics of their relationships with customers, suppliers and competitors? Are their decision-making processes founded upon a set of performance measurements that were accurately designed and systematically elaborated? The above questions are the focus of this book, as is the following premise: enterprises need a system to measure their critical performances so they can be managed effectively; metaphorically speaking, enterprises need a “management dashboard” to serve as a navigational aid. A dashboard to show – with as few distortions as possible – the pattern of key variables that characterizes the specific formula enterprises use to face their competitive and social environment.

Features
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Responsible Investment in Times of Turmoil

The SRI phenomenon is said to be entering the mainstream of financial intermediation. From a fairly marginal practice promoted or campaigned for by NGO’s and at odds with financial practice and orthodoxy it grew into well formulated policy adopted by a wide range of investors. Academic literature on SRI has also boomed on the assumption that mainstreaming is taking place. However, little thinking has been carried out on questions specifically arising from this alleged ‘mainstreaming’. This book, addressed to those with a scholarly or practitioner’s interest in SRI, starts filling this neglected dimension. Today, one cannot ignore the difficulties of main stream financing. The financial spheres are trembling globally in one of the worst crises since the 1930’s. As a response to the crisis, the intermediation of ‘financial responsibility’ will undoubtedly be the subject of new regulation and scrutinizing. This book looks into what these turbulences will imply for SRI. In view of these circumstances,[…]

Features
The SRI phenomenon is said to be entering the mainstream of financial intermediation. From a fairly marginal practice promoted or campaigned for by NGO’s and at odds with financial practice and orthodoxy it grew into well formulated policy adopted by a wide range of investors. Academic literature on SRI has also boomed on the assumption that mainstreaming is taking place. However, little thinking has been […]

Contents
Foreword; Alejo José G. Sison.- List of tables.- List of figures.- About the editors.- About the authors.- Introduction; Wim Vandekerckhove, Jos Leys, Kristian Alm, Bert Scholten, Silvana Signori and Henry Schäfer.- Chapter 1. Global finance and the role of responsible investors; Steve Waddell.- Chapter 2. New values in responsible finance and the role of responsible investors; Steve Signori and Henry Schäfer.- Chapter 1. Global

Semantic Technologies in Content Management Systems

Content Management Systems (CMSs) are used in almost every industry by millions of end-user organizations. In contrast to the 90’s, they are no longer used as isolated applications in one organization but they support critical core operations in business ecosystems. Content management today is more interactive and more integrative: interactive because end-users are increasingly content creators themselves and integrative because content elements can be embedded into various other applications. The authors of this book investigate how Semantic Technologies can increase interactivity and integration capabilities of CMSs and discuss their business value to millions of end-user organizations. This book has therefore the objective, to reflect existing applications as well as to discuss and present new applications for CMSs that use Semantic Technologies. An evaluation of 27 CMSs concludes this book and provides a basis for IT executives that plan to adopt or replace a CMS in the near future.

Features
same as information text, copy and paste does not work

Contents

Fields of interest
Technology Management; Business Information Systems; Media Management; Management of Computing and Information Systems; Information Storage and Retrieval; Information Systems Applications (incl.Internet)

Type of publication
Handbook

Usually dispatched within 3 to 5 business days

2012. IX, 204 p. 35 illus. Hardcover

49.95 €
ISBN 978-3-642-21549-0

Serviceinnovation

Potenziale industrieller Dienstleistungen erkennen und erfolgreich implementieren

Führende Industrieunternehmen haben erkannt, dass die Entwicklung und Herstellung technisch hochwertiger Produkte allein nicht mehr ausreicht, um ehrgeizige Umsatz- und Ertragsziele zu erreichen. Damit ein Unternehmen Kunden langfristig und profitabel an sich binden kann, sind gezielte Serviceinnovationen und eine Fokussierung auf die Erbringung intelligenter Serviceleistungen entlang der Wertschöpfungskette des Kunden notwendig. Geschäftsführern und Verantwortlichen in After Sales, Service und Vertrieb wird in diesem Buch eine Roadmap für den Weg ihres Unternehmens hin zu einem erfolgreichen industriellen Dienstleistungsunternehmen aufgezeigt: in vier Stufen entwickeln Sie Ihr Unternehmen zum Service-Gestalter, der mit einem ganzheitlichen, integrierten Produkt- und Serviceportfolio und hohe Servicequalität profitabel und dauerhaft an sich bindet. In diesem Buch finden Sie Antworten auf die folgenden Fragen: Welchen aktuellen Servicerisikofaktor beziffern […]

Features
Führende Industrieunternehmen haben erkannt, dass die Entwicklung und Herstellung technisch hochwertiger Produkte allein nicht mehr ausreicht, um ehrgeizige Umsatz- und Ertragsziele zu erreichen. Damit ein Unternehmen Kunden langfristig und profitabel an sich binden kann, sind gezielte Serviceinnovationen und eine Fokussierung auf die Erbringung intelligenter Serviceleistungen entlang der […]

Contents

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

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. X, 200 S. 86 Abb. Softcover

56,03 €
ISBN 978-3-642-21238-3
Six Sigma+Lean Toolset

Mindset zur erfolgreichen Umsetzung von Verbesserungsprojekten


Features


Contents


Fields of interest

Management/Business for Professionals; Organization / Planning

Target groups

Professional/practitioner

Type of publication

Professional book

Online orders shipping within 2-3 days.

2012, XIII, 398 S. Hardcover

46.68 €

ISBN 978-3-642-27331-5
Understanding German Real Estate Markets

Real estate is the biggest real asset class in an economy, and Germany is the biggest economy in Europe. This implies opportunities as well as specific risks for investors and policy makers. As the German real estate markets have by and large been spared severe disruptions in the course of the economic crisis, many questions arise for investors and academics alike. What are the key institutional characteristics of the German real estate markets that make it different? What are the short and long-term drivers of demand and supply? Which regional and functional market segments are most likely to outperform in the next few years? What are the most important pitfalls for investors in Germany? This book gives answers to these and many more questions. The editors have invited a broad range of extensively knowledgeable practitioners and academics from across the relevant real estate spectrum, i.e. economic, legal, tax, planning and financing issues, to express their views. There is no better English.[…]

Features
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Contents

Fields of interest
Management/Business for Professionals; Regional Science; Landscape, Regional and Urban Planning; Sustainable Development; Non-Profit Enterprises/ Corporate Social Responsibility

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, XXI, 403 p. 99 illus. (Management for Professionals) Hardcover

79,95 €
ISBN 978-3-642-23610-5

Understanding German Real Estate Markets

Real estate is the biggest real asset class in an economy, and Germany is the biggest economy in Europe. This implies opportunities as well as specific risks for investors and policy makers. As the German real estate markets have by and large been spared severe disruptions in the course of the economic crisis, many questions arise for investors and academics alike. What are the key institutional characteristics of the German real estate markets that make it different? What are the short and long-term drivers of demand and supply? Which regional and functional market segments are most likely to outperform in the next few years? What are the most important pitfalls for investors in Germany? This book gives answers to these and many more questions. The editors have invited a broad range of extensively knowledgeable practitioners and academics from across the relevant real estate spectrum, i.e. economic, legal, tax, planning and financing issues, to express their views. There is no better English.[…]

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Contents

Fields of interest
Management/Business for Professionals; Regional Science; Landscape, Regional and Urban Planning; Sustainable Development; Non-Profit Enterprises/ Corporate Social Responsibility

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, XXI, 403 p. 99 illus. (Management for Professionals) Hardcover

79,95 €
ISBN 978-3-642-23610-5
Deutschland braucht Innovationen. Aufgrund ihres Mangels an natürlichen Ressourcen ist die Bundesrepublik abhängig von dem erfolgreichen Technologietransfer aus Hochschulen und Forschungseinrichtungen. Um Rückstände in der Innovationsleistung im Vergleich zu Ländern wie den USA und Japan zu verringern, muss Deutschland junge High-Tech-Unternehmen fördern. Insbesondere Ausgründungen aus dem akademischen Bereich können das Wirtschaftswachstum stärken, Arbeitsplätze schaffen und einen Beitrag zur Entwicklung technologischer „Exportschläger“ leisten. Mehrere hundert Inkubatoren in Deutschland unterstützen die Jungunternehmer beim Schritt aus der Wissenschaft hinaus auf den Markt. Welche Leistungen die Inkubatoren anbieten und welche Bedarfe die Ausgründungen haben, untersucht diese Studie und deckt dabei typische Diskrepanzen auf.

Features
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Contents

Fields of interest
Business & Economics (general)

Target groups
Popular/general

Type of publication
Monograph

Online orders shipping within 2-3 days.

2012. Etwa 60 S. 9 Abb., 5 in Farbe. (acatech BERICHTET UND EMPFIEHLT) Softcover
27,99 €
ISBN 978-3-642-24532-9

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A. Meier, University of Freiburg, Switzerland

eDemocracy & eGovernment

Stages of a Democratic Knowledge Society

The reference book reviews and presents systematically the use of Internet in administration and politics. A process-oriented layer model defines the options of exchange and participation for all claim groups covering these topics: eAssistance, eProcurement, eService, eContracting, eSettlement, eCollaboration, eDemocracy, and eCommunity. Case studies show practical applications in industry, administration and research. The book is well suited for students in Business, Economics and Political Sciences courses as well as for practitioners interested in the opportunities of digital exchange and participation in the knowledge society.

Features
The reference book reviews and presents systematically the use of Internet in administration and politics. A process-oriented layer model defines the options of exchange and participation for all claim groups covering these topics: eAssistance, eProcurement, eService, eContracting, eSettlement, eCollaboration, eDemocracy, and eCommunity. Case studies show practical applications in industry, administration [...]

Contents

Fields of interest
Business Information Systems; Political Science, general

Target groups
Graduate

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. X, 224 p. 80 illus. Hardcover
89,95 €
ISBN 978-3-642-24493-3

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N.M. Seel, Albert-Ludwigs-University, Freiburg, Germany (Ed.)

Encyclopedia of the Sciences of Learning

Over the past century, educational psychologists and researchers have posited many theories to explain how individuals learn, i.e. how they acquire, organize and deploy knowledge and skills. The 20th century can be considered the century of psychology on learning and related fields of interest (such as motivation, cognition, metacognition etc.) and it is fascinating to see the various mainstreams of learning, remembered and forgotten over the 20th century and note that basic assumptions of early theories survived several paradigm shifts of psychology and epistemology. Beyond folk psychology and its naïve theories of learning, psychological learning theories can be grouped into some basic categories, such as behaviorist learning theories, connectionist learning theories, cognitive learning theories, constructivist learning theories, and social learning theories. Learning theories are not limited to psychology and related fields of interest but rather we can find the topic of learning in various [...]

Features
Over the past century, educational psychologists and researchers have posited many theories to explain how individuals learn, i.e. how they acquire, organize and deploy knowledge and skills. The 20th century can be considered the century of psychology on learning and related fields of interest (such as motivation, cognition, metacognition etc.) and it is fascinating to see the various mainstreams [...]

Contents
Animal Learning and EcologyArtificial Intelligence / Intelligent SystemsBiography / NeurobiologyClinical Psychology and PsychotherapyComparative Psychology and EthologyEducation / Socio-cultural aspectsInstructional Psychology and LearningMachine Learning (and robotics)NeurologyNeuroscience(s)Philosophy, Information Technology

Fields of interest
Learning and Instruction; Artificial Intelligence (incl. Robotics); Educational Technology

Target groups
Research

Type of publication
Encyclopediaedia

Online orders shipping within 2-3 days.

2012. 4300 p. 100 illus. Print + eReference.
3.125,00 €
ISBN 978-1-4419-5503-6
International Handbook of Protestant Education

Since their earliest days, institutions providing a Protestant education have always been respected and sought-after for their rigor and relative freedom from dogma—and despite today’s secularism and plurality, they remain so. This international handbook is the ultimate companion to Protestant schooling worldwide. Its 39 chapters form the most comprehensive and wide-ranging treatment of the subject yet available, addressing Protestant education on all six inhabited continents and featuring the perspectives of leading authorities and public figures. The contributions cover in detail not only the facts and features of Protestant schooling in sundry nations, but also integrate a range of themes common to them all, themes so vital that they are of central concern to Christians around the world and of whatever denomination. Some of these topics are school choice, globalization, Bible pedagogy and character education, the fine arts, parental involvement, and the rise of Christianity in previous [...]

Features

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Contents


Fields of interest

Religion and Education; International and Comparative Education; Sociology of Education; Educational Policy and Politics

Perspectives on Males and Singing

“Since singing is so good a thing I wish all men would learn to sing” (William Byrd, 1588) Over the centuries, there has been reluctance among boys and men to become involved in some forms of singing. Perspectives on Males and Singing tackles this conundrum head-on as the first academic volume to bring together leading thinkers and practitioners who share their insights on the involvement of males in singing. The authors share research that analyzes the axiomatic male disinclination to sing, and give strategies designed to engage males more successfully in performing vocal music emphasizing the many positive effects it can have on their lives. Inspired by a meeting at the Australian symposium ‘Boys and Voices’, which focused on the engagement of boys in singing, the volume includes contributions from leading authorities in Australia, New Zealand, Canada, the United States and Europe.

Features

“Since singing is so good a thing I wish all men would learn to sing” (William Byrd, 1588) Over the centuries, there has been reluctance among boys and men to become involved in some forms of singing. Perspectives on Males and Singing tackles this conundrum head-on as the first academic volume to bring together leading thinkers and practitioners who share their insights on the [...]

Contents

I Overview. - II Singing in Formal Contexts. - III Singing in Informal and Community Contexts. - IV Singing in Popular Contexts. - V Practitioner Reflections. - Index.

Fields of interest

Arts Education

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XVII, 711 p. 5 illus. (International Handbooks of Religion and Education, Vol. 6) Hardcover

249,00 €
Problem-Based Learning in Clinical Education
The Next Generation

Developed in the context of health sciences education in the late 1960s, problem-based learning (PBL) is now widely employed as an education methodology. Its problem-solving, collaborative, student-centred ethos is seen as a more appropriate system of pedagogy than earlier ‘chalk-and-talk’ modes. Focusing on its use in clinical education, this collection of recent scholarship on PBL examines the ways in which PBL is both conceived and implemented in clinical education. The work has a dual emphasis, research-driven on the one hand, while on the other assessing new methodologies to explore how problem-based curricula support the achievement of students’ learning outcomes in the context of clinical education. The chapters draw on studies that explore PBL both theoretically and empirically. The volume’s eclecticism capitals on the growing body of empirical research into PBL evaluations. It balances this with studies analysing the relatively new area of discourse-based research on PBL-in-action, whose [...] Features

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Professional and Vocational Education; Medical Education; Learning and Instruction; Curriculum Studies

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XVII, 223 p. 21 illus. Hardcover
99,95 €
ISBN 978-94-007-2638-3

Rewriting the History of School Mathematics in North America 1607-1861

The Central Role of Cyphering Books

The focus of this book is the fundamental influence of the cyphering tradition on mathematics education in North American colleges, schools, and apprenticeship training classes between 1607 and 1861. It is the first book on the history of North American mathematics education to be written from that perspective. The principal data source is a set of 207 handwritten cyphering books that have never previously been subjected to careful historical analysis.

Features

Two centuries ago, American teachers did not stand at the front of the room and teach, and most students—even those studying mathematics—did not own a mathematics textbook. Written examinations of any kind were not used. Most teachers of mathematics did not have formal qualifications in mathematics. The modern educator might well ask: “If all of that is true, then how were teachers expected to teach and how [...] Contents


Fields of interest

Mathematics Education; History of Mathematics; Curriculum Studies; History

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 223 p. 21 illus. Hardcover
99,95 €
ISBN 978-94-007-2638-3

School Leadership Effects Revisited

Review and Meta-Analysis of Empirical Studies

This highly detailed study maps four decades of evolution of the concept of what constitutes effective school leadership. It analyses the theoretical background to these developments and advocates the utility of thinking of a ‘lean’ form of school leadership that is comparable to the concept of ‘meta-control’. A wide-ranging survey of the empirical research literature on leadership effects includes the presentation of results from earlier meta-analyses as well as a new meta-analysis on some 25 studies carried out between 2005 and 2010. This survey demonstrates that older reviews and meta-analyses were predominantly based on so-called ‘direct effect’ studies, while more recent studies have tried to quantify the indirect effects of leadership, mediated by other school variables. While acknowledging the relatively small total effect of leadership on student outcomes, the study does identify promising intermediary factors which, stimulated by specific leadership behaviours, impact on student[...]

Features

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Perspectives on educational quality, Jaap Scheerens.- Measuring educational quality by means of indicators, Jaap Scheerens.- Description and earlier quality review of the Dutch Educational System, Jaap Scheerens.- The quality of education in the Netherlands, as expressed by achievement attainment indicators, Hans Luyten.- The selectivity and vocational orientation of education systems, Jan van Ravens.- Summary and discussion, Jaap Scheerens.

Fields of interest

Administration, Organization and Leadership; Educational Policy and Politics; Assessment, Testing and Evaluation

Target groups

Research

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012. IX, 152 p. 15 illus. (SpringerBriefs in Education) Softcover
49,95 €
ISBN 978-94-007-2767-0
D.N. Aspin, Monash University, Victoria, Australia; J. Chapman, Australian Catholic University, Melbourne, Victoria, Australia; K. Evans, University of London, UK; R. Bagnall, Griffith University, Brisbane, Queensland, Australia (Eds.)

Second International Handbook of Lifelong Learning

The second edition of the International Handbook of Lifelong Learning is extensive, innovative, and international in scope, remit and vision, inviting its readers to engage in a critical re-appraisal of the theme of “lifelong learning”. It is a thoroughgoing, rigorous and scholarly work, with profound and wide-ranging implications for the future of educating institutions and agencies of all kinds in the conception, planning and delivery of lifelong learning initiatives. Lifelong learning requires a wholly new philosophy of learning, education and training, one that aims to facilitate a coherent set of links and pathways between work, school and education, and recognises the necessity for government to give incentives to industry and their employees so they can truly “invest” in lifelong learning. It is also a concept that is premised on the understanding of a learning society in which everyone, independent of race, creed or gender, is entitled to quality learning that is truly excellent. This book [...] 

Features
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Contents
Foreword; Arne Carsen.- Acknowledgements.- Introduction and Overview; David N. Aspin, Karen Evans, Judith D. Chapman and Richard Bagnall.- Part I: History, Theory, and Philosophy; Section Editor: David N. Aspin.- Part II: The Policy Challenge; Section Editor: Karen Evans.- Part III: Programmes and Practices; Section Editor: Judith D. Chapman.- Part IV: A Critical Stocktaking; Section Editor: Richard G. Bagnall.- List of Contributors.- Index.

Fields of interest
Lifelong Learning / Adult Education; International and Comparative Education; Educational Policy and Politics; Educational Philosophy; Sociology of Education

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days


499,00 €
ISBN 978-94-007-2359-7

Teaching About Hegemony

Race, Class and Democracy in the 21st Century

Political progressives in Canada and the United States are deeply concerned by the manner in which their countries treat their poor. They are dismayed at the dismantling of the social welfare state, the weakening of public education systems and the grotesque and ever-growing inequality of wealth. To remedy this problem, citizens need to be more aware of how political ideology influences attitudes and actions, and they need to better comprehend the effects of hegemonic discourses in the corporate media and school curriculum. This book informs educators how to develop context-specific pedagogy that will help achieve a more enlightened citizenry and, as a result, a stronger democracy. Teaching about Hegemony: Race, Class and Democracy in the 21st Century promotes a progressive agenda for teaching that is rooted in critical pedagogy, it explains why ideological critique is necessary in raising political consciousness, it deconstructs white, middle-class hegemony in the formal school curriculum, and it [...] 

Features
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Contents

Fields of interest
Sociology of Education; Educational Policy and Politics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XVI, 216 p. 6 illus. (Explorations of Educational Purpose, Vol. 17) Softcover

29,95 €

Transformative Approaches to New Technologies and Student Diversity in Futures Oriented Classrooms

Future Proofing Education

In this book we outline an optimistic, aspirational and unashamedly ambitious agenda for schooling. We make cautious use of the concept of ‘future proofing’ to signal the commitment of the various authors to re-thinking the purposes, content and processes of schooling with a view to ensuring that all children, from all backgrounds are prepared by their education to make a positive contribution to the futures that are ahead of them. The book focuses on issues relating to technology and social justice to re-examine the traditional relationship between schools and technology, between schools and diverse learners, and between schools, children and knowledge. Drawing from examples from around the world, the book explores practical ways that diverse schools have worked to celebrate diverse understandings of what it means to be a learner, a citizen, a worker in these changed and changing times and the ways different technologies can support this agenda.

Features
In this book we outline an optimistic, aspirational and unashamedly ambitious agenda for schooling. We make cautious use of the concept of ‘future proofing’ to signal the commitment of the various authors to re-thinking the purposes, content and processes of schooling with a view to ensuring that all children, from all backgrounds are prepared by their education to make a positive contribution to the [...] 

Contents

Fields of interest
Educational Technology; Sociology of Education; Literacy; International and Comparative Education; Curriculum Studies

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, IX, 241 p. 26 illus. Hardcover

99,95 €
ISBN 978-94-007-2641-3
Undoing Ethics
Rethinking Practice in Online Research

Over the past decade, researchers from different academic disciplines have paid increasing attention to the productivity of online environments. The ethical underpinnings of research in such settings, however, remain contested and often controversial. As traditional debates have been reignited by the need to respond to the particular characteristics of technologically-mediated environments, researchers have entered anew key debates regarding the moral, legal and regulatory aspects of research ethics. A growing trend in this work has been towards the promotion of localized and contextualized research ethics - the suggestion that the decisions we make should be informed by the nature of the environments we study and the habits/expectations of participants within them. Despite such moves, the relationship between the empirical, theoretical and methodological aspects of Internet research ethics remains underexplored. Drawing from ongoing sociological research into the practices of media cultures online, [..]

Features
Researchers entering into online environments for the purposes of research need to be able to demonstrate that they have considered the ethics of their practice, their use of data, and their relationship to the researched settings. No matter what the activity they are interested in, it is likely that they will be asked to account for the decisions they make and describe the strategies they have developed for [..]

Contents
Preface - Ethical Stances in Research - The Achievement of Research Ethics - Public or Private? - Text or Subjects? - Unstable Relations - Undoing Ethics.

Fields of interest
Educational Technology; Ethics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 154 p. 4 illus. Hardcover

89,95 €

Valuing Students with Impairment
International comparisons of practice in educational accountability

In this book, the author Joy Cumming draws on knowledge of law, assessment and measurement to provide an original analysis of the inclusion of students with impairment in educational accountability assessments in the U.S., England and Australia. Equitable education of students with impairment is worldwide policy. Educational accountability for improvement of educational outcomes is also a worldwide phenomenon. The U.S., England and Australia are well placed economically and politically to pursue best educational practice for students with impairment and well advanced in both provision and educational accountability systems. Examining these three systems enables an analysis of possible optimal practices to guide other countries. The book identifies three models of impairment in place in legislation, policy and enacted practice for educational accountability with students with impairment. Intentions of legislation and policy reflect a social model of impairment - while an individual has an impairment, [..]

Features
In this book, the author Joy Cumming draws on knowledge of law, assessment and measurement to provide an original analysis of the inclusion of students with impairment in educational accountability assessments in the U.S., England and Australia. Equitable education of students with impairment is worldwide policy. Educational accountability for improvement of educational outcomes is also a worldwide [..]

Contents
Chapter 1 Towards Equitable Provision of Education for Students with Disability in Education - Chapter 2 Educational Reform and Educational Accountability Legislation and Policy in the U.S., England and Australia - Chapter 3 Educational Provision, Equity and Educational Accountability for Students with Disability: Intentions and Practice - Chapter 4 Constructing the Identity of Students with Disability in Accountability Legislation and Policy - Chapter 5 Developing an Equitable Accountability System for Students with Impairment.

Fields of interest
Educational Policy and Politics; Assessment, Testing and Evaluation; International and Comparative Education

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. VII, 95 p. (SpringerBriefs in Education) Softcover

49,95 €
ISBN 978-94-007-2934-6

Advances in Bio-Imaging: From Physics to Signal Understanding Issues
State-of-the-Art and Challenges

Advances in Imaging Devices and Image processing stem from cross-fertilization between many fields of research such as Chemistry, Physics, Mathematics and Computer Sciences. This BioImaging Community feel the urge to integrate more intensively its various results, discoveries and innovation into ready to use tools that can address all the new exciting challenges that Life Scientists (Biologists, Medical doctors, ..) keep providing, almost on a daily basis. Devising innovative chemical probes, for example, is an archetypal goal in which image quality improvement must be driven by the physics of acquisition, the image processing and analysis algorithms and the chemical skills in order to design an optimal bioprobe. This book offers an overview of the current advances in many research fields related to bioimaging and highlights the current limitations that would need to be addressed in the next decade to design fully integrated BioImaging Device.

Features
Advances in Imaging Devices and Image processing stem from cross-fertilization between many fields of research such as Chemistry, Physics, Mathematics and Computer Sciences. This BioImaging Community feel the urge to integrate more intensively its various results, discoveries and innovation into ready to use tools that can address all the new exciting challenges that Life Scientists (Biologists, ..) keep providing.

Contents
Part I Biology - Part II Physics and Chemistry - Part III Digitized Histopathology - Part IV Image Analysis.

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Signal, Image and Speech Processing; Image Processing and Computer Vision; Biological Networks, Systems Biology

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XXII, 246 p. 129 illus., 84 in color. (Advances in Intelligent and Soft Computing, Vol. 120) Softcover

139,95 €
ISBN 978-3-642-25546-5
Advances in Cognitive Information Systems

The development of computer science is now so rapid that we, the readers, in creasingly receive technology news about new solutions and applications which very often straddle the border between the real and the virtual worlds. Computer science is also the area in which cognitive science is witnessing a renaissance, because its combination with technical sciences has given birth to a broad scientific discipline called cognitive informatics. And it is this discipline which has become the main theme of this monograph, which is also to serve as a kind of guide to cognitive informatics problems. This book is the result of work on systems for the cognitive analysis and inter-pretation of various data. The purpose of such an analytical approach is to show that for an in-depth analysis of data, the layers of semantics contained in these sets must be taken into account. The interdisciplinary nature of the solutions proposed means that the subject of cognitive systems forming part of cognitive informatics. [...] 

Features
The development of computer science is now so rapid that we, the readers, in creasingly receive technology news about new solutions and applications which very often straddle the border between the real and the virtual worlds. Computer science is also the area in which cognitive science is witnessing a renaissance, because its combination with technical sciences has given birth to a broad scientific [...] 

Contents
Beginnings of cognitive science. - Fundamentals of cognitive informatics. - Cognitive information systems. - Intelligent cognitive data analysis systems of the UBMIS type as an example of a cognitive categorisation systems. - UBIAS – intelligent cognitive systems for visual data analysis. - E-UBIAS – cognitive systems for image and biometric data analysis. - Cognitive systems and artificial brains. - Summary. 

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

Target groups
Research 

Type of publication
Monograph 

Usually dispatched within 3 to 5 business days 


79,95 € 
ISBN 978-3-642-25245-7 

Advances in Collective Intelligence 2011

Collective intelligence has become an attractive subject of interest for both academia and industry. More and more conferences and workshops discuss the impact of the users’ motivation to participate in the value creation process, the enabling role of leading-edge information and communication technologies and the need for better algorithms to deal with the growing amount of shared data. There are many interesting and challenging topics that need to be researched and discussed with respect to knowledge creation, creativity and innovation processes carried forward in the emerging communities of practice. COLLIN is on the path to become the flagship conference in the areas of collective intelligence and ICT-enabled social networking. We were delighted to again receive contributions from different parts of the world including Australia, Europe, Asia, and the United States. Encouraged by the positive response, we plan COLLIN 2012 to be held next year end of August at FernUniversität in Hagen. In order to [...] 

Features
Collective intelligence has become an attractive subject of interest for both academia and industry. More and more conferences and workshops discuss the impact of the users’ motivation to participate in the value creation process, the enabling role of leading-edge information and communication technologies and the need for better algorithms to deal with the growing amount of shared data. There are many [...] 

Contents
From the content: Enough Questions for Everybody. - Understanding Collective Intelligence. - Predicting Asset Value Through Twitter Buzz. - Adding Value with Collective Intelligence – A Reference Framework for Business Models for User-generated Content. - Collective Intelligence Model: How to Describe Collective Intelligence. - The participatory roles play simulation in a social and collective learning context. - A Complex Network Analysis of the Weighted Graph of the Web2.0 Service Network. 

Fields of interest
Computational Intelligence; Business Information Systems; e-commerce / e-business 

Target groups
Research 

Type of publication
Proceedings 

Usually dispatched within 3 to 5 business days 


139,95 € 
ISBN 978-3-642-25320-1 

Advances in Computational Environment Science


2012 International Conference on Environment Science and 2012 International Conference on Computer Science (ICES 2012/ICCS 2012) will be held in Australia, Melbourne, 15-16 March, 2012. Volume 1 contains some new results in computational environment science. There are 47 papers were selected as the regular paper in this volume. It contains the latest developments and reflects the experience of many researchers working in different environments (universities, research centers or even industries), publishing new theories and solving new technological problems on computational environment science. The purpose of volume 1 is interconnection of diverse scientific fields, the cultivation of every possible scientific collaboration, the exchange of views and the promotion of new research targets as well as the further dissemination, the dispersion, the diffusion of the environment science, including but not limited to Ecology, Physics, Chemistry, Biology, Soil Science, Geology, Atmospheric Science and [...] 

Features
2012 International Conference on Environment Science and 2012 International Conference on Computer Science (ICES 2012/ICCS 2012) will be held in Australia, Melbourne, 15-16 March, 2012. Volume 1 contains some new results in computational environment science. There are 47 papers were selected as the regular paper in this volume. It contains the latest developments and reflects the experience of many [...] 

Contents
From the content: A Case Study of Karstic Collapse Columns Delimitation in Coal Mine by GIS Spatial Analysis. - Development Trend of the Coal Bed Exploration Type Division. - Water Abundance Forecast Study of Sandstone Aquifers in the No.1 Coal Seam’s Roof in the Second Section of Jinyang Coal Mine. - Field observations of seabed scour around a submarine pipeline on cohesive bed. - Test the Effectiveness of China Securities Regulatory Commission Approach to Regulate China’s Stock Markets. - Research and Development of Poyang Lake Hydrodynamic Modeling System Based on MapWinGIS. - Extraction of [...] 

Fields of interest
Computational Intelligence; Earth Sciences (general); Math. Appl. in Environmental Science 

Target groups
Research 

Type of publication
Proceedings 

Usually dispatched within 3 to 5 business days 


189,95 € 
ISBN 978-3-642-27956-0
Advances in Computer Science and Education

CSE2011 is an integrated conference concentration its focus on computer science and education. In the proceeding, you can learn much more knowledge about computer science and education of researchers from all around the world. The main role of the proceeding is to be used as an exchange pillar for researchers who are working in the mentioned fields. In order to meet the high quality of Springer, AISC series, the organization committee has made their efforts to do the following things. Firstly, poor quality paper has been refused after reviewing course by anonymous referee experts. Secondly, periodically review meetings have been held around the reviewers about five times for exchanging reviewing suggestions. Finally, the conference organizers had several preliminary sessions before the conference. Through efforts of different people and departments, the conference will be successful and fruitful.

Features
CSE2011 is an integrated conference concentration its focus on computer science and education. In the proceeding, you can learn much more knowledge about computer science and education of researchers from all around the world. The main role of the proceeding is to be used as an exchange pillar for researchers who are working in the mentioned fields. In order to meet the high quality of Springer, AISC series. [...] Content
Computational Intelligence; Artificial Intelligence (incl. Robotics); Computing Methodologies

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


249,00 €
ISBN 978-3-642-27944-7

Advances in Computer Science and Engineering

This book includes the proceedings of the second International Conference on Advances in Computer Science and Engineering (CES 2012), which was held during January 13-14, 2012 in Sanya, China. The papers in these proceedings of CES 2012 focus on the researchers' advanced works in their fields of Computer Science and Engineering mainly organized in four topics, (1) Software Engineering, (2) Intelligent Computing, (3) Computer Networks, and (4) Artificial Intelligence Software.

Features
This book includes the proceedings of the second International Conference on Advances in Computer Science and Engineering (CES 2012), which was held during January 13-14, 2012 in Sanya, China. The papers in these proceedings of CES 2012 focus on the researchers’ advanced works in their fields of Computer Science and Engineering mainly organized in four topics, (1) Software Engineering, (2) Intelligent Computing, [...] Contents
From the content: An Exploration on the Cultivating Mechanism for Economics and Management Innovative Talents. - Current Situations and Suggestions about Bilingual Education in Chinese High Education. - Training Innovation Ability of Students in Practical Teaching of Regional Planning. - Simulation System of Examination Score Analysis Based on an Improved Apriori Algorithm. - Practice of Flexible Talents Training Mode “2+6.5+0.5” for Surveying and Mapping Major for Higher Vocational Education. - The Construction of Entrepreneurial Practice Platform System for College Students. - Construction [...] Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Computing Methodologies

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


299,00 €
ISBN 978-3-642-27947-8

Advances in Control and Communication

With success of ICEEE 2010 in Wuhan, China, and December 4 to 5, 2010, the second International Conference of Electrical and Electronics Engineering (ICEEE 2011) will be held in Macau, China, and December 1 to 2, 2011. ICEEE is an annual conference to call together researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Electrical and Electronics Engineering along with Computer Science and Technology, Communication Technology, Artificial Intelligence, Information Technology, etc. This year ICEEE is sponsored by International Industrial Electronics Center, Hong Kong. And based on the deserved reputation, more than 750 papers have been submitted to ICEEE 2011, from which 92 high quality original papers have been selected for the conference presentation and inclusion in the “Future Information Technology and Computer Engineering” book based on the referees’ comments from peer-refereed. We expect [...] Features
With success of ICEEE 2010 in Wuhan, China, and December 4 to 5, 2010, the second International Conference of Electrical and Electronics Engineering (ICEEE 2011) will be held in Macau, China, and December 1 to 2, 2011. ICEEE is an annual conference to call together researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and [...] Content
Electrical Engineering; Communications Engineering, Networks; Control

Target groups
Professional/practitioner

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


169,95 €
ISBN 978-3-642-26006-3
Advances in Electronic Engineering, Communication and Management
Vol.1
Proceedings of the 2011 International Conference on Electronic Engineering, Communication and Management (EECM 2011), held on December 24-25, 2011, Beijing, China

This volume presents the main results of the 2011 International Conference on Electronic Engineering, Communication and Management (EECM2011) held December 24-25, 2011, Beijing China. The EECM2011 is an integrated conference providing a valuable opportunity for researchers, scholars and scientists to exchange their ideas face to face together. The main focus of the EECM 2011 and the present two volumes “Advances in Electronic Engineering, Communication and Management” is on Power Engineering, Electrical engineering applications, Electrical machines, as well as Communication and Information Systems Engineering.

Contents
From the content: Depth Distributions of Some Linear Codes. - Design of Dual Phase Signals Generator Based on AD9833. - The design of temperature and humidity control system based on fuzzy control in multi incubators. - Construction Data Mining Information Management System based on FCA and Ontology. - The apply of the adjustable modifying factor fuzzy-PID control in constant pressure water supply system. - A On-site Monitoring system of Reservoir Sediment for Three Gorges. - Research on the algorithm of management clustering for wireless sensor network. - Research on the satellite networks.

Fields of interest
Electrical Engineering, Communications Engineering, Networks

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012, XX, 672 p. 277 illus. (Lecture Notes in Electrical Engineering, Vol. 139) Hardcover

199,95 €
ISBN 978-3-642-27286-8

Advances in Electronic Engineering, Communication and Management
Vol.2
Proceedings of the EECM 2011 International Conference on Electronic Engineering, Communication and Management, held December 24-25, 2011, Beijing, China

This volume presents the main results of the 2011 International Conference on Electronic Engineering, Communication and Management (EECM2011) held December 24-25, 2011, Beijing China. The EECM2011 is an integrated conference providing a valuable opportunity for researchers, scholars and scientists to exchange their ideas face to face together. The main focus of the EECM 2011 and the present two volumes “Advances in Electronic Engineering, Communication and Management” is on Power Engineering, Electrical engineering applications, Electrical machines, as well as Communication and Information Systems Engineering.

Contents

Fields of interest
Electrical Engineering, Communications Engineering, Networks

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


199,95 €
ISBN 978-3-642-27295-0
Advances in Information Technology and Industry Applications

With success of ICEEE 2010 in Wuhan, China, and December 4 to 5, 2010, the second International Conference of Electrical and Electronics Engineering (ICEEE 2011) will be held in Macau, China, and December 1 to 2, 2011. ICEEE is an annual conference to call together researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Electrical and Electronics Engineering along with Computer Science and Technology, Communication Technology, Artificial Intelligence, Information Technology, etc. This year ICEEE is sponsored by International Industrial Electronics Center, Hong Kong. And based on the deserved reputation, more than 750 papers have been submitted to ICEEE 2011, from which about 94 high quality original papers have been selected for the conference presentation and inclusion in the “Advanced Computer, Communication, and Control” book based on the referees’ comments from peer-refereed. All the papers are selected as the regular paper in this volume.

Features

With success of ICEEE 2010 in Wuhan, China, and December 4 to 5, 2010, the second International Conference of Electrical and Electronics Engineering (ICEEE 2011) will be held in Macau, China, and December 1 to 2, 2011. ICEEE is an annual conference to call together researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and [

Contents


Fields of interest

Electrical Engineering; Industrial and Production Engineering

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days


199,95 €

ISBN 978-3-642-26000-1

Advances in Intelligent Systems

Selected papers from 2012 International Conference on Control Systems (ICCS 2012), March 1-2, Hong Kong

2012 International Conference on Environment Science and 2012 International Conference on Computer Science (ICES 2012/ICCS 2012) will be held in Australia, Melbourne, 15-16 March, 2012. Volume 2 contains some topics in intelligent system. There are 51 papers were selected as the regular paper in this volume. It contains the latest developments and reflects the experience of many researchers working in different environments (universities, research centers or even industries), publishing new theories and solving new technological problems. The purpose of volume 2 is to interconnection of diverse scientific fields, the cultivation of every possible scientific collaboration, the exchange of views and the promotion of new research targets as well as the further dissemination, the diffusion of intelligent system, including but not limited to Intelligent System, Neural networks, Machine Learning, Multimedia System and Applications, Speech Processing, Image & video Signal Processing and Computer Aided Network.

Features

2012 International Conference on Environment Science and 2012 International Conference on Computer Science (ICES 2012/ICCS 2012) will be held in Australia, Melbourne, 15-16 March, 2012. Volume 2 contains some topics in intelligent system. There are 51 papers were selected as the regular paper in this volume. It contains the latest developments and reflects the experience of many researchers working in [

Contents


Fields of interest

Computational Intelligence; Control; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days


299,00 €

ISBN 978-3-642-27868-6

Advances in Reasoning-Based Image Processing Intelligent Systems

Conventional and Intelligent Paradigms

The book puts special stress on the contemporary techniques for reasoning-based image processing and analysis: learning based image representation and advanced video coding; intelligent image processing and analysis in medical vision systems; similarity learning models for image reconstruction; visual perception for mobile robot motion control, simulation of human brain activity in the analysis of video sequences; shape-based invariant features extraction; essential of paraconsistent neural networks, creativity and intelligent representation in computational systems. The book comprises 14 chapters. Each chapter is a small monograph, representing resent investigations of authors in the area. The topics of the chapters cover wide scientific and application areas and complement each-other very well. The chapters' content is based on fundamental theoretical presentations, followed by experimental results and comparison with similar techniques. The size of the chapters is well-ballanced which permits a[

Features

The book puts special stress on the contemporary techniques for reasoning-based image processing and analysis: learning based image representation and advanced video coding; intelligent image processing and analysis in medical vision systems; similarity learning models for image reconstruction; visual perception for mobile robot motion control, simulation of human brain activity in the analysis of video [

Contents


Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


129,95 €

ISBN 978-3-642-24692-0
Affective Computing and Intelligent Interaction

2012 International Conference on Affective Computing and Intelligent Interaction (ICACII 2012) was the most comprehensive conference focused on the various aspects of advances in Affective Computing and Intelligent Interaction. The conference provided a rare opportunity to bring together worldwide academic researchers and practitioners for exchanging the latest developments and applications in this field such as Intelligent Computing, Affective Computing, Machine Learning, Business Intelligence and HCI. This volume is a collection of 119 papers selected from 410 submissions from universities and industries all over the world, based on their quality and relevancy to the conference. All of the papers have been peer-reviewed by selected experts.

Features
2012 International Conference on Affective Computing and Intelligent Interaction (ICACII 2012) was the most comprehensive conference focused on the various aspects of advances in Affective Computing and Intelligent Interaction. The conference provided a rare opportunity to bring together worldwide academic researchers and practitioners for exchanging the latest developments and applications in this field.

Contents
From the content: Comparison and Evaluation on Performance of Customer Collaboration Innovation Implementation - A Hybrid Design and Implementation of Socket Directly and WebBrowser Online Email Address Verifier - Artificial Emotion Elicitor Based on Sequential Check Theory - Causality and Reasons of Agricultural Production and Agricultural Logistics Practitioners in China - The Research on Modes and Application of Inventory Financing - Technology Roadmapping Method Combined Requirements-pull with Technology-push Analysis - Multi-Sensor Augmented Reality Tracking Based on Robot Hand - Eyel...

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


299,00 €
ISBN 978-3-642-27865-5

Alternative Energy Sources

Alternative Energy Sources is designed to give the reader, a clear view of the role each form of alternative energy may play in supplying the energy needs of the human society in the near future (20-50 years). The two first chapters on "energy demand and supply" and "environmental effects," set the tone as to why alternative energy is essential for the future. The third chapter gives the laws of energy conversion processes, as well as the limitations of converting one energy form to another. The section on exergy gives a quantitative background on the capability/potential of each energy source to produce power. The fourth, fifth and sixth chapters are expositions of fusion and fusion nuclear energy, the power plants that may produce power from these sources and the issues that will frame the public debate on nuclear energy. The following five chapters include descriptions of the most common renewable energy sources (wind, solar, geothermal, biomass, hydroelectric) some of the less common sources.[]

Features
Alternative Energy Sources is designed to give the reader, a clear view of the role each form of alternative energy may play in supplying the energy needs of the human society in the near and intermediate future (20-50 years). The two first chapters on energy demand and supply and environmental effects, set the tone as to why the widespread use of alternative energy is.

Contents

Fields of interest
Renewable and Green Energy; Renewable and Green Energy; Sustainable Development; Energy Technology

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012, XVII, 459 p. 138 Illus. (Green Energy and Technology) Hardcover

69,95 €
ISBN 978-3-642-20950-9

Ambient Assisted Living

5. AAL-Kongress 2011 Berlin, Germany, January 24-25, 2012

In this book, leading authors in the field discuss development of Ambient Assisted Living. The contributions have been chosen and invited at the 5th AAL congress, Berlin. It presents new technological developments which support the autonomy and independence of individuals with special needs. As the technological innovation raises also social issues, the book addresses micro and macro economical aspects of.

Contents

Fields of interest
Biomedical Engineering; R & D / Technology Policy; Aging; Geriatrics / Gerontology

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XII, 358 p. 137 Illus., 26 in color. (Advanced Technologies and Societal Change) Hardcover

99,95 €
ISBN 978-3-642-27490-9
Analytic Methods of Sound Field Synthesis

This book puts the focus on serving human listeners in the sound field synthesis although the approach can be also exploited in other applications such as underwater acoustics or ultrasonics. The author derives a fundamental formulation based on standard integral equations and the single-layer potential approach is identified as a useful tool in order to derive a general solution. He also proposes extensions to the single-layer potential approach which allow for a derivation of explicit solutions for circular, planar, and linear distributions of secondary sources. Based on above described formulation it is shown that the two established analytical approaches of Wave Field Synthesis andNear-field Compensated Higher Order Ambisonics constitute specific solutions to the general problem which are covered by the single-layer potential solution and its extensions.

Features
This book treats the topic of sound field synthesis with a focus on serving human listeners through the approach can be also exploited in other areas such as underwater acoustics or ultrasonics. The author derives a fundamental formulation based on standard integral equations and the single-layer potential approach is identified as a useful tool in order to derive a general solution. He also proposes extensions [...]
Automatic Calibration and Reconstruction for Active Vision Systems

In this book, the design of two new planar patterns for camera calibration of intrinsic parameters is addressed and a line-based method for distortion correction is suggested. The dynamic calibration of structured light systems, which consist of a camera and a projector is also treated. Also, the 3D Euclidean reconstruction by using the image-to-world transformation is investigated. Lastly, linear calibration algorithms for the catadioptric camera are considered, and the homographic matrix and fundamental matrix are extensively studied. In these methods, analytic solutions are provided for the computational efficiency and redundancy in the data can be easily incorporated to improve reliability of the estimations. This volume will therefore prove valuable and practical tool for researchers and practitioners working in image processing and computer vision and related subjects.

Features
In this book, the design of two new planar patterns for camera calibration of intrinsic parameters is addressed and a line-based method for distortion correction is suggested. The dynamic calibration of structured light systems, which consist of a camera and a projector is also treated. Also, the 3D Euclidean reconstruction by using the image-to-world transformation is investigated. Lastly, linear calibration [...]
Commercial-Industrial Cleaning, by Pressure-Washing, Hydro-Blasting and UHP-Jetting

The Business Operating Model and How-To Manual for 450 Specific Applications

Commercial-Industrial Cleaning, by Pressure-Washing, Hydro-Blasting and UHP-Jetting is the first proprietary manual for cleaning and rehabilitation through pressure-washing, hydro-blasting and ultra high pressure water jetting (UHP). It examines the cleaning, restoration and rehabilitation of statuary and historical structures; manufacturing hardware; and application technologies for residential, commercial and industrial areas, structures and buildings.

Commercial-Industrial Cleaning, by Pressure-Washing, Hydro-Blasting and UHP-Jetting contains over 450 applications from agricultural, marine, municipal, food processing, paper-pulp, pharmaceutical and cosmetic, industrial and power generating maintenance areas. It includes gear lists to help readers easily identify the appropriate tooling and equipment for each specific application and industry. Commercial-Industrial Cleaning, by Pressure-Washing, Hydro-Blasting and UHP-Jetting supplies readers with the tools to create a successful business model.[...]

Features

Commercial-Industrial Cleaning, by Pressure-Washing, Hydro-Blasting and UHP-Jetting is the first proprietary manual for cleaning and rehabilitation through pressure-washing, hydro-blasting and ultra high pressure water jetting (UHP). It examines the cleaning, restoration and rehabilitation of statuary and historical structures; manufacturing hardware; and application technologies for [...]
Computation and Asymptotics

This book addresses the task of computation from the standpoint of asymptotic analysis and multiple scales that may be inherent in the system dynamics being studied. This is in contrast to the usual methods of numerical analysis and computation. The technical literature is replete with numerical methods such as Runge-Kutta approach and its variations, finite element methods, and so on. However, not much attention has been given to asymptotic methods for computation, although such approaches have been widely applied with great success in the analysis of dynamic systems. The presence of different scales in a dynamic phenomenon enable us to make judicious use of them in developing computational approaches which are highly efficient. Many such applications have been developed in such areas as astrodynamics, fluid mechanics and so on. This book presents a novel approach to make use of the different time constants inherent in the system to develop rapid computational methods. First, the fundamental[...]

Features

This book addresses the task of computation from the standpoint of asymptotic analysis and multiple scales that may be inherent in the system dynamics being studied. This is in contrast to the usual methods of numerical analysis and computation. The technical literature is replete with numerical methods such as Runge-Kutta approach and its variations, finite element methods, and so on. However, not much[...]

Contents


Fields of interest

Theoretical and Applied Mechanics; Computational Mathematics and Numerical Analysis; Aerospace Technology and Astronautics

Target groups

Research

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012. XV, 120 p. 37 illus. (SpringerBriefs in Computational Mechanics) Softcover

49,95 €

ISBN 978-3-642-25748-3

Computational Intelligence Paradigms in Advanced Pattern Classification

This monograph presents selected areas of application of pattern recognition and classification approaches including handwriting recognition, medical image analysis and interpretation, development of cognitive systems for image computer understanding, moving object detection, advanced image filtration and intelligent multi-object labelling and classification. It is directed to the scientists, application engineers, professors, professors and students will find this book useful.

Features

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Contents

Recent Advances in Pattern Classification.- Neural Networks for Handwriting Recognition.- Moving object detection from mobile platforms using stereo data registration.- Pattern Classifications in Cognitive Informatics.- Optimal Differential Filter on Hexagonal Lattice.- Graph image language techniques supporting advanced classification and cognitive interpretation of CT coronary vessel visualizations.- A graph matching approach to symmetry detection and analysis.- Pattern classification methods for analysis and visualization of brain perfusion CT maps.- Inference of co-occurring classes[...]

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics); Pattern Recognition

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 200 p. 92 illus., 70 in color. (Studies in Computational Intelligence, Vol. 386) Hardcover

99,95 €

ISBN 978-3-642-24048-5

Computational Intelligence for Privacy and Security

The book is a collection of invited papers on Computational Intelligence for Privacy and Security. The majority of the chapters are extended versions of works presented at the special session on Computational Intelligence for Privacy and Security of the International Joint Conference on Neural Networks (IJCNN-2010) held July 2010 in Barcelona, Spain. The book is devoted to Computational Intelligence for Privacy and Security. It provides an overview of the most recent advances on the Computational Intelligence techniques being developed for Privacy and Security. The book will be of interest to researchers in industry and academics and to post-graduate students interested in the latest advances and developments in the field of Computational Intelligence for Privacy and Security.

Features

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Contents


Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 260 p. 69 illus., 36 in color. (Studies in Computational Intelligence, Vol. 394) Hardcover

99,95 €

ISBN 978-3-642-25236-5
Computational Viscoelasticity

This text is a guide how to solve problems in which viscoelasticity is present using existing commercial computational codes. The book gives information on codes’ structure and use, data preparation and output interpretation and verification. The first part of the book introduces the reader to the subject, and to provide the models, equations and notation to be used in the computational applications. The second part shows the most important Computational techniques: Finite elements formulation, Boundary elements formulation, and presents the solutions of Viscoelastic problems with Abaqus.

Features
This text is a guide how to solve problems in which viscoelasticity is present using existing commercial computational codes. The book gives information on codes’ structure and use, data preparation and output interpretation and verification. The first part of the book introduces the reader to the subject, and to provide the models, equations and notation to be used in the computational applications. The [...]
Constitutive Modelling in Geomechanics

Introduction

The purpose of this book is to bridge the gap between the traditional Geomechanics and Numerical Geotechnical Modelling with applications in science and practice. Geomechanics is rarely taught within the rigorous context of Continuum Mechanics and Thermodynamics, while when it comes to Numerical Modelling, commercially available finite element software violate the Laws of Thermodynamics. The book is introductory, by no means does it claim any completeness and state of the art in such a dynamically developing field as numerical and constitutive modelling of soils. The author gives basic understanding of conventional continuum mechanics approaches to constitutive modelling, which can serve as a foundation for exploring more.[…]

Features

The purpose of this book is to bridge the gap between the traditional Geomechanics and Numerical Geotechnical Modelling with applications in science and practice. Geomechanics is rarely taught within the rigorous context of Continuum Mechanics and Thermodynamics, while when it comes to Numerical Modelling, commercially available finite element software utilize constitutive relationships within the fields of control and information sciences - quickly, informally and at a high level. The type of material considered for publication includes: 1. Preliminary drafts of monographs and advanced textbooks 2. Lectures on a new field, or presenting a new angle of a classical field 3. Research reports 4. Reports of meetings, provided they are a) of exceptional […]

Contents


Fields of interest

Geotechnical Engineering; Foundations; Hydraulics; Continuum Mechanics and Mechanics of Materials; Geotechnical Engineering & Applied Earth Sciences; Characterization and Evaluation of Materials; Structural Materials

Target groups

Graduate

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 312 p. 100 illus. Hardcover

99,95 €

ISBN 978-3-642-27394-0

Control Systems with Saturating Inputs

Analysis Tools and Advanced Design

Saturation nonlinearities are ubiquitous in engineering systems: every physical actuator or sensor is subject to saturation owing to its maximum and minimum limits. Input saturation is an operating condition that is well known to the control community for its “side effects”, which cause conventional controllers to lose their closed-loop performance as well as control authority in stabilization. Therefore, the practical application of control theory cannot avoid taking into account saturation nonlinearities in actuators, explicitly dealing with constraints in control design.

Features

This series aims to report new developments in the fields of control and information sciences - quickly, informally and at a high level. The type of material considered for publication includes: 1. Preliminary drafts of monographs and advanced textbooks 2. Lectures on a new field, or presenting a new angle of a classical field 3. Research reports 4. Reports of meetings, provided they are a) of exceptional […]

Contents


Fields of interest

Control; Engineering Design; Industrial and Production Engineering

Target groups

Professional/practitioner

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 140 p. 33 illus., 3 in color. (Lecture Notes in Control and Information Sciences, Vol. 424) Softcover

79,95 €

ISBN 978-1-4471-2505-1

Control of Solar Energy Systems

Control of Solar Energy Systems details the main solar energy systems, problems involved with their control, and how control systems can help in increasing their efficiency. Thermal energy systems are explored in depth, as are photovoltaic generation and other solar energy applications such as solar furnaces and solar refrigeration systems. This second and updated edition of Advanced Control of Solar Plants includes new material on: solar towers and solar tracking; heliostat calibration, characterization and offset correction; solar radiation, estimation, prediction, and computation; and integrated control of solar plants. This new edition contains worked examples in the text as well as proposed exercises and simulation models and so will be of great use to the student and academic, as well as the industrial practitioner.

Features

Control of Solar Energy Systems details the main solar energy systems, problems involved with their control, and how control systems can help in increasing their efficiency. After a brief introduction to the fundamental concepts associated with the use of solar energy in both photovoltaic and thermal systems, specific issues related to control of solar systems are embarked upon. Thermal energy […]

Contents


Fields of interest

Control; Renewable and Green Energy; Energy Technology

Target groups

Professional/practitioner

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XXXII, 416 p. 232 illus., 114 in color. (Advances in Industrial Control) Hardcover

129,95 €

ISBN 978-0-85729-915-4
Customer-Driven Supply Chains
From Glass Pipelines to Open Innovation Networks

In recent years, the supply chain has become a key element to the survival and prosperity of organisations in different industry sectors. Organisations dealing in dynamic business environments demand supply chains that support the satisfaction of customer needs. The principles of lean thinking that once permeated standalone organisations have now been transferred to the supply chain, making imperative the development of innovative approaches to supply chain management. Customer-driven Supply Chains: Strategies for Lean and Agile Supply Chain Design reviews the concept of lean thinking and its relationship to other key initiatives associated with supply chain management. Detailed industrial case studies based on the authors’ experience illustrate the principles behind lean supply chains. Moreover, a series of diagrams are used to illustrate critical concepts and supply chain architectures. Special emphasis is placed on the importance of transferring lean principles from the organisational level to [...] 

Features
In recent years, the supply chain has become a key element to the survival and prosperity of organisations in different industry sectors. Organisations dealing in dynamic business environments demand supply chains that support the satisfaction of customer needs. The principles of lean thinking that once permeated standalone organisations have now been transferred to the supply chain, making imperative the [...] 

Contents

Fields of interest
Engineering Economics, Organization, Logistics, Marketing, Operating Procedures, Materials, Treatment; Manufacturing, Machines, Tools; Production / Logistics 

Target groups
Research 

Type of publication
Monograph

Usually dispatched within 3 to 5 business days 
2012. XIX, 195 p. 81 illus. (Decision Engineering) Hardcover 
99,95 € 
ISBN 978-1-84628-875-3 

Damage and Fracture of Composite Materials and Structures

This monograph presents recent research findings on fracture properties and behavior of the composites, and their damage and cracking process under both quasi-static and impact loading conditions. Theoretical treatment, experimental investigation and numerical simulation aspects of the mechanics of composites, including sandwich structures are included. 

Features
This monograph presents recent research findings on fracture properties and behavior of the composites, and their damage and cracking process under both quasi-static and impact loading conditions. Theoretical treatment, experimental investigation and numerical simulation aspects of the mechanics of composites, including sandwich structures are included. 

Contents

Fields of interest
Mechanics and Mechanics of Materials; Characterization and Evaluation of Materials; Computational Science and Engineering; Ceramics, Glass, Composites, Natural Materials 

Target groups
Research 

Type of publication
Monograph 

Usually dispatched within 3 to 5 business days 
90 € 
ISBN 978-3-642-23658-7 

Data Mining: Foundations and Intelligent Paradigms
Volume 3: Medical, Health, Social, Biological and other Applications

There are many invaluable books available on data mining theory and applications. However, in compiling a volume titled “DATA MINING: Foundations and Intelligent Paradigms: Volume 3: Medical, Health, Social, Biological and other Applications” we wish to introduce some of the latest developments to a broad audience of both specialists and non-specialists in this field. 

Features
Data mining is one of the most rapidly growing research areas in computer science and statistics. In Volume 3 of this three volume series, we have brought together contributions from some of the most prestigious researchers in applied data mining. Areas of application covered are diverse and include healthcare and finance. Each of the chapters is self contained. Statisticians, applied scientists/ engineers [...] 

Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Operation Research / Decision Theory 

Target groups
Research 

Type of publication
Monograph 

Usually dispatched within 3 to 5 business days 
129,95 € 
ISBN 978-3-642-23150-6
Decision Making in Complex Systems
The DeciMaS Agent-based Interdisciplinary Framework Approach

The study of complex systems attracts the attention of many researchers in diverse fields. Complex systems are characterized by a high number of entities and a high degree of interactions. One of the most important features is that they do not involve a central organizing authority, but the various elements that make up the systems are self-organized. Moreover, some complex systems possess an emergency priority: climate change and sustainable development, research studies, public health, ecosystem habitats, epidemiology, and medicine, among others. Unfortunately, a great number of today’s overlapping approaches fail to meet the needs of decision makers when managing complex domains. Indeed, the design of complex systems often requires the integration of a number of artificial intelligence tools and techniques. The problem can be viewed in terms of goals, states, and actions, choosing the best action to move the system toward its desired state or behavior. This is why agent-based approaches are used. [...] Features
The study of complex systems attracts the attention of many researchers in diverse fields. Complex systems are characterized by a high number of entities and a high degree of interactions. One of the most important features is that they do not involve a central organizing authority, but the various elements that make up the systems are self-organized. Moreover, some complex systems possess an emergency [...] Contents

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 184 p. 88 illus. Intelligent Systems Reference Library, Vol. 30 Hardcover
99,95 €
ISBN 978-3-642-25543-4

Design for Environment as a Tool for the Development of a Sustainable Supply Chain

Environmental Design is becoming an increasingly significant agenda for many manufacturing companies and yet there is no standard to their approaches, strategies or their levels of execution. Applying Design for Environment (DfE) methodologies to develop a more sustainable supply chain has formed procedures and techniques which allow designers to integrate these methods with environmental supply chain management. Design for Environment as a Tool for the Development of a Sustainable Supply Chain aims to define relevant target specifications for a product throughout its life cycle; from conception and design to the end of its operating life. Be considering this new approach to the supply chain, environmental responsiveness can work in tandem with sounds business management. The usual focus on suppliers, manufacturers and customers is expanded in Design for Environment as a Tool for the Development of a Sustainable Supply Chain to include stakeholders such as government bodies and recycling companies. [...] Features
Environmental Design is becoming an increasingly significant agenda for many manufacturing companies and yet there is no standard to their approaches, strategies or their levels of execution. Applying Design for Environment (DfE) methodologies to develop a more sustainable supply chain has formed procedures and techniques which allow designers to integrate these methods with environmental supply chain [...]

Contents

Fields of interest
Engineering Design; Engineering Economics, Organization, Logistics, Marketing; Production / Logistics; Sustainable Development

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

129,95 €

Dictionary of Production Engineering/Wörterbuch der Fertigungstechnik/Dictionnaire des Techniques de Production Mécanique Vol IV

Assembly/Montage/Assemble

Vol. IV of the dictionary deals with tasks of assembly in manufacturing, the methods and mechanisms of controlling them. Thus, the volume is interesting for both production engineers and managers. It covers pure technical terminology but also related subjects like organization and quality. Correspondingly, it also contains a broad range of terms and definitions. Band IV enthält Begriffe und Definitionen aus der Montageotechnik, zu den Methoden, zur Organisation und der Ablaufübersicht. Der Band wendet sich an Spezialisten in der Montageotechnik wie auch im Management, die internationalen fachlichen Austausch benötigen. Neben den spezifischen Fachausdrücken wurden wichtige Definitionen aufgenommen. Neben den rein technischen Begriffen werden auch organisatorische Themen wie Qualität und Verfügbarkeit einbezogen. Le Volume IV traite des procédés d’assemblage, des méthodes et techniques qu’ils ont intervenir. Ce Volume est d’intérêt tant pour les ingénieurs de production que les managers. Il couvre [...]

Features
General terms Allgemeine Begriffe Termes généraux Assembly systems Montagesysteme Systèmes d’assemblage Assembly process Montageprozess Techniques d’assemblage Assembly organization Montageorganisation Organisation de l’assemblage Assembly planning Montageplanung Planification de l’assemblage Assembly systems operation Montagebetrieb Operation des systèmes d’assemblage

Contents

Fields of interest
Industrial and Production Engineering; Manufacturing, Machines, Tools

Target groups
Professional/practitioner

Type of publication
Dictionary

Usually dispatched within 3 to 5 business days

2012. XIX, 520 p. 424 illus. Hardcover
229,00 €
ISBN 978-3-642-12006-0
Electromagnetic Fields and Waves in Fractional Dimensional Space

This book presents the concept of fractional dimensional space applied to the use of electromagnetic fields and waves. It provides the advantages in studying the behavior of electromagnetic fields and waves in fractal media. The book presents novel fractional space generalization of the differential electromagnetic equations is provided as well as a new form of vector differential operators is formulated in fractional space. Using these modified vector differential operators, the classical Maxwell's electromagnetic equations are worked out. The Laplace's, Poisson's and Helmholtz's equations in fractional space are derived by using modified vector differential operators.

Features

This book presents the concept of fractional dimensional space applied to the use of electromagnetic fields and waves. It demonstrates the advantages in studying the behavior of electromagnetic fields and waves in fractal media. The book presents novel fractional space generalization of the differential electromagnetic equations as well as a new form of vector differential operators in [...]

Contents

Differential Electromagnetic Equations in Fractional Space.- Potential for Static and Time-Varying Fields in Fractional Space.- Electromagnetic Wave Propagation in Fractional Space.- Electromagnetic Radiations from Sources in Fractional Space.

Fields of interest

Microwaves, RF and Optical Engineering; Classical Electrodynamics, Wave Phenomena; Mathematical Methods in Physics

Target groups

Research

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012. XVIII, 70 p. 14 illus. (SpringerBriefs in Applied Sciences and Technology) Softcover

49,95 €

ISBN 978-3-642-25357-7

Elektrische Maschinen

Grundlagen Magnetfelder, Wicklungen, Asynchronmaschinen, Synchronmaschinen, Elektronisch kommunierte Gleichstrommaschinen


Elektromechanische Energiewandler (Motoren, Generatoren, Aktuatoren) finden sich in vielfältigen Anwendungen. Da elektromechanische Energiewandler zunehmend Schlüsselkomponenten in komplexen Systemen mit hohen Zuverlässigkeits- und Energieeffizienzansprüchen sind, ist die Kenntnis ihrer Wirkungsweise für Hersteller und Nutzer bedeutsam. Das Buch beschreibt - ausgehend von den physikalischen Grundgesetzen - die [..]

Contents


Fields of interest

Energy Technology; Machinery and Machine Elements; Control, Robotics, Mechatronics

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2012. XII, 496 S. 252 Abb., 145 in Farbe. Hardcover

37,34 €

ISBN 978-3-642-24219-9

Elektrische und magnetische Felder

Eine praxisorientierte Einführung


Features

In diesem kompakten Lehrbuch werden die elektrischen und magnetischen Felder so dargestellt, dass sie auch dem mehr praxisorientierten Studenten zugänglich sind. Hervorzuheben sind die auf der Basis moderner numerischer Verfahren erstellten besonders anschaulichen Abbildungen sowie die zahlreichen durchgerechneten Beispiele. Die Autorin ist Spezialistin für Magnettechnik und lädt ihre große praktische [...] Features


Fields of interest

Electrical Engineering; Classical Electrodynamics, Wave Phenomena; Appl. Mathematics / Computational Methods of Engineering

Target groups

Upper undergraduate

Type of publication

German textbook

Online orders shipping within 2-3 days.

2012. XIV, 343 S. Hardcover

37,34 €

ISBN 978-3-642-24219-9
Emerging Technological Risk

Underpinning the Risk of Technology Innovation

Classes of socio-technical hazards allow a characterization of the risk in technology innovation and clarify the mechanisms underpinning emergent technological risk. Emerging Technological Risk provides an interdisciplinary account of risk in socio-technical systems including hazards which highlight: How technological risk crosses organizational boundaries. How technological trajectories and evolution develop from resolving tensions emerging between social aspects of organisations and technologies and how social behaviour shapes, and is shaped by, technology. Addressing an audience from a range of academic and professional backgrounds, Emerging Technological Risk is a key source for those who wish to benefit from a detail and methodical exposure to multiple perspectives on technological risk. By providing a synthesis of recent work on risk that captures the complex mechanisms that characterize the emergence of risk in technology innovation, Emerging Technological Risk [...]  

Features

Classes of socio-technical hazards allow a characterization of the risk in technology innovation and clarify the mechanisms underpinning emergent technological risk. Emerging Technological Risk provides an interdisciplinary account of risk in socio-technical systems including hazards which highlight: How technological risk crosses organizational boundaries. How [...]  

Contents


Fields of interest

Quality Control, Reliability, Safety and Risk; Technology Management; System Performance and Evaluation; Philosophy of Technology  

Target groups

Research  

Type of publication

Monograph  

Usually dispatched within 3 to 5 business days

2012, XXVI, 185 p. 19 illus., 11 in color. Hardcover  

99,95 €  

ISBN 978-1-4471-2142-8

Energy Management in Buildings Using Photovoltaics

Although fossil fuels remain the primary global energy source, developing and expanding economies are creating an ever-widening gap between supply and demand. Efficient energy management offers a cost-effective opportunity for both industrialized and developing nations to limit the enormous financial and environmental costs associated with burning fossil fuels. The implication of photovoltaic systems in particular presents the potential for clean and sustainable electrical energy to be generated from an unrestricted source. Energy Management in Buildings Using Photovoltaics demonstrates how adopting ‘best practices’ for energy management and harvesting can reduce the need to construct new generating facilities. Illustrated with figures, tables and photos, Energy Management in Buildings Using Photovoltaics provides an introduction and step by step instructions on designing and planning photovoltaic systems and energy policies for both residential and industrial buildings. With particular focus on [...]  

Features

Although fossil fuels remain the primary global energy source, developing and expanding economies are creating an ever-widening gap between supply and demand. Efficient energy management offers a cost-effective opportunity for both industrialized and developing nations to limit the enormous financial and environmental costs associated with burning fossil fuels. The implication of photovoltaic systems in [...]  

Fields of interest

Renewable and Green Energy; Facility Management; Industrial Pollution Prevention  

Target groups

Research  

Type of publication

Monograph  

Usually dispatched within 3 to 5 business days

2012. XIII, 130 p. 60 illus. (Green Energy and Technology) Hardcover  

99,95 €  

ISBN 978-1-4471-2382-8

Energy

Production, Conversion, Storage, Conservation, and Coupling

Understanding the sustainable use of energy in various processes is an integral part of engineering and scientific studies, which rely on a sound knowledge of energy systems. Whilst many institutions now offer degrees in energy-related programs, a comprehensive textbook, which introduces and explains sustainable energy systems and can be used across engineering and scientific fields, has been lacking. Energy; Production, Conversion, Storage, Conservation, and Coupling provides the reader with a practical understanding of these five main topic areas of energy including 130 examples and over 600 practice problems. Each chapter contains a range of supporting figures, tables, thermodynamic diagrams and charts, while the Appendix supplies the reader with all the necessary data including the steam tables. This new textbook presents a clear introduction of basic vocabulary, properties, forms, sources, and balances of energy before advancing to the main topic areas of: Energy production and conversion in [...]  

Features

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Fields of interest

Energy Technology; Sustainable Development; Engineering Thermodynamics, Heat and Mass Transfer; Energy (general)  

Target groups

Research  

Type of publication

Monograph  

Usually dispatched within 3 to 5 business days

2012. XIX, 507 p. 274 illus. With online files/update. (Green Energy and Technology) Hardcover  

199,95 €  

Environment-Friendly Machining

Environment-Friendly Machining provides an in-depth overview of environmentally-friendly machining processes, covering numerous different types of machining in order to identify which practice is the most environmentally sustainable. The book discusses three systems at length: machining with minimal cutting fluid, air-cooled machining and dry machining. Also covered is a way to conserve energy during machining processes, along with useful data and detailed descriptions for developing and utilizing the most efficient modern machining tools. Researchers and engineers looking for sustainable machining solutions will find Environment-Friendly Machining to be a useful volume.

Features
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Fields of interest
Manufacturing, Machines, Tools; Machinery and Machine Elements; Industrial Pollution Prevention

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012, XX, 100 p. 39 illus. (SpringerBriefs in Applied Sciences and Technology) Softcover

49,95 €

A.T. Zehnder, Cornell University, Ithaca, NY, USA

Fracture Mechanics

Fracture mechanics is a vast and growing field. This book develops the basic elements needed for both fracture research and engineering practice. The emphasis is on continuum mechanics models for energy flows and crack-tip stress- and deformation fields in elastic and plastic materials. In addition to a brief discussion of computational fracture methods, the text includes practical sections on fracture criteria, fracture toughness testing, and methods for measuring stress intensity factors and energy release rates. Class-tested at Cornell, this book is designed for students, researchers and practitioners interested in understanding and contributing to a diverse and vital field of knowledge.

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Fields of interest
Continuum Mechanics and Mechanics of Materials; Mechanics; Structural Materials; Computational Mathematics and Numerical Analysis; Quantum Field Theories, String Theory

Target groups
Graduate

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


99,95 €

A.T. Zehnder, Cornell University, Ithaca, NY, USA

Frontiers in Computer Education

This book is the proceedings of the 2011 International Conference on Frontiers in Computer Education (ICFCE 2011) in Sanya, China, December 1-2, 2011. The contributions can be useful for researchers, software engineers, and programmers, all interested in promoting the computer and education development. Topics covered are computing and communication technology, network management, wireless networks, telecommunication, Signal and Image Processing, Machine Learning, educational management, educational psychology, educational system, education engineering, education technology and training. The emphasis is on methods and calculi for computer science and education technology development, verification and verification tools support, experiences from doing developments, and the associated theoretical problems.

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Contents
From the content: Personalized recommendation system of third-party e-commerce.- Application of Multimedia Technology in Mechanical Engineering Material Teaching of Vocational College.- Design and Auto Machining of Friction Disc Casting Die Cavity Based on MasterCAM.- The expansibility research of college teachers, educational technology ability under information environment.- A Study on Improving E-learning in Higher Engineering Education.- Basic CAD/CAM Engineering Education through Multimedia and Network Aid.- Application of Multimedia in the PE instruction of Special Schools in Hebei[...]

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


349,00 €
ISBN 978-3-642-27551-7

S. Sambath, South China Normal University, Guangzhou, China; E. Zhu, South China Normal University, Guangzhou, China (Eds.)
Future Energy Grid

**IKT für den Weg in ein nachhaltig-wirtschaftliches Energiesystem**


**Features**
- ..

**Fields of interest**
Energy Technology; Computer Communication Networks; Renewable and Green Energy

**Target groups**
Popular/general

**Type of publication**
Monograph

**Online orders shipping within 2-3 days.**

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2012. Etwa 30 S. 2 Abb. in Farbe. (acatech BEZEICHNUNG POSITION, Vol. 10) Softcover
18,64 €
ISBN 978-3-642-27861-7

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**Future Energy Grid**

**Migrationspfade in das Internet der Energie**

Bis 2022 will Deutschland aus der Kernenergie aussteigen und zügig auf eine Energieversorgung auf der Grundlage erneuerbarer Energien wie Wind- oder Sonnenenergie umsteilen. Diese lassen sich in großem Umfang nur mithilfe von Informations- und Kommunikationstechnologien (IKT) in das Elektrizitätssystem integrieren. In einem sogenannten Smart Grid verschmelzen IKT und Energietechnik und sorgen für [...] 

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**Fields of interest**
Energy Technology; Computer Communication Networks; Renewable and Green Energy

**Target groups**
Professional/practitioner

**Type of publication**
Monograph

**Online orders shipping within 2-3 days.**

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2012. Etwa 350 S. 70 Abb. in Farbe. (acatech BERICHTET UND EMPFIEHLT) Softcover
46,68 €
ISBN 978-3-642-27863-1
Future Wireless Networks and Information Systems

Volume 1

This volume contains revised and extended research articles written by prominent researchers participating in ICFWI 2011 conference. The 2011 International Conference on Future Wireless Networks and Information Systems (ICFWI 2011) has been held on November 30 – December 1, 2011, Macao, China. Topics covered include Wireless Information Networks, Wireless Networking Technologies, Mobile Software and Services, intelligent computing, network management, power engineering, control engineering, Signal and Image Processing, Machine Learning, Control Systems and Applications. The book will offer the states of arts of tremendous advances in Wireless Networks and Information Systems and also serve as an excellent reference work for researchers and graduate students working on Wireless Networks and Information Systems.

Features

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GSN - The Goal Structuring Notation

A Structured Approach to Presenting Arguments

Goal Structuring Notation (GSN) is becoming increasingly popular; practitioners use it in the railway, air traffic management and nuclear industries, amongst others. Originally developed to present safety assurance arguments, GSN need not be restricted to safety assurances only; in principle, you can use it to present (and test) any argument.

Anyone wishing to support, or refute, a claim can use GSN. Written by an experienced practitioner, The Goal Structuring Notation is both for those who wish to prepare and present compelling arguments using the notation, and for those who wish to review such arguments critically and effectively. To emphasise the versatility of this approach, The Goal Structuring Notation presents examples and questions based on diverse subject areas including Business Management, Drama, Engineering, Politics and Astrobiology. Simple examples introduce each symbol of the notation before introducing more complex structures which illustrate how the symbols work together in practical.

Features

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Contents


Fields of interest

Engineering Economics, Organization, Logistics, Marketing, Management/Business for Professionals, Quality Control, Reliability, Safety and Risk.

Target groups

Professional/practitioner

Type of publication

Professional book

 Usually dispatched within 3 to 5 business days

2012. XIV, 192 p. 179 illus. Hardcover

129,95 €

ISBN 978-1-4471-2311-8

Green Communications and Networks

Proceedings of the International Conference on Green Communications and Networks (GCN 2011)

The objective of GCN 2011 is to facilitate an exchange of information on best practices for the latest research advances in the area of green communications and networks, which mainly includes the intelligent control, or efficient management, or optimal design of access network infrastructures, home networks, terminal equipment, and etc. Topics of interests include network design methodology, enabling technologies, network components and devices, applications, others and emerging new topics.

Features

Green Communications and Networks presents 95 papers chosen for publication from among 190 reviewed papers accepted for presentation to the International Conference on Green Communications and Networks (GCN 2011), held in Chongqing, China, July 15-17, 2011. GCN 2011 provided a venue for leading academic and industrial researchers to exchange their views, ideas and research results on innovative.

Contents


Fields of interest

Communications Engineering, Networks; Computer Communication Networks; Renewable and Green Energy

Target groups

Research

Type of publication

Proceedings

 Usually dispatched within 3 to 5 business days


349,00 €


Green Tribology

Biomimetics, Energy Conservation and Sustainability

Tribology is the study of friction, wear and lubrication. Recently, the concept of "green tribology" as "the science and technology of the tribological aspects of ecological balance and of environmental and biological impacts" was introduced. The field of green tribology includes tribological technology that mimics living nature (biomimetic surfaces) and thus is expected to be environmentally friendly, the control of friction and wear that is of importance for energy conservation and conversion, environmental aspects of lubrication and surface modification techniques, and tribological aspects of green applications such as wind-power turbines or solar panels.

Features

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Contents


Fields of interest

Renewable and Green Energy; Tribology, Corrosion and Coatings; Surface and Interface Science; Thin Films; Environmental Engineering / Biotechnology; Sustainable Development

Target groups

Graduate

Type of publication

Monograph

 Usually dispatched within 3 to 5 business days

2012. XIV, 632 p. 329 illus. (Green Energy and Technology) Hardcover

129,95 €

ISBN 978-3-642-23680-8
Handbook Timing Belts

Principles, Calculations, Applications

Timing belts offer a broad range of innovative drivetrain solutions; they allow low-backlash operation in robot systems, they are widely used in automated processes and industrial handling involving highly dynamic start-up loads, they are low-maintenance solutions for continuous operation applications, and they can guarantee exact positioning at high operating speeds. Based on his years of professional experience, the author has developed concise guidelines for the dimensioning of timing belt drives and presents proven examples from the fields of power transmission, transport and linear transfer technology. He offers definitive support for dealing with and compensating for adverse operating conditions and belt damage, as well as advice on drive optimization and guidelines for the design of drivetrain details and supporting systems. All market-standard timing belts are listed as brand neutral. Readers will discover an extensive bibliography with information on the various manufacturers and their...

Features
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Contents

Fields of interest
Machinery and Machine Elements; Robotics and Automation; Engineering Design; Automotive Engineering

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. XII, 269 p. 237 illus. Hardcover

99,95 €
ISBN 978-3-642-17754-5

Handbook of Climate Change Mitigation

There is a mounting consensus that human behavior is changing the global climate and its consequence could be catastrophic. Reducing the 24 billion metric tons of carbon dioxide emissions from stationary and mobile sources is a gigantic task involving both technological challenges and monumental financial and societal costs. The pursuit of sustainable energy resources, environment, and economy has become a complex issue of global scale that affects the daily life of every citizen of the world. The present mitigation activities range from energy conservation, carbon-neutral energy conversions, carbon advanced combustion process that produce no greenhouse gases and that enable carbon capture and sequestration, to other advanced technologies. From its causes and impacts to its solutions, the issues surrounding climate change involve multidisciplinary science and technology. This handbook will provide a single source of this information. The book will be divided into the following sections: Scientific...

Features
There is a mounting consensus that human behavior is changing the global climate and its consequence could be catastrophic. Reducing the 24 billion metric tons of carbon dioxide emissions from stationary and mobile sources is a gigantic task involving both technological challenges and monumental financial and societal costs. The pursuit of sustainable energy resources, environment, and economy has become a...

Contents

Fields of interest
Renewable and Green Energy; Climate Change; Industrial Chemistry / Chemical Engineering; Environmental Chemistry; Analytical Chemistry; Catalysis

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days

2012. XXVII, 2130 p. In 4 volumes, not available separately. Hardcover

799,00 €
Handbook of Climate Change Mitigation

There is a mounting consensus that human behavior is changing the global climate and its consequence could be catastrophic. Reducing the 24 billion metric tons of carbon dioxide emissions from stationary and mobile sources is a gigantic task involving both technological challenges and monumental financial and societal costs. The pursuit of sustainable energy resources, environment, and economy has become a complex issue of global scale that affects the daily life of every citizen of the world. The present mitigation activities range from energy conservation, carbon-neutral energy conversions, carbon advanced combustion process that produce no greenhouse gases and that enable carbon capture and sequestration, to other advanced technologies. From its causes and impacts to its solutions, the issues surrounding climate change involve multidisciplinary science and technology. This handbook will provide a single source of this information. The book will be divided into the following sections: Scientific [...] Features

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Contents


Fields of interest

Renewable and Green Energy; Climate Change; Industrial Chemistry / Chemical Engineering; Environmental Chemistry; Analytical Chemistry; Catalysis

Target groups

Research

Type of publication

Handbook

Online orders shipping within 2-3 days.

2012, XXVII, 2130 p. eReference. In 4 volumes, not available separately.

799,00 €
The Handbook of Visual Display Technology is a unique work offering a comprehensive description of the science, technology, economic and human interface factors associated with the displays industry. An invaluable compilation of information, the Handbook will serve as a single reference source with expert contributions from over 150 international display professionals and academic researchers. All classes of display device are covered including LCDs, reflective displays, flexible solutions and emissive devices such as OLEDs and plasma displays, with discussion of established principles, emergent technologies, and particular areas of application. The wide-ranging content also encompasses the fundamental science of light and vision, image manipulation, core materials and processing techniques, display driving and metrology.

Features
The Handbook of Visual Display Technology is a unique work offering a comprehensive description of the science, technology, economic and human interface factors associated with the displays industry. An invaluable compilation of information, the Handbook will serve as a single reference source with expert contributions from over 150 international display professionals and academic researchers. All classes [...]
Human-Computer Interaction: The Agency Perspective

Agent-centric theories, approaches and technologies are contributing to enrich interactions between users and computers. This book aims at highlighting the influence of the agency perspective in Human-Computer Interaction through a careful selection of research contributions. Split into five sections; Users as Agents, Agents and Accessibility, Agents and Interactions, Agent-centric Paradigms and Approaches, and Collective Agents, the book covers a wealth of novel, original and fully updated material, offering: To provide a coherent, in depth, and timely material on the agency perspective in HCI To offer an authoritative treatment of the subject matter presented by carefully selected authors To offer a balanced and broad coverage of the subject area, including human, organizational, social, as well as technological concerns To offer a hands-on experience by covering representative case studies and offering essential design guidelines. The book will appeal to a broad audience of researchers and practitioners.

Industrial Applications of Evolutionary Algorithms

"Industrial applications of evolutionary algorithms" is intended as a resource for both experienced users of evolutionary algorithms and researchers that are beginning to approach these fascinating optimization techniques. Experienced users will find interesting details of real-world problems, advice on solving issues related to fitness computation or modeling, and suggestions on how to set the appropriate parameters to reach optimal solutions. Beginners will find a thorough introduction to evolutionary computation, and a complete presentation of several classes of evolutionary algorithms exploited to solve different problems. Inside, scholars will find useful examples on how to fill the gap between purely theoretical examples and industrial problems. The collection of case studies presented is also extremely appealing for anyone interested in Evolutionary Computation, but without direct access to extensive technical literature on the subject. After the introduction, each chapter in the book presents a methodological framework for solving a particular problem.

Engineering 101

Type of publication
Research

Features
- Offers a comprehensive introduction to the Industrial Applications of Evolutionary Algorithms
- Provides valuable insights into the practical implementation of evolutionary algorithms in various fields
- Highlights the importance of understanding the underlying principles of evolutionary algorithms

Fields of interest
- Engineering Economics
- Organization / Planning
- Technology Management

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XVIII, 466 p. 120 illus., 70 in color. (Studies in Computational Intelligence, Vol. 396) Hardcover

129,95 €
ISBN 978-3-642-25690-5

Industrial Engineering: Innovative Networks

5th International Conference on Industrial Engineering and Industrial Management "CIO 2011", Cartagena, Spain, September 2011, Proceedings

The Spanish Conference of Industrial Engineering / Ingeniería de Organización Industrial (CIO) is an annual meeting promoted by Asociación para el Desarrollo de la Ingeniería de Organización/Industrial Engineers Association (ADINGOR). The aim of CIO is to establish a forum for the open and free exchange of ideas, opinions and academic experiences about research, technology transfer or successful business experiences in the field of Industrial Engineering. The Scientific Committee is composed by 68 international referees and we foresee the attendance of some 200 people from more than 15 countries and following the rotation of venue and organization between various Spanish universities, the 2011 Conference will be the fifteenth National Conference and the fifth International Conference in Cartagena. During three days the 2011 Conference will include the participation of European and other foreign countries researchers and practitioners that will presenting communications, reproduced in this volume.

Features
- Presents a comprehensive overview of the latest developments in industrial engineering and management
- Discusses current trends and future challenges in industrial engineering
- Provides insights into innovative networks and their impact on industry

Fields of interest
- Engineering Economics
- Organization / Planning
- Technology Management

Target groups
Research

Type of publication
Procedings

Usually dispatched within 3 to 5 business days

2012, XIV, 396 p. 86 illus., 31 in color. Hardcover

189,95 €
ISBN 978-1-4471-2320-0
Ingenieurpromotion - Stärken und Qualitätssicherung

Beiträge eines gemeinsamen Symposions von acatech, TU9, ARGE TU/TUH und 4ING

Im In- und Ausland genießt die Ingenieurpromotion an deutschen Hochschulen ein besonders hohes Ansehen: Sie qualifiziert für Leitungspositionen und beschleunigt zugleich den Wissenstransfer zwischen Wissenschaft und Wirtschaft. Dennoch gibt es an einigen Stellen Optimierungsbedarf, beispielsweise in der Auswahl und Betreuung von Promotionskandidat/inn/en, im Erwerb außerfachlicher Qualifikationen, beim immer noch zu geringen Frauenanteil sowie in der Internationalisierung der Ingenieurpromotion.


Features

Im In- und Ausland genießt die Ingenieurpromotion an deutschen Hochschulen ein besonders hohes Ansehen: Sie qualifiziert für Leitungspositionen und beschleunigt zugleich den Wissenstransfer zwischen Wissenschaft und Wirtschaft. Dennoch gibt es an einigen Stellen Optimierungsbedarf, beispielsweise in der Auswahl und Betreuung von Promotionskandidat/inn/en, im Erwerb außerfachlicher Qualifikationen, beim immer [...]
Intelligent Tools for Building a Scientific Information Platform

This book is a selection of results obtained within one year of research performed under SYNAT - a nation-wide scientific project aiming to create an infrastructure for scientific content storage and sharing for academia, education and open knowledge society in Poland. The selection refers to the research in artificial intelligence, knowledge discovery and data mining, information retrieval and natural language processing, addressing the problems of implementing intelligent tools for building a scientific information platform. The idea of this book is based on the very successful SYNAT Project Conference and the SYNAT Workshop accompanying the 19th International Symposium on Methodologies for Intelligent Systems (ISMIS 2011). The papers included in this book present an overview and insight into such topics as architecture of scientific information platforms, semantic clustering, ontology-based systems, as well as, multimedia data processing.

Features
This book is a selection of results obtained within one year of research performed under SYNAT - a nation-wide scientific project aiming to create an infrastructure for scientific content storage and sharing for academia, education and open knowledge society in Poland. The selection refers to the research in artificial intelligence, knowledge discovery and data mining, information retrieval and natural [...]

Contents

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 268 p. 64 illus., 19 in color. (Studies in Computational Intelligence, Vol. 390) Hardcover

99,95 €
ISBN 978-3-642-24808-5

Interdisciplinary Applications of Kinematics


Kinematics is an exciting area of computational mechanics which plays a central role in a great variety of fields and industrial applications. Apart from research in pure kinematics, the field offers challenging problems of practical relevance that need to be solved in an interdisciplinary manner in order for new technologies to develop. The present book collects a number of important contributions presented during the First Conference on Interdisciplinary Applications of Kinematics (IAK 2008) held in Lima, Peru. To share inspiration and non-standard solutions among the different applications, the conference brought together scientists from several research fields related to kinematics, such as for example, computational kinematics, multibody systems, industrial machines, robotics, biomechanics, mechatronics and chemistry. The conference focused on all aspects of kinematics, namely modeling, optimization, experimental validation, industrial applications, theoretical kinematic methods, and design.[...]

Features
Kinematics is an exciting area of computational mechanics which plays a central role in a great variety of fields and industrial applications. Apart from research in pure kinematics, the field offers challenging problems of practical relevance that need to be solved in an interdisciplinary manner in order for new technologies to develop. The present book collects a number of important contributions [...]

Contents

Fields of interest
Control, Robotics, Mechatronics; Computational Science and Engineering; Theoretical and Applied Mechanics

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


139,95 €
ISBN 978-94-007-2977-3

Interfacial Compatibility in Microelectronics

Moving Away from the Trial and Error Approach

Interfaces between dissimilar materials are met everywhere in microelectronics and microsystems. In order to ensure faultless operation of these highly sophisticated structures, it is mandatory to have fundamental understanding of materials and their interactions in the system. In this difficult task, the "traditional" method of trial and error is not feasible anymore; it takes too much time and repeated efforts. In Interfacial Compatibility in Microelectronics, an alternative approach is introduced. In this revised method four fundamental disciplines are combined: i) thermodynamics of materials ii) reaction kinetics iii) theory of microstructures and iv) stress and strain analysis. The advantages of the method are illustrated in Interfacial Compatibility in Microelectronics which includes: solutions to several common reliability issues in microsystem technology, methods to understand and predict failure mechanisms at interfaces between dissimilar materials and an approach to DFR based on deep[...]

Features
Interfaces between dissimilar materials are met everywhere in microelectronics and microsystems. In order to ensure faultless operation of these highly sophisticated structures, it is mandatory to have fundamental understanding of materials and their interactions in the system. In this difficult task, the "traditional" method of trial and error is not feasible anymore; it takes too much time and repeated [...]

Contents
Introduction: Away from trial and error methods.- Materials and interfaces in Microsystems.- Introduction to mechanics of materials.- Introduction to thermodynamic-kinetic method.- Interfacial adhesion in polymer systems.- Evolution of different types of interfacial structures.

Fields of interest
Nanotechnology and Microengineering; Surfaces and Interfaces, Thin Films; Optical and Electronic Materials

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. IX, 217 p. 128 illus., 15 in color. (Micosystems) Hardcover

99,95 €
ISBN 978-1-4471-2469-6
Knowledge Discovery and Data Mining

The volume includes a set of selected papers extended and revised from the 4th International conference on Knowledge Discovery and Data Mining, March 1-2, 2011, Macau, Chin. This Volume is to provide a forum for researchers, educators, engineers, and government officials involved in the general areas of knowledge discovery and data mining and learning to disseminate their latest research results and exchange views on the future research directions of these fields. 108 high-quality papers are included in the volume.

Contents
From the content: On the Analysis of Speciality Contents involved in the general areas of knowledge discovery and data mining and learning to disseminate their latest research [...]
Low-Power Wireless Sensor Networks

Protocols, Services and Applications

Wireless sensor network (WSN) is an ad-hoc network technology comprising even thousands of autonomic and self-organizing nodes that combine environmental sensing, data processing, and wireless networking. The applications for sensor networks range from home and industrial environments to military uses. Unlike the traditional computer networks, a WSN is application-oriented and deployed for a specific task. WSNs are data-centric, which means that messages are not sent to individual nodes but to geographical locations or regions based on the data content. A WSN node is typically battery powered and characterized by extremely small size and low cost. As a result, the processing power, memory, and energy resources of an individual sensor node are limited. However, the feasibility of a WSN lies on the collaboration between the nodes. A reference WSN node comprises a Micro-Controller Unit (MCU) having few Million Instructions Per Second (MIPS) processing speed, tens of kilobytes program memory, etc.

Features

Wireless sensor network (WSN) is an ad-hoc network technology comprising even thousands of autonomic and self-organizing nodes that combine environmental sensing, data processing, and wireless networking. The applications for sensor networks range from home and industrial environments to military uses. Unlike the traditional computer networks, a WSN is application-oriented and deployed for a specific task.

Contents


Fields of interest

Communications Engineering, Networks

Target groups

Professional/practitioner

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012, XII, 32 p. 32 illus. (SpringerBriefs in Electrical and Computer Engineering) Softcover

39,95 €
ISBN 978-1-4614-2172-6
Mechanical Design Optimization Using Advanced Optimization Techniques

Mechanical design includes an optimization process in which designers always consider objectives such as strength, deflection, weight, wear, corrosion, etc. depending on the requirements. However, design optimization for a complete mechanical assembly leads to a complicated objective function with a large number of design variables. It is a good practice to apply optimization techniques for individual components or intermediate assemblies than a complete assembly. Analytical or numerical methods for calculating the extreme values of a function may perform well in many practical cases, but may fail in more complex design situations.

In real design problems, the number of design parameters can be very large and their influence on the value to be optimized (the goal function) can be very complicated, having nonlinear character. In these complex cases, advanced optimization algorithms offer solutions to the problems, because they find a solution near to the global optimum within reasonable time and [...]
Multi Criteria Analysis in the Renewable Energy Industry

Decision makers in the Renewable Energy sector face an increasingly complex social, economic, technological, and environmental scenario in their decision process. Different groups of decision-makers become involved in the process, each group bringing along different criteria therefore, policy formulation for fossil fuel substitution by Renewable Energies must be addressed in a multi-criteria context. Multi Criteria Analysis in the Renewable Energy Industry is a direct response to the increasing interest in the Renewable Energy industry which can be seen as an important remedy to many environmental problems that the world faces today. The multiplicity of criteria and the increasingly complex social, economic, technological, and environmental scenario makes multi-criteria analysis a valuable tool in the decision-making process for fossil fuel substitution. The detailed chapters explore the use of the Multi-criteria decision-making methods and how they provide valuable assistance in reaching equitable [...]

Features

Decision makers in the Renewable Energy sector face an increasingly complex social, economic, technological, and environmental scenario in their decision process. Different groups of decision-makers become involved in the process, each group bringing along different criteria therefore, policy formulation for fossil fuel substitution by Renewable Energies must be addressed in a multi-criteria context. [...]
Nonlinear Dynamical Systems in Engineering

Some Approximate Approaches

This book presents and extends different known methods to solve different types of strong nonlinearities encountered by engineering systems. A better knowledge of the classical methods presented in the first part lead to a better choice of the so-called "base functions". These are absolutely necessary to obtain the auxiliary functions involved in the optimal approaches which are presented in the second part. Every chapter introduces a distinct approximate method applicable to nonlinear dynamical systems. Each approximate analytical approach is accompanied by representative examples related to nonlinear dynamical systems from to various fields of engineering.

Features
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### Parametric Analog Signal Amplification Applied to Nanoscale CMOS Technologies

This book is dedicated to the analysis of parametric amplification with special emphasis on the MOS discrete-time implementation. This implementation is demonstrated by the presentation of several circuits where the MOS parametric amplifier cell is used: small gain amplifier, comparator with embedded pre-amplification, discrete-time mixer/IIR-Filter, and analog-to-digital converter (ADC). Experimental results are shown to validate the overall design technique.

**Features**

This book is dedicated to the analysis of parametric amplification with special emphasis on the MOS discrete-time implementation. This implementation is demonstrated by the presentation of several circuits where the MOS parametric amplifier cell is used: small gain amplifier, comparator with embedded pre-amplification, discrete-time mixer/IIR-Filter, and analog-to-digital converter (ADC). Experimental [..]

**Contents**


**Fields of interest**

Circuits and Systems; Electronics and Microelectronics, Instrumentation; Signal, Image and Speech Processing

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. XXI, 183 p. 129 illus. Hardcover

99,95 €
ISBN 978-1-4614-1670-8

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### Patient-Specific Modeling in Tomorrow's Medicine

This book reviews the frontier of research and clinical applications of Patient Specific Modeling, and provides a state-of-the-art update as well as perspectives on future directions in this exciting field. The book is useful for medical physicists, biomedical engineers and other engineers who are interested in the science and technology aspects of Patient Specific Modeling, as well as for radiologists and other medical specialists who wish to be updated about the state of implementation.

**Features**

This book reviews the frontier of research and clinical applications of Patient Specific Modeling, and provides a state-of-the-art update as well as perspectives on future directions in this exciting field. The book is useful for medical physicists, biomedical engineers and other engineers who are interested in the science and technology aspects of Patient Specific Modeling, as well as for radiologists and [..]

**Contents**

Fundamental concepts.- Experimental methods.- Computational modeling.- Mechanobiology in cancer.

**Fields of interest**

Biomedical Engineering; Medical and Radiation Physics; Diagnostic Radiology; Biomaterials

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. IX, 532 p. 253 illus., 9 in color. (Studies in Mechanobiology, Tissue Engineering and Biomaterials, Vol. 09) Hardcover

99,95 €
ISBN 978-3-642-24617-3

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### Pervasive Mobile and Ambient Wireless Communications

COST Action 2100

Pervasive Mobile and Ambient Wireless Communications reports the findings of COST 2100, a project of the European intergovernmental COST framework addressing various topics currently emerging in mobile and wireless communications. Drawing on experience developed in this and earlier COST projects, the text represents the final outcome of collaborative work involving more than 500 researchers in 140 institutions and 30 countries (including outside Europe). The book’s subject matter includes: transmission techniques; signal processing; radio channel modeling and measurement; radio network issues; and recent paradigms including ultra-wideband, cooperative, vehicle-to-vehicle and body communications. The research reported comes from a variety of backgrounds: academic, equipment manufacturing and operational and the information contained in this book will bring the study reported to a wider audience from all those spheres of work. Pervasive Mobile and Ambient Wireless Communications will be of[..]

**Features**

Pervasive Mobile and Ambient Wireless Communications reports the findings of COST 2100, a project of the European intergovernmental COST framework addressing various topics currently emerging in mobile and wireless communications. Drawing on experience developed in this and earlier COST projects, the text represents the final outcome of collaborative work involving more than 500 researchers in 140 institutions [..]

**Contents**


**Fields of interest**

Communications Engineering, Networks; Microwaves, RF and Optical Engineering; Computer Communication Networks; Signal, Image and Speech Processing

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. XXXI, 677 p. 372 illus., 285 in color. (Signals and Communication Technology) Hardcover

169,95 €
Possibility Theory and the Risk

The book deals with some of the fundamental issues of risk assessment in grid computing environments. The book describes the development of a hybrid probabilistic and possibilistic model for assessing the success of a computing task in a grid environment.

Features
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Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Probability Theory and Stochastic Processes; Financial Economics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 128 p. 5 illus. (Studies in Fuzziness and Soft Computing, Vol. 274) Hardcover

99,95 €
ISBN 978-3-642-24739-2

Powered Flight

The Engineering of Aerospace Propulsion

Whilst most contemporary books in the aerospace propulsion field are dedicated primarily to gas turbine engines, there is often little or no coverage of other propulsion systems and devices such as propeller and helicopter rotors or detailed attention to rocket engines. By taking a wider viewpoint, Powered Flight - The Engineering of Aerospace Propulsion aims to provide a broader context, allowing observations and comparisons to be made across systems that are overlooked by focusing on a single aspect alone. The physics and history of aerospace propulsion are built on step-by-step, coupled with the development of an appreciation for the mathematics involved in the science and engineering of propulsion. Combining the author’s experience as a researcher, an industry professional and a lecturer in graduate and undergraduate aerospace engineering, Powered Flight - The Engineering of Aerospace Propulsion covers its subject matter both theoretically and with an awareness of the practicalities of the[...]

Features
Whilst most contemporary books in the aerospace propulsion field are dedicated primarily to gas turbine engines, there is often little or no coverage of other propulsion systems and devices such as propeller and helicopter rotors or detailed attention to rocket engines. By taking a wider viewpoint, Powered Flight - The Engineering of Aerospace Propulsion aims to provide a broader context, allowing[...]

Contents

Fields of interest
Aerospace Technology and Astronautics; Fluid- and Aerodynamics

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XLI, 519 p. 287 illus., 26 in color. With online files/update. Hardcover

89,95 €
Pro/MECHANICA® verstehen lernen
für Pro/ENGINEER Wildfire® 4.0 und Creo Elements/Pro 5.0
(Wildfire® 5.0)


Features

Contents

Fields of interest
Structural Mechanics; Computational Science and Engineering; Engineering Design; Machinery and Machine Elements; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Professional/practitioner

Type of publication
Professional book

Online orders shipping within 2-3 days.
**Recent Advances in Computer Science and Information Engineering**

**Volume 2**

CSIE 2011 is an international scientific Congress for distinguished scholars engaged in scientific, engineering and technological research, dedicated to build a platform for exploring and discussing the future of Computer Science and Information Engineering with existing and potential application scenarios. The congress has been held twice, in Los Angeles, USA for the first and in Changchun, China for the second time, each of which attracted a large number of researchers from all over the world. The congress turns out to develop a spirit of cooperation that leads to new friendship for addressing a wide variety of ongoing problems in this vibrant area of technology and fostering more collaboration over the world. The congress, CSIE 2011, received 2483 full paper and abstract submissions from 27 countries and regions over the world. Through a rigorous peer review process, all submissions were refereed based on their quality of content, level of innovation, significance, originality and legibility. 688 [...]  

**Features**

CSIE 2011 is an international scientific Congress for distinguished scholars engaged in scientific, engineering and technological research, dedicated to build a platform for exploring and discussing the future of Computer Science and Information Engineering with existing and potential application scenarios. The congress has been held twice, in Los Angeles, USA for the first and in Changchun, China for the [...]  

**Contents**

From the content: A Biologically-Inspired Network Engineering with existing and potential application engineering and technological research, dedicated to build a platform for exploring and discussing the future of Computer Science and Information Engineering with existing and potential application scenarios. The congress has been held twice, in Los Angeles, USA for the first and in Changchun, China for the [...]  

**Fields of interest**

Electrical Engineering; Computer Engineering  

**Target groups**

Research  

**Type of publication**

Monograph  

**Usually dispatched within 3 to 5 business days**


199,95 €  

ISBN 978-3-642-25788-9

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**Recent Advances in Computer Science and Information Engineering**

**Volume 5**

CSIE 2011 is an international scientific Congress for distinguished scholars engaged in scientific, engineering and technological research, dedicated to build a platform for exploring and discussing the future of Computer Science and Information Engineering with existing and potential application scenarios. The congress has been held twice, in Los Angeles, USA for the first and in Changchun, China for the second time, each of which attracted a large number of researchers from all over the world. The congress turns out to develop a spirit of cooperation that leads to new friendship for addressing a wide variety of ongoing problems in this vibrant area of technology and fostering more collaboration over the world. The congress, CSIE 2011, received 2483 full paper and abstract submissions from 27 countries and regions over the world. Through a rigorous peer review process, all submissions were refereed based on their quality of content, level of innovation, significance, originality and legibility. 688 [...]  

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**Contents**


**Fields of interest**

Electrical Engineering; Computer Engineering  

**Target groups**

Research  

**Type of publication**

Monograph  

**Usually dispatched within 3 to 5 business days**

2012, XX, 766 p. 464 illus. (Lecture Notes in Electrical Engineering, Vol. 128) Hardcover  

199,95 €  

ISBN 978-3-642-25791-9

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**Recommender Systems for the Social Web**

The recommendation of products, content and services cannot be considered newly born, although its widespread application is still in full swing. While its growing success in numerous sectors, the progress of the Social Web has revolutionized the architecture of participation and relationship in the Web, making it necessary to restate recommendation and reconciling it with Collaborative Tagging, as the popularization of authoring in the Web, and Social Networking, as the translation of personal relationships to the Web. Precisely, the convergence of recommendation with the above Social Web pillars is what motivates this book, which has collected contributions from well-known experts in the academy and the industry to provide a broader view of the problems that Social Recommenders might face with. If recommender systems have proven their key role in facilitating the user access to resources on the Web, when sharing resources has become social, it is natural for recommendation strategies in the [...]  

**Features**

The recommendation of products, content and services cannot be considered newly born, although its widespread application is still in full swing. While its growing success in numerous sectors, the progress of the Social Web has revolutionized the architecture of participation and relationship in the Web, making it necessary to restate recommendation and reconciling it with Collaborative [...]  

**Contents**


**Fields of interest**

Computational Intelligence; Artificial Intelligence (incl. Robotics)  

**Target groups**

Research  

**Type of publication**

Monograph  

**Usually dispatched within 3 to 5 business days**


99,95 €  

ISBN 978-3-642-25693-6
Self-Organizing Robots

It is man’s ongoing hope that a machine could somehow adapt to its environment by reorganizing itself. This is what the notion of self-organizing robots is based on. The theme of this book is to examine the feasibility of creating such robots within the limitations of current mechanical engineering. The topics comprise the following aspects of such a pursuit: the philosophy of design of self-organizing mechanical systems; self-organization in biological systems; the history of self-organizing mechanical systems; a case study of a self-assembling/self-repairing system as an autonomous distributed system; a self-organizing robot that can create its own shape and robotic motion; implementation and instrumentation of self-organizing robots; and the future of self-organizing robots. All topics are illustrated with many up-to-date examples, including those from the authors’ own work. The book does not require advanced knowledge of mathematics to be understood, and will be of great benefit to students in [...]

Contents

Fields of interest
Robotics and Automation; Artificial Intelligence (incl. Robotics); Mechanical Engineering; Systems Biology; Computer System Implementation; Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


79,95 €
ISBN 978-4-431-54054-0

Sensors and Microsystems

AISEM 2011 Proceedings

This book contains a selection of papers presented at the 16th AISEM (“Associazione Italiana Sensori e Microsistemi”) National Conference on Sensors and Microsystems, held in Rome 7-9 February 2011. The conference highlighted updated results from both theoretical and applied research in the field of sensors and Microsystems. This book presents material in an interdisciplinary approach, covering many aspects of the disciplines related to sensors and Microsystems, including physics, chemistry, materials science, biology and applications.

Features
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Contents

Fields of interest
Electronics and Microelectronics, Instrumentation; Circuits and Systems; Nanotechnology and Microengineering

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


99,95 €

Sliding-Mode Control of PEM Fuel Cells

Sliding mode Control of PEM Fuel Cells demonstrates the application of higher-order sliding-mode control to PEMFC dynamics showing the advantages of sliding modes. The book introduces the theory of fuel cells and sliding-mode control. It contextualises PEMFCs both in terms of their development and within the hydrogen economy and today’s energy production situation as a whole. It then discusses fuel-cell operation principles, the mathematical background of high-order sliding-mode control and to a feasibility study for the use of sliding modes in the control of an automotive fuel stack. Part II presents experimental results of sliding-mode control application to laboratory fuel cells and deals with subsystem-based modelling, detailed design, and observability and controllability. Simulation results are contrasted with empirical data and performance, robustness and implementation issues are treated in depth. Possibilities for future research are also laid out.

Features
Recent advances in catalysis technologies and new materials make fuel cells an economically appealing and clean energy source with massive market potential in portable devices, home power generation and the automotive industry. Among the more promising fuel-cell technologies are proton exchange membrane fuel cells (PEMFCs). Sliding-Mode Control of PEM Fuel Cells demonstrates the application of [...]

Contents

Fields of interest
Control; Renewable and Green Energy; Automotive Engineering

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XX, 177 p. 90 illus., 51 in color. (Advances in Industrial Control) Hardcover

99,95 €
ISBN 978-1-4471-2430-6
Smart Power Grids 2011

Electric power systems are experiencing significant changes at the worldwide scale in order to become cleaner, smarter, and more reliable. This edited book examines a wide range of topics related to these changes, which are primarily caused by the introduction of information technologies, renewable energy penetration, digitalized equipment, new operational strategies, and so forth. The emphasis will be put on the modeling and control of smart grid systems. The book addresses research topics such as high efficiency transformers, wind turbines and generators, fuel cells, or high speed turbines and generators.

Features
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Contents
I. Modeling of Smart Grids - Loads Impedance model, P and Q model, load forecasting.- High Efficiency transformers - PV Sources (Thermal and PV panels).- Wind Turbines.- Wind Generators.- High Speed Micro turbines.- High Speed Micro generators.- Fuel Cells.- DC/DC Converters.- Bidirectional DC-DC Converters.- Storage systems (Battery and Fly wheels).- AC/DC rectifiers.- DC/AC Inverters.- Multi Level Converters.- Bidirectional Converters.- II. Control of Smart Grid Systems.- Smart Meters.- Micro grids.- Control of DC/DC Converters.- Control of DC/AC inverters.- Load Frequency Control In...-]

Fields of interest
Power Electronics, Electrical Machines and Network; Renewable and Green Energy; Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 676 p. 431 illus., 128 in color. (Power Systems)

Software Engineering and Knowledge Engineering: Theory and Practice

Volume 1

The volume includes a set of selected papers extended and revised from the I2009 Pacific-Asia Conference on Knowledge Engineering and Software Engineering (KESE 2009) was held on December 19–20, 2009, Shenzhen, China. Volume 1 is to provide a forum for researchers, educators, engineers, and government officials involved in the general areas of Computer and Software Engineering to disseminate their latest research results and exchange views on the future research directions of these fields. 140 high-quality papers are included in the volume. Each paper has been peer-reviewed by at least 2 program committee members and selected by the volume editor Prof. Yaowen Wu. On behalf of this volume, we would like to express our sincere appreciation to all of authors and referees for their efforts reviewing the papers. Hoping you can find lots of profound research ideas and results on the related fields of Computer and Software Engineering.

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

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


299,00 €
ISBN 978-3-642-03717-7

Stochastic Global Optimization and Its Applications with Fuzzy Adaptive Simulated Annealing

Stochastic global optimization is a very important subject, that has applications in virtually all areas of science and technology. Therefore there is nothing more opportune than writing a book about a successful and mature algorithm that turned out to be a good tool in solving difficult problems. Here we present some techniques for solving several problems by means of Fuzzy Adaptive Simulated Annealing (Fuzzy ASA), a fuzzy-controlled version of ASA, and by ASA itself. ASA is a sophisticated global optimization algorithm that is based upon ideas of the simulated annealing paradigm, coded in the C programming language and developed to statistically find the best global fit of a nonlinear constrained, non-convex cost function over a multi-dimensional space. By presenting detailed examples of its application we want to stimulate the reader’s intuition and make the use of Fuzzy ASA (or regular ASA) easier for everyone wishing to use these tools to solve problems. We kept formal mathematical...]

Features
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Contents

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 208 p. 59 illus., 14 in color. (Intelligent Systems Reference Library, Vol. 35) Hardcover

99,95 €
ISBN 978-3-642-27478-7
Supercavitation

Advances and Perspectives A collection dedicated to the 70th jubilee of Yu.N. Savchenko

This collection is dedicated to the 70th jubilee of Yu. N. Savchenko, and presents experimental, theoretical, and numerical investigations written by an international group of well-known authors. The contributions solve very important problems of the high-speed hydrodynamics, such as supersonic motion in water, drag diminishing, dynamics and stability of supercavitating vehicles, water entry and hydrodynamic performances of hydrofoils, ventilated cavities after a disc and under the ship bottom. The book is written for researchers, scientists, engineers, and students interested in problems of hydromechanics.

Features

This collection is dedicated to the 70th jubilee of Yu. N. Savchenko, and presents experimental, theoretical, and numerical investigations written by an international group of well-known authors. The contributions solve very important problems of the high-speed hydrodynamics, such as supersonic motion in water, drag diminishing, dynamics and stability of supercavitating vehicles, water entry and hydrodynamic performance of [..]

Contents

Mathematical theory and numerical simulation of bubbly cavitating nozzle flows. - Controlled supercavitation formed by a ring type wing. - Supercavitation as the effective tool for water drag reduction. - Water entry of thin hydrofoils. - Hydrodynamic performance of 2-D shock-free supercavitation hydrofoils with a spoiler on the trailing edge. - Investigation of parameters of artificial cavity at closure on a cylindrical hull. - Two-dimensional theory of cavitation flows under the ship bottom. - Hydrodynamic characteristics of disk with a duct in supercavitation flow. - Gas flows within [..]

Fields of interest

Engineering Fluid Dynamics; Fluid- and Aerodynamics; Computational Mathematics and Numerical Analysis; Aerospace Technology and Astronautics

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


99.95 €

ISBN 978-3-642-23655-6

Technology for Education and Learning

This volume contains 108 papers presented at the international conference on Technology for Education and Learning (ICTET 2012), Macau, China, March 1-2, 2012, which is to bring together researchers working in many different areas of education and learning to foster international collaborations and exchange of new ideas. This volume can be divided into two sections on the basis of the classification of manuscripts considered. The first section deals with technology for education. The second section of this volume consists of technology for learning.

Features

This volume contains 108 papers presented at the international conference on Technology for Education and Learning (ICTET 2012), Macau, China, March 1-2, 2012, which is to bring together researchers working in many different areas of education and learning to foster international collaborations and exchange of new ideas. This volume can be divided into two sections on the basis of the [..]

Contents


Fields of interest

Computational Intelligence; Computers and Education

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days


299.00 €

ISBN 978-3-642-27710-8

The Common Information Model CIM

IEC 61968/61970 and 62325 - A practical introduction to the CIM

Within the Smart Grid, the combination of automation equipment, communication technology and IT is crucial. Interoperability of devices and systems can be seen as the key enabler of smart grids. Therefore, international initiatives have been started in order to identify interoperability core standards for Smart Grids. IEC 62357, the so-called Seamless Integration Architecture, is one of these very core standards, which has been identified by recent Smart Grid initiatives and roadmaps to be essential for building and managing intelligent power systems. The Seamless Integration Architecture provides an overview of the interoperability and relations between further standards from IEC TC 57 like the IEC 61970/61968: Common Information Model - CIM. CIM has proven to be a mature standard for interoperability and engineering; consequently, it is a cornerstone of the IEC Smart Grid Standardization Roadmap. This book provides an overview on how the CIM developed, in which international projects and roadmaps[..]

Features

Within the Smart Grid, the combination of automation equipment, communication technology and IT is crucial. Interoperability of devices and systems can be seen as the key enabler of smart grids. Therefore, international initiatives have been started in order to identify interoperability core standards for Smart Grids. IEC 62357, the so-called Seamless Integration Architecture, is one of these [..]

Contents

Basic technologies. - The IEC Common Information Model - Utilization of the CIM. - Examples of using the CIM. - Tool support. - Participation in the CIMug. - Perspective.

Fields of interest

Energy Technology; Energy Systems; Appl. Mathematics / Computational Methods of Engineering

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 244 p. 102 illus., 66 in color. (Power Systems, Vol.) Hardcover

99.95 €

ISBN 978-3-642-25214-3
The Newcom++ Vision Book
Perspectives of Research on Wireless Communications in Europe

The Book contains the Vision of the researchers of the European Network of Excellence NEWCOM++ (Network of Excellence on Wireless COMmunication) on the present and future status of Wireless Communication Networks. In its content, the community of NEWCOM++ researchers, shaped under the common ground of a mainly academic network of excellence, have distilled their scientific wisdom in a number of areas characterized by the common denominator of wireless communications, by identifying the medium-long term research tendencies/problems, describing the tools to face them and providing a relatively large number of references for the interested reader. The identified areas and the researchers involved in their redaction reflect the intersection of the major topics in wireless communications with those that are deeply investigated in NEWCOM++: they are preceded by an original description of the main trends in user/society needs and the degree of fulfilment that ongoing and future wireless communications [...] Features
The Book contains the Vision of the researchers of the European Network of Excellence NEWCOM++ (Network of Excellence on Wireless COMmunication) on the present and future status of Wireless Communication Networks. In its content, the community of NEWCOM++ researchers, shaped under the common ground of a mainly academic network of excellence, have distilled their scientific wisdom in a number of areas [...] Contents
Communications Engineering, Networks Target groups
Professional/practitioner Type of publication
Contributed volume

L.P. Yarin, Technion, Haifa, Israel

The Pi-Theorem
Applications to Fluid Mechanics and Heat and Mass Transfer

This volume presents applications of the Pi-Theorem to fluid mechanics and heat and mass transfer. The Pi-theorem yields a physical motivation behind many flow processes and therefore it constitutes a valuable tool for the intelligent planning of experiments in fluids. After a short introduction to the underlying differential equations and their treatments, the author presents many novel approaches how to use the Pi-theorem to understand fluid mechanical issues. The book is a great value to the fluid mechanics community, as it cuts across many subdisciplines of experimental fluid mechanics.

Features
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Fields of interest
Engineering Fluid Dynamics; Fluid- and Aerodynamics; Engineering Thermodynamics; Heat and Mass Transfer; Computational Mathematics and Numerical Analysis

Target groups
Research Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXV, 305 p. 68 illus. (Experimental Fluid Mechanics) Hardcover

99,95 €
ISBN 978-3-642-19564-8

G.F.M. de Souza, University of São Paulo, Brazil (Ed.)

Thermal Power Plant Performance Analysis

The analysis of the reliability and availability of power plants is frequently based on simple indexes that do not take into account the criticality of some failures used for availability analysis. This criticality should be evaluated based on concepts of reliability which consider the effect of a component failure on the performance of the entire plant. System reliability analysis tools provide a root-cause analysis leading to the improvement of the plant maintenance plan. Taking in view that the power plant performance can be evaluated not only based on thermodynamic related indexes, such as heat-rate, Thermal Power Plant Performance Analysis focuses on the presentation of reliability-based tools used to define performance of complex systems and introduces the basic concepts of reliability, maintainability and risk analysis aiming at their application as tools for power plant performance improvement, including: selection of critical equipment and components, definition of [...] Features
The analysis of the reliability and availability of power plants is frequently based on simple indexes that do not take into account the criticality of some failures used for availability analysis. This criticality should be evaluated based on concepts of reliability which consider the effect of a component failure on the performance of the entire plant. System reliability analysis tools provide a [...] Contents
Equipment and components, - definition of [...] Fields of interest
Energy Technology; Quality Control, Reliability, Safety and Risk; Engineering Thermodynamics, Heat and Mass Transfer; Organization / Planning; Facility Management; Energy Systems

Target groups
Research Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 287 p. 118 illus., 7 in color. (Springer Series in Reliability Engineering) Hardcover

129,95 €
ISBN 978-1-4471-2308-8

G.F.M. de Souza, University of São Paulo, Brazil (Ed.)
Waste to Energy
Opportunities and Challenges for Developing and Transition Economies

Solid waste management is currently a major issue worldwide with numerous areas reaching critical levels. Many developing countries and countries in transition still miss basic waste management infrastructure and awareness. It is here that many of the solid waste management problems and challenges are currently being faced. As such, waste-to-energy (WTE) consists of a proven and continuously developing spectrum and range of technologies in a number of (mostly) developed countries. However, it’s integration in developing countries and systems in transition is often faced with scepticism and a complex set of barriers which are quite unique and differ greatly from those where WTE has been validated and applied over the years. Waste-to-Energy: Opportunities and Challenges for Developing and Transition Economies will address this issue both theoretically and using concrete examples, including: - contributions from numerous scholars and practitioners in the field, - useful lessons and rules of thumb, [...] 

Features
Solid waste management is currently a major issue worldwide with numerous areas reaching critical levels. Many developing countries and countries in transition still miss basic waste management infrastructure and awareness. It is here that many of the solid waste management problems and challenges are currently being faced. As such, waste-to-energy (WTE) consists of a proven and continuously developing [...] 

Fields of interest
Renewable and Green Energy; Waste Management / Waste Technology; Sustainable Development; Energy Economics; Renewable and Green Energy

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 370 p. 114 illus., 28 in color. (Green Energy and Technology) Hardcover

129,95 €

Wind Energy Conversion Systems
Technology and Trends

Wind Energy Conversion System covers the technological progress of wind energy conversion systems, along with potential future trends. It includes recently developed wind energy conversion systems such as multi-converter operation of variable-speed wind generators, lightning protection schemes, voltage flicker mitigation and prediction schemes for advanced control of wind generators. Modeling and control strategies of variable speed wind generators are discussed, together with the frequency converter topologies suitable for grid integration. Wind Energy Conversion System also describes offshore farm technologies including multi-terminal topology and space-based wind observation schemes, as well as both AC and DC based wind farm topologies. The stability and reliability of wind farms are discussed, and grid integration issues are examined in the context of the most recent industry guidelines. Wind power smoothing, one of the big challenges for transmission system operators, is a particular focus. [...] 

Features
Wind Energy Conversion System covers the technological progress of wind energy conversion systems, along with potential future trends. It includes recently developed wind energy conversion systems such as multi-converter operation of variable-speed wind generators, lightning protection schemes, voltage flicker mitigation and prediction schemes for advanced control of wind generators. Modeling [...] 

Contents

Fields of interest
Renewable and Green Energy; Renewable and Green Energy; Control, Sustainable Development

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXVI, 525 p. 366 illus., 49 in color. (Green Energy and Technology) Hardcover

169,95 €

Zustandsregelung verteilt-parametrischer Systeme


Features

Contents

Fields of interest
Control, Systems Theory, Control, Statistical Physics, Dynamical Systems and Complexity

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. IX, 315 S. Hardcover

93,41 €
ISBN 978-3-642-19558-7
Zählverfahren und Lastannahme in der Betriebsfestigkeit

Betriebsfestigkeit bedeutet die sichere Bemessung von Bauteilen unter realistischen Umgebungsbe dingungen mit dem Ziel Leichtbau. Im Mittelpunkt steht die Schwingbeanspruchung. Bei der Bemessung wird die zu erwartende Beanspruchung (Belastung) mit der Beanspruchbarkeit (Festigkeit) verglichen, wobei die für den Anwendungsfall notwendige Sicherheit gewährleistet werden muss. Voraussetzung für die betriebsfeste Bemessung ist eine zuverlässige Lastannahme. Die Autoren stellen dar, wie die im Betrieb gemessenen Beanspruchungszeitfunktionen durch Zählverfahren in Kollektive oder Matrizen transformiert werden können. Ausführlich behandelt wird, welche Aspekte zu beachten sind, um eine zuverlässige Lastannahme für die Bemessung sicherzustellen. Dazu wird einmal der theoretische Hinter grund der Lebensdauerabschätzung von Bauteilen erläutert, zum anderen werden die […]

Features
Betriebsfestigkeit bedeutet die sichere Bemessung von Bauteilen unter realistischen Umgebungsbe dingungen mit dem Ziel Leichtbau. Im Mittelpunkt steht die Schwingbeanspruchung. Bei der Bemessung wird die zu erwartende Beanspruchung (Belastung) mit der Beanspruchbarkeit (Festigkeit) verglichen, wobei die für den Anwendungsfall notwendige Sicherheit […]

Contents

Fields of interest
Quality Control, Reliability, Safety and Risk; Appl. Mathematics / Computational Methods of Engineering; Mathematical Modeling and Industrial Mathematics

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012, XV, 212 S. 136 Abb., 5 in Farbe. Hardcover

74,72 €
ISBN 978-3-642-13163-9

Environment

N. Blum, University of Sussex, UK

Education, Community Engagement and Sustainable Development

Negotiating Environmental Knowledge in Monteverde, Costa Rica

A growing body of research has given critical attention to diverse theories and practices of environmental education, and its potential contribution to addressing pressing global issues such as sustainable development and climate change. While much of this work has focused on perspectives and practices in Europe and North America, this book explores environmental learning within formal education, in programmes by non-governmental organisations, and in public education spaces in Monteverde, Costa Rica. The discussion also highlights the need for more research to understand the broader social and economic interactions between such efforts and the communities in which they are located.

Features
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Contents

Fields of interest
Sustainable Development; International and Comparative Education; Educational Policy and Politics; Education (general); Anthropology

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XIII, 163 p. 8 Illus. in color. Hardcover

99,95 €
ISBN 978-94-007-2526-3

Fiber Reinforced Polymer (FRP) Composites for Infrastructure Applications

Negotiating Environmental Knowledge in Monteverde, Costa Rica

This book examines current issues of fiber reinforced polymer (FRP) composites in civil infrastructure. The contents of this book are divided into two parts. The first part engages topics related to durability and service life of FRP composites and how they contribute to sustainability. The second part highlights implementation and applications of the FRP composites with an emphasis on bridge structures. An introductory chapter provides an overview of FRP composites and its role in a sustainable built environment highlighting the issues of durability and service life followed by a current review of sustainability in infrastructure design.

Features
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Contents

Fields of interest
Sustainable Development; Building Materials; Civil Engineering

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


129,95 €
ISBN 978-94-007-2356-6
Global Change

Interviews with Leading Climate Scientists

Seven interviews with leading climate scientists cover both fundamental research (climate modeling, global warming, sea level change, melting of the ice caps, natural hazards) and impact assessment (adaption, mitigation, economic impacts and costs of climate change). Experts on different aspects of the topic explain their own field and give their opinion on general questions concerning climate change. The goal is to provide the reader with first-hand information on the current state of climate research.

Features

The book consists of interviews with leading climate scientists. Experts on different aspects of the topic explain their own field and give their opinion on general questions concerning climate change. The interviews cover both fundamental research (climate modeling, global warming, sea level change, melting of the ice caps, natural hazards) and impact assessment (adaption, mitigation, economic impacts and costs of climate change). Experts on different aspects of the topic explain their own field and give their opinion on general questions concerning climate change.

Contents

Understanding does not imply predictive power.- We always make models for something, not of something. - Time means are more predictable than the instantaneous state.- The large scale dynamics are reasonably well understood, un-certainty lies in the parametrization of small scale processes.- It is the poor and the marginalized that are hit hardest by climate change.- When deciding about long-term strategies, irreversibility is a key point.- The Montreal Agreement is a good example of how to deal with a global environmental problem.

Fields of interest

Climate Change; Meteorology / Climatology; Popular Science in Nature and Environment; Environmental Economics

Target groups

Popular/general

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012, VII, 53 p. 7 illus. in color. (SpringerBriefs in Earth System Sciences) Softcover

49,95 €
ISBN 978-3-642-23443-9

Global Risk-Based Management of Chemical Additives I

Production, Usage and Environmental Occurrence

Chemical additives are used to enhance the properties of many industrial products. Since their release into the environment is a potential risk for man and nature, their fate and behavior were investigated in the framework of the European Union-funded project RISKCYCLE. The results are presented in two volumes, Global Risk-Based Management of Chemical Additives I: Production, Usage and Environmental Occurrence and Global Risk-Based Management of Chemical Additives II: Environmental and Health Risk and Life Cycle Assessment. This book is the first of the two volumes and contains two main parts. The chapters of the first part provide a thorough review of the chemical additives used in the textile, plastics, lubricants, paper, leather and electronics industries, and describe the effect of each additive on the properties of the product. In the second part international case studies on the global trade of these chemicals and their impact on public health and the environment are presented. This volume is an introduction.

Features

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Contents

Introduction.- Additives in the paper industry.- Additives in the leather industry.- Additives in the electronics.- Additives in the textile industry.- Lubricants and additives: a point of view.- Additives in the plastic industry.- Problems in paper recycling in Vietnam.- Case study on printed matter in Denmark.- Reuse of potential chemical sludge: a hazardous waste in the textile dying process.- Risk management of chemicals in the leather sector – a case study from Sweden.- Lubricants recycling: a case study.- Emissions of additives from plastics in the societal material stock - a case study.

Fields of interest

Environmental Chemistry

Target groups

Research

Type of publication

Reviews

Usually dispatched within 3 to 5 business days

2012, XIV, 290 p. 91 illus. 34 in color. (The Handbook of Environmental Chemistry, Vol. I.B) Hardcover

229,00 €
ISBN 978-3-642-24875-7

National Security and Human Health Implications of Climate Change

Climate change has been identified as one of the greatest threats to humanity of all times. In addition to producing adverse environmental conditions such as rising sea level, drought, crop failure, vector-borne diseases, extreme events, degradation of water/air quality and heat waves, climate change is also considered a threat multiplier that leads to local and international conflicts and armed interventions. Urban areas may bear the brunt of climate change, as they are the centers of human habitation, anthropogenic stressors and environmental degradation, and the ensuing health impacts are of grave societal concern. The papers in this volume span a suite of climate change repercussions, paying particular attention to national security and human health aspects. It is an outcome of a NATO Advanced Research Workshop held during April 28-30, 2011 in Dubrovnik, Croatia, sponsored by the NATO Science for Peace and Security Program. The contributions cut across the elements of modeling, natural, [...]

Features

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Contents

National Security and Human Health Implications of Climate Change; M.D. King, Islands in a Sea of Change: Climate Change, Health and Human Security in Small Island States; N. Lewis, Issues of Climate Change, Health, and National Security in Expanding Cities Worldwide; J.C.R. Hunt, S.E. Belcher, Climate Change, Tipping Elements and Security; K. Rasmussen, T. Birk, Interactions of Global Climate Change and Urban Climate in Different Climate Regions; R. Bornstein et al., ENSO Forcing of Climate Variability over the North Atlantic / European Region in Warmer Climate Conditions; I.H. [...]

Fields of interest

Climate Change; Geotechnical Engineering & Applied Earth Sciences; Sustainable Development

Target groups

Graduate

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days


139,95 €
ISBN 978-94-007-2429-7
National Security and Human Health Implications of Climate Change

Climate change has been identified as one of the greatest threats to humanity of all times. In addition to producing adverse environmental conditions such as rising sea level, drought, crop failure, vector-borne diseases, extreme events, degradation of water/air quality and heat waves, climate change is also considered a threat multiplier that leads to local and international conflicts and armed interventions. Urban areas may bear the brunt of climate change, as they are the centers of human habitation, anthropogenic stressors and environmental degradation, and the ensuing health impacts are of grave societal concern. The papers in this volume span a suite of climate change repercussions, paying particular attention to national security and human health aspects. It is an outcome of a NATO Advanced Research Workshop held during April 28-30, 2011 in Dubrovnik, Croatia, sponsored by the NATO Science for Peace and Security Program. The contributions cut across the elements of modeling, natural, [...] Features

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National Security and Human Health Implications of Climate Change; M.D. King. - Islands in a Sea of Change: Climate Change, Health and Human Security in Small Island States; N. Lewis. - Issues of Climate Change, Health, and National Security in Expanding Cities Worldwide; J.C.R. Hunt, S.E. Belcher. - Climate Change, Tipping Elements and Security; K. Rasmussen, T. Birk. - Interactions of Global Climate Change and Urban Climate in Different Climate Regions; R. Borrosteint al. - ENSO Forcing of Climate Variability over the North Atlantic / European Region in Warmer Climate Conditions; I.H. [...] Fields of interest

Climate Change; Geotechnical Engineering & Applied Earth Sciences; Sustainable Development...
Towards a Sustainable Asia

Environment and Climate Change

This series of books are the output of the research project called "Sustainable Development in Asia (SDA)", which was initiated by the Association of Academies of Sciences in Asia (AASA). They are comprised of one synthesis report, which entitled "Towards a Sustainable Asia: Green Transition and Innovation", and four thematic reports on natural resources, energy, the environment and climate change, and culture from particular perspectives of agriculture. They aim to: 1) investigate common sustainability issues faced by all Asian countries, including population increase, poverty alleviation, pollution control, ecological restoration, as well as regional problems, such as water shortage in West and Central Asia, energy security in Northeast Asia, development model & transformation in East Asia; 2) analyze and summarize of best practices towards sustainable development in Asia; 3) bring forward suggestions and policy options for promoting green transition, system innovation and sustainable development.[…]

Features
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Contents
Environmental issues in Asia: states and trends.- Sensitivity and vulnerability across Asia – eco-regional perspective.- Challenges and opportunities for better environment.- Regional/national environmental and climate change policies towards sustainability.

Fields of interest
Sustainable Development; Climate Change; Meteorology / Climatology

Target groups
Research

Type of publication
Monograph

Online orders shipping within 2-3 days.

2012, 105 p. 38 illus. in color. Softcover

99,95 €
ISBN 978-3-642-16671-6

Towards a Sustainable Asia

Green Transition and Innovation

This series of books are the output of the research project called "Sustainable Development in Asia (SDA)", which was initiated by the Association of Academies of Sciences in Asia (AASA). They are comprised of one synthesis report, which entitled "Towards a Sustainable Asia: Green Transition and Innovation", and four thematic reports on natural resources, energy, the environment and climate change, and culture from particular perspectives of agriculture. They aim to: 1) investigate common sustainability issues faced by all Asian countries, including population increase, poverty alleviation, pollution control, ecological restoration, as well as regional problems, such as water shortage in West and Central Asia, energy security in Northeast Asia, development model & transformation in East Asia; 2) analyze and summarize of best practices towards sustainable development in Asia; 3) bring forward suggestions and policy options for promoting green transition, system innovation and sustainable development.[…]

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Contents

Fields of interest
Sustainable Development; Environmental Law / Policy / Ecojustice; Earth Sciences (general); Geography (general)

Target groups
Research

Type of publication
Monograph

Online orders shipping within 2-3 days.

2012, XII, 178 p. 69 illus., 68 in color. Softcover

99,95 €
ISBN 978-3-642-16674-7

Towards a Sustainable Asia

Natural Resources

This series of books are the output of the research project called "Sustainable Development in Asia (SDA)", which was initiated by the Association of Academies of Sciences in Asia (AASA). They are comprised of one synthesis report, which entitled "Towards a Sustainable Asia: Green Transition and Innovation", and four thematic reports on natural resources, energy, the environment and climate change, and culture from particular perspectives of agriculture. They aim to: 1) investigate common sustainability issues faced by all Asian countries, including population increase, poverty alleviation, pollution control, ecological restoration, as well as regional problems, such as water shortage in West and Central Asia, energy security in Northeast Asia, development model & transformation in East Asia; 2) analyze and summarize of best practices towards sustainable development in Asia; 3) bring forward suggestions and policy options for promoting green transition, system innovation and sustainable development.[…]

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Contents
Introduction.- Status and trends of resources utilization in Asia.- Major problems and challenges of resources utilization in Asia.- Successful experience and lessons of the utilization of resources in typical countries and regions in Asia.- Policy recommendations for sustainable resources utilization in Asia.- Major project proposal for sustainable resources utilization in Asia.

Fields of interest
Sustainable Development; Mineral Resources; Economic Geography

Target groups
Research

Type of publication
Monograph

Online orders shipping within 2-3 days.

2012, XXXII, 80 p. 27 Illus., 25 in color. Softcover

99,95 €
ISBN 978-3-642-16677-8
Towards a Sustainable Asia

The Cultural Perspectives

This series of books are the output of the research project called 'Sustainable Development in Asia (SDA)', which was initiated by the Association of Academies of Sciences in Asia (AASA). They are comprised of one synthesis report, which entitled "Towards a Sustainable Asia: Green Transition and Innovation", and four thematic reports on natural resources, energy, the environment and climate change, and culture from particular perspectives of agriculture. They aim to: 1) investigate common sustainability issues faced by all Asian countries, including population increase, poverty alleviation, pollution control, ecological restoration, as well as regional problems, such as water shortage in West and Central Asia, energy security in Northeast Asia, development model & transformation in East Asia; 2) analyze and summarize of best practices towards sustainable development in Asia; 3) bring forward suggestions and policy options for promoting green transition, system innovation and sustainable development.[…]

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Contents
Introduction.- Asian History and Culture Overview.- Agrarian culture is the basis of Asian culture.- The differences between Eastern and Western civilizations and conflicts.- Review and Prospects.

Fields of interest
Sustainable Development; Agriculture; Cultural Heritage; History

Target groups
Research

Type of publication
Monograph

Online orders shipping within 2-3 days.

2012. XXIV, 96 p. 9 illus., 7 in color. Softcover

99,95 €
ISBN 978-3-642-16668-6

Umweltschutztechnik


Features

Contents

Fields of interest
Environmental Engineering / Biotechnology; Geotechnology, Foundations, Hydraulics; Safety in Chemistry / Dangerous Goods; Energy (general)

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. XVII, 524 S. 110 Abb. Hardcover

46,68 €
ISBN 978-3-642-2972-5

S. Rauch, Chalmers University of Technology, Gothenborg, Sweden; G.M. Morrison, Chalmers University of Technology, Gothenborg, Sweden (Eds.)

Urban Environment

Proceedings of the 10th Urban Environment Symposium

The 10th Urban Environment Symposium (10UES) was held on 9–11 June 2010 in Gothenburg, Sweden. UES aims at providing a forum on the science and practices required to support pathways to a positive and sustainable future in the urban environment. The UES series is run by Chalmers University of Technology within the Alliance for Global Sustainability (The AGS). Papers by leading experts are presented in sections on Sustainable Urban Development and Urban Planning. Air Quality and Human Health; Urban Waters; and Urban Soil Contamination and Treatment.

Features
The 10th Urban Environment Symposium (10UES) was held on 9–11 June 2010 in Gothenburg, Sweden. UES aims at providing a forum on the science and practices required to support pathways to a positive and sustainable future in the urban environment. The UES series is run by Chalmers University of Technology within the Alliance for Global Sustainability (The AGS). Papers by leading experts are […]

Contents

Fields of interest
Monitoring / Environmental Analysis; Urbanism; Atmospheric Protection / Air Quality Control / Air Pollution

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


129,95 €
ISBN 978-94-007-2539-3
Wheat Marketing in Transition

The Transformation of the Australian Wheat Board

This detailed account tells the background story of a privatised monopoly whose sharp practices embroiled a national government in scandal and shocked a nation that prides itself on the strength of its institutions. AWB Limited, the former Australian Wheat Board that in the 1990s was sold into the private sector, paid more than $US200m in kickbacks to the pariah regime of Saddam Hussein in Iraq, exploiting the provisions of the United Nations’ Oil for Food program by inflating the price of the wheat it sent there to disguise the payoffs that secured the contracts. The ensuing uproar threatened the careers of key cabinet ministers in the Howard government and contributed to the rise and subsequent election victory of the Australian Labor Party’s Kevin Rudd.

Contents


Fields of interest

Environment (general); Political Science, general

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XII, 146 p. ills. (Environment & Policy, Vol. 53)

139,95 €


General Science

Das Studium: Vom Start zum Ziel

Leitfaden für Studierende


Contents


Fields of interest

Science; Computer Science (general); Mathematics (general); Physics (general); Engineering (general); Business & Economics (general)

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2012, XIX, 359 S. 13 Abb

15,84 €

ISBN 978-3-642-20650-4

Gaither’s Dictionary of Scientific Quotations


This unprecedented collection of 27,000 quotations is the most comprehensive and carefully researched of its kind, covering all fields of science and mathematics. With this vast compendium you can readily conceptualize and embrace the written images of scientists, laymen, politicians, novelists, playwrights, and poets about humankind’s scientific achievements. Approximately 9000 high-quality entries have been added to this new edition to provide a rich selection of quotations for the student, the educator, and the scientist who would like to introduce a presentation with a relevant quotation that provides perspective and historical background on his subject. Gaither’s Dictionary of Scientific Quotations, Second Edition, provides the finest reference source of science quotations for all audiences. The new edition adds greater depth to the number of quotations in the various thematic arrangements and also provides new thematic categories.

Contents

Approximately 27,000 Quotations Pertaining to Archaeology, Architecture, Astronomy, Biology, Botany, Chemistry, Cosmology, Darwinism, Engineering, Geology, Mathematics, Medicine, Nature, Nursing, Paleontology, Philosophy, Physics, Probability, Science, Statistics, Technology, Theory, Universe, and Zoology

Fields of interest

History of Science; Popular Science; Physics (general); Chemistry (general); Biomedicine (general); Engineering (general)

Target groups

Research

Type of publication

Reference work

Usually dispatched within 3 to 5 business days

2012, XLV, 2770 p. In 3 volumes, not available separately

249,00 €

ISBN 978-1-4614-1113-0
Georessource Wasser - Herausforderung Globaler Wandel


Features

Fields of interest
Science; Popular Science; Earth Sciences (general); Environment (general)

Target groups
Popular/general

Type of publication
Popular science

Online orders shipping within 2-3 days.


Georessource Wasser - Herausforderung Globaler Wandel

Beiträge zu einer nachhaltigen Wasserressourcenbewirtschaftung


Features

Fields of interest
Science; Popular Science; Earth Sciences (general); Environment (general)

Target groups
Professional/practitioner

Type of publication
Professional book

Online orders shipping within 2-3 days.

2012. Etwa 280 S. 55 Abb. in Farbe. (acatech BERICHTET UND EMPFIEHLT, 0) Softcover 37,34 € ISBN 978-3-642-27570-8

Georessource Wasser - Herausforderung Globaler Wandel


Features

Fields of interest
Science; Popular Science; Earth Sciences (general); Environment (general)

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


A New Target Detector Based on Geometrical Perturbation Filters for Polarimetric Synthetic Aperture Radar (POL-SAR)

This thesis presents a groundbreaking methodology for the radar international community. The detection approach introduced, namely perturbation analysis, is completely novel showing a remarkable capability of thinking outside the box. Perturbation analysis is able to push forward the performance limits of current algorithms, allowing the detection of targets smaller than the resolution cell and highly embedded in clutter. The methodology itself is extraordinary flexible and has already been used in two other large projects, funded by the ESA (European Space Agency); M-POL for maritime surveillance, and DRAGON-2 for land classification with particular attention to forests. This book is a perfectly organised piece of work where every detail and perspective is taken into account in order to provide a comprehensive vision of the problems and solutions.

Features
This thesis presents a groundbreaking methodology for the radar international community. The detection approach introduced, namely perturbation analysis, is completely novel showing a remarkable capability of thinking outside the box. Perturbation analysis is able to push forward the performance limits of current algorithms, allowing the detection of targets smaller than the resolution cell and highly embedded [...] 

Contents
Introduction.- Synthetic Aperture Radar (SAR).- Radar Polarimetry.- Polarimetric Detector.- Polarimetric Detector Statistics.- Validation with airborne data.- Validation with satellite data.- Recent applications of perturbation filters.- Conclusions.- Appendices.

Fields of interest
Remote Sensing / Photogrammetry; Mathematical Applications in the Physical Sciences; Microwaves, RF and Optical Engineering; Algorithms

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

Contractual Communities in the Self-Organising City

Freedom, Creativity, Subsidiarity

Both “land-use regulation” and “territorial collective services” have traditionally been accomplished in cities through coercive efforts of public administrations. Recently, land-use regulation and collective service provision regimes have emerged within “contractual communities”: territory-based organisations (usually, but not exclusively residential) such as homeowners’ associations. This book examines the problems and opportunities of contractual communities, avoiding both the alarmism and unwarranted apologies found in much of the literature on contractual communities. The central notion is that cases in which coercive action by a public agency was deemed indispensable have been unjustly overstated, while the potential benefits of voluntary self-organizing processes have been seriously understated. The authors propose a revised notion of the state role that allows ample leeway for contractual communities of all forms.

Features
Both “land-use regulation” and “territorial collective services” have traditionally been accomplished in cities through coercive efforts of public administrations. Recently, land-use regulation and collective service provision regimes have emerged within “contractual communities”: territory-based organisations (usually, but not exclusively residential) such as homeowners’ associations. This book […]

Contents
Introduction: Contractual Communities in the Self-organising City - part one: Characteristics and Functions of Contractual Communities: 1: Types of Contractual Community - 2: Differences and Similarities between Contractual Communities, and Reasons for their Success - Part Two: The Role of Contractual Communities: 3: Positive Aspects and Limits of Contractual Communities - 4: The Space of Contractual Communities and the Re-design of the State’s Role - Part Three: Precursors to the idea of Contractual Communities: 5: The Proposal of Ebenezer Howard - 6: The Proposal of Spencer Heath. […]

Fields of interest
Landscape, Regional and Urban Planning; Human Geography; Political Science, general

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days


49,95 €

Geospatial Techniques in Urban Planning

This work presents cases studies of applications of Geotechnology such as Geography Information Systems, virtual reality and cellular automaton and multi-agent systems in the field of urban planning and design. These are joint research presentations with students and colleagues from Kanazawa University. All these case studies are about application in Japanese or Chinese cities, which are on-field examples reflecting the enormous spread of geo-computation technology. Nevertheless, the concepts have wide applicability to other contexts. The works can be classified into three types of Geotechnological applications at different levels of urban spaces, which are relevant to different kinds of urban planning and development projects. The book is comprised of three parts: Part 1: GeoSimulation and land use plan Part 2: Geo Visualization and urban design Part 3: Geography information system and planning support

Features
This volume presents cases studies of applications of Geotechnology such as Geography Information Systems, virtual reality and cellular automaton and multi-agent systems in the field of urban planning and design. These are joint research presentations with students and colleagues from Asian universities in Japan and China. All these case studies refer to their application in Japanese or Chinese […]

Contents
Part 1: GeoSimulation and land use plan - Part 2: Geo Visualization and urban design - Part 3: Geography information system and planning support

Fields of interest
Geographical Information Systems / Cartography; Remote Sensing / Photogrammetry; Environmental Management

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XIII, 393 p. 236 illus., 169 in color. (Advances in Geographic Information Science) Hardcover

129,95 €
ISBN 978-3-642-13558-3

History of Cartography

International Symposium of the ICA Commission, 2010

This volume comprises the proceedings of the 2010 International Symposium of the ICA Commission on the History of Cartography. The nineteen papers reflect the research interests of the Commission which span the period from the Enlightenment to the evolution of Geographical Information Science. Apart from studies on general cartography, the volume, which reflects some co-operation with the ICA Commission on Maps and Society and the United States Geological Survey (USGS), contains regional studies on cartographic endeavours in Northern America, Brazil, and Southern Africa. The ICA Commission on Maps and Society participated as its field of study often overlaps with that of the ICA Commission on the History of Cartography. The USGS which is the official USA mapping organisation, was invited to emphasise that the ICA Commission on the History of Cartography is not only interested in historical maps, but also has as mandate the research and document the history of Geographical Information Science. The […]

Features
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Contents
Early Explorative Cartography - United States in the 19th Century - United States Geological Survey - New Mexico - Brazilian Cartography - Southern Africa - General Cartography

Fields of interest
Geographical Information Systems / Cartography

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. IX, 303 p. 120 illus., 3 in color. (Publications of the International Cartographic Association (ICA)) Hardcover

99,95 €
ISBN 978-3-642-19087-2
Maps for the Future
Children, Education and Internet

The joint symposium of ICA commissions is always one of the most important event for cartographers. This joint seminar in Orleans was connected to 25th International Cartographic Conference, Paris. Works were presented by members of the commissions on: Cartography and Children, Cartographic Education and Training, Maps and the Internet, Planetary Cartography, Early Warning and Disaster Management.

Features
The joint symposium of ICA commissions is always one of the most important event for cartographers. This joint seminar in Orleans was connected to 25th International Cartographic Conference, Paris. Works were presented by members of the commissions on: Cartography and Children, Cartographic Education and Training, Maps and the Internet, Planetary Cartography, Early Warning and Disaster Management.

Contents
International Associations and the Provision of Outreach Programmes for Education and Training. - Exercises in Cartography. - The Role of Output Devices in the Higher Education Courses of Cartography. - Teaching Cartographical Skills in Different Educational Systems of EU. - Cartography at Elementary School Level: Continuing Education of Teachers and Experiences in the Classrooms. - Cartography in Textbooks Published Between 1824 and 2002 in Brazil. - The Transition from the Analytic to Synthesis Reasoning in the Maps of Geographic School Atlases for Children. - How School Trips Modify the[...]

Fields of interest
Geographical Information Systems / Cartography; Earth Sciences (general)

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

99.95 €
ISBN 978-3-642-19521-1

Recent Landform Evolution
The Carpatho-Balkan Dinaric Region

The Carpatho-Balkan Geomorphological Commission and the International Association of Geomorphologists (IAG) Carpatho-Balkan-Dinaric Regional Working Group, promote networking between researchers and the exchange of research experience. Following a brief introduction into the geology, climate, hydrology and land cover of the Carpatho-Balkan-Dinaric region, the book provides detailed information on research applying both traditional and innovative techniques and summarizes recent geomorphic processes. Additionally, it presents studies of exogetic geomorphic processes from each country. The chapters on Poland, the Czech Republic, Slovakia, Ukraine, Hungary, Romania, Slovenia, Croatia, Serbia, Bulgaria and Macedonia examine the geomorphic processes in shaping the topography of each country. This volume also examines key geomorphic processes influencing land use and economic activities as well as contributions discussing processes under climate change.

Features
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Contents

Fields of interest
Physical Geography; Geomorphology; Geocology / Natural Processes

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 460 p. 125 illus., 75 in color. (Springer Geography) Hardcover

129.95 €
ISBN 978-94-007-2447-1

Remote Sensing of the Environment and Radiation Transfer
An Introductory Survey

The interaction of the solar and heat radiation with the atmosphere and surface is the subject of the book. It is useful also for wide circle scientists involved in environmental studies. The book contains the description of 17 computer studying programs supporting different topics of courses. It includes only the base ground for comprehension of key topics and provides the accomplishment of practical works[...]

Contents
Graduation in the earth atmosphere. - Special features of self-surface (heat) radiation forming. - Calculation of the intensity of self heat radiation of the system "surface-atmosphere. - Study of depending the uncertainty of the remote surface temperature retrieval on the initial parameters exactness. - The thermal remote sounding of the atmosphere. - Calculating optical characteristics of atmospheric aerosol. - Calculating solar radiative characteristics in clouds with asymptotic formulas of the radiative transfer theory. - Calculating solar irradiance with the Eddington method. - Monte-Carlo[...]

Fields of interest
Remote Sensing / Photogrammetry; Geophysics and Environmental Physics; Mathematical Software; Effects of Radiation / Radiation Protection; Computer Applications; Environmental Physics

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XIII, 185 p. With online files/update. Hardcover

59.95 €
**Satellite Remote Sensing**

*A New Tool for Archaeology*

This book provides a state-of-the-art overview of satellite archaeology and it is an invaluable volume for archaeologists, scientists, and managers interested in using satellite Earth Observation (EO) to improve the traditional approach for archaeological investigation, protection and management of Cultural Heritage. The recent increasing development of EO techniques and the tremendous advances in Information and Communication Technologies (ICT) have resulted primarily in Cultural Heritage applications. The book focuses on new challenging prospects for the use of EO in archaeology not only for probing the subsurface to unveil sites and artifacts, but also for the management and valorization as well as for the monitoring and preservation of cultural resources. The book provides a first-class understanding of this revolutionary scenario which was unthinkable several years ago. The book offers: (i) an excellent collection of outstanding articles focusing on satellite data processing, analysis and...[\]

**Features**

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**Contents**

Foreword by Volker Liebig · Foreword by Tom G. Farr · Acknowledgements · Introduction · Part I Optical Satellite Remote Sensing in Archaeology: An Overview · 1 Remote Sensing in Archaeology: From Visual Data Interpretation to Digital Data Manipulation; Rosa Lasaponara and Nicola Masini · 2 Image Enhancement, Feature Extraction and Geospatial Analysis in an Archaeological Perspective; Rosa Lasaponara and Nicola Masini · 3 Pattern Recognition and Classification Using VHR Data for Archaeological Research; Rosa Lasaponara and Nicola Masini · 4 Pan-Sharpening Techniques to Enhance...[\]

**Fields of interest**

Remote Sensing / Photogrammetry; Archaeology; Cultural Heritage; Image Processing and Computer Vision; Interdisciplinary Studies

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**


129.95 €


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**The Geography of Wine**

*Regions, Terroir and Techniques*

Wine has been described as a window into places, cultures and times. Geographers have studied wine since the time of the early Greeks and Romans, when viticulturists realized that the same grape grown in different geographic regions produced wine with differing olfactory and taste characteristics. This book, based on research presented to the Wine Specialty Group of the Association of American Geographers, shows just how far the relationship has come since the time of Bacchus and Dionysus. Geographers have technical input into the wine industry, with exciting new research tackling subjects such as the impact of climate change on grape production, to the use of remote sensing and Geographical Information Systems for improving the quality of crops. This book explores the interdisciplinary connections and science behind world viticulture. Chapters cover a wide range of topics from the way in which landforms and soil affect wine production, to the climatic aberration of the Niagara wine industry, to...[\]

**Features**

Wine has been described as a window into places, cultures and times. Geographers have studied wine since the time of the early Greeks and Romans, when viticulturists realized that the same grape grown in different geographic regions produced wine with differing olfactory and taste characteristics. This book, based on research presented to the Wine Specialty Group of the Association of American...[\]

**Contents**


**Fields of interest**

Physical Geography; Popular Science in Nature and Environment; Geology; Soil Science & Conservation; Agriculture

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. XII, 255 p. 88 illus., 74 in color. Hardcover

99.95 €

ISBN 978-94-007-0463-3
The Science of Cities and Regions

A. Wilson, University College London, UK

Lectures on Mathematical Model Design

A ‘science of cities and regions’ is critical for meeting future challenges. The world is urbanising: huge cities are being created and are continuing to grow rapidly. There are many planning and development issues arising in different manifestations in countries across the globe. These developments can, in principle, be simulated through mathematical computer models which provide tools for forecasting and testing future scenarios and plans. These models can represent the functioning of cities and regions, predicting the spatial demography and the economy, the main flows such as journey to work or to services, and the mechanisms of future evolution. In this book, the main principles involved in the design of this range of models are articulated, providing an account of the current state of the art as well as future research challenges. Alan Wilson has over forty years working with urban and regional models and has contributed important discoveries. He has distilled this experience into what serves as [...] Features

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Fields of interest
Quantitative Geography; Applications of Mathematics; Computer Science (general); Statistical Physics, Dynamical Systems and Complexity; Ecology

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012, XII, 102 p. 31 illus. (SpringerBriefs in Geography) Softcover

49.95 €
ISBN 978-3-642-22651-1

True-3D in Cartography

M. Buchroithner, Dresden University of Technology, Germany (Ed.)

Autostereoscopic and Solid Visualisation of Geodata

As corroborated by the never-sagging and even increasing interest within the last decade, the intuitive attraction of ‘True 3D’ in geodata presentation is well worth covering its current status and recent developments in a compendium like the present one. It covers most aspects of (auto-) stereoscopic representation techniques of both topographic and thematic geodata, be they haptic or not. Theory is treated as well as are many fields of concrete applications. Displays for big audiences and special single-user applications are presented, well-established technologies like classical manual fabrication of landscape reliefs contrast with cutting-edge developments

Features
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Geovisualization. - True-3D, 3D Modelling, VR Cartography, Stereo Film Animation.

Fields of interest
Geographical Information Systems / Cartography; Earth Sciences (general)

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, X, 505 p. 261 illus., 51 in color. (Lecture Notes in Geoinformation and Cartography) Hardcover

169.95 €
ISBN 978-3-642-12271-2

Ventilating Cities

S. Kato, The University of Tokyo, Japan; K. Hiyama, The University of Tokyo, Japan

Air-flow Criteria for Healthy and Comfortable Urban Living

The majority of the world’s population live in environments with artificially weakened wind as buildings in urban areas form wind-breaks and reduce wind speeds. Anthropogenic heat is also generated and during the summer dense urban areas suffer from the urban heat island effect, a known urban climate problem. This book discusses how to evaluate the urban wind environment, including ventilation performance and thermal comfort. This book is organized in two parts: Wind Environment and the Urban Environment and Criteria for Assessing Breeze Environments. It includes chapters on sea breeze in urban areas; thermal adaptation and the effect of wind on thermal comfort; health risk of exposures; pollutant transport in dense urban areas; legal regulations for urban ventilation and new criteria for assessing the local wind environment.Keywords: urban wind environments, urban heat island, urban climate, land use change, thermal comfort, risk assessment, urban air pollution, urban ventilation

Features
The majority of the world’s population live in environments with artificially weakened wind as buildings in urban areas form wind-breaks and reduce wind speeds. Anthropogenic heat is also generated and during the summer dense urban areas suffer from the urban heat island effect, a known urban climate problem. This book discusses how to evaluate the urban wind environment, including ventilation performance [...] Contents


Fields of interest
Landscape, Regional and Urban Planning; Urbanism

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, X, 193 p. 87 illus., 25 in color. (Springer Geography) Hardcover

99.95 €
ISBN 978-3-642-2770-0
Child Soldier Victims of Genocidal Forcible Transfer
Exonerating Child Soldiers Charged With Grave Conflict-related International Crimes

This book provides an original legal analysis of child soldiers recruited into armed groups or forces committing mass atrocities and/or genocide as the victims of the genocidal forcible transfer of children. Legal argument is made regarding the lack of criminal culpability of such child soldier ‘recruits’ for conflict-related international crimes and the inapplicability of currently recommended judicial and non-judicial accountability mechanisms in such cases. The book challenges various anthropological accounts of child soldiers’ alleged ‘tactical agency’ to resist committing atrocity as members of armed groups or forces committing mass atrocity and/or genocide. Also provided are original interpretations of relevant international law including an interpretation of the Rome Statute age-based exclusion from prosecution of persons who were under 18 at the time of perpetrating the crime as substantive law setting an international standard for the humane treatment of child soldiers.

Features
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Contents

Fields of interest
Public International Law; Human Rights; International Humanitarian Law, Law of Armed Conflict; International Criminal Law

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 302 p. Hardcover
99.95 €
ISBN 978-3-642-23613-6
German Corporate Governance in International and European Context

Corporate governance encompasses the free enterprise system, which is treated comprehensively in this book from a German perspective. This distinguishes the book from other books written in English in this subject area, not only because of the comprehensive way it covers German corporate law and corporate governance, but also because of the fact that it provides international and European perspectives on these important topics. This second edition is an extensively revised and updated version of the first edition, in particular with a view to the worldwide debt crisis. The authors provide readers with an overview of the unique features of German business and enterprise law and an in-depth analysis of the organs of governance of German public limited companies (general meeting, management board, supervisory board). In addition, approaches for reforms required at the international level are also suggested and discussed, including, among others, the unique interplay and dynamics of the German two-tier [...]
International Neurolaw

A Comparative Analysis

Whereas the past few years have repeatedly been referred to as the "era of biotechnology", most recently the impression has emerged that at least the same degree of attention is being paid to the latest developments in the field of neurosciences. It has now become nearly impossible to maintain an overview of the number of research projects dealing with the functionality of the brain – for example concerning its organizational structure – or projects dealing with the topics of legal responsibility, brain–computer interface applications, neuromarketing, lie detection or mind reading. These procedures are connected to a number of legal questions concerning the framework conditions of research projects as well as the right approach to the findings generated. Given the primary importance of the topic for the latest developments, it is essential to compare the different legal systems and strategies that they offer for dealing with these legal implications. Therefore, the book International Neurolaw – A[...]

Features
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Menschenwürde und Spätabbruch

**Moderne italienische Strafrechtsdenker**


**Real Estate Investments in Germany**

**Transactions and Development**

The real estate market in Germany has recovered remarkably well from 2008/09 crisis. Portfolio transactions, infrastructure projects as well as investments in commercial and residential real estate are on the rise. This publication provides investors, property developers and advisers with a practical guideline to the legal, tax and commercial framework for real estate investments in Germany.

**Features**

The real estate market in Germany has recovered remarkably well from 2008/09 crisis. Portfolio transactions, infrastructure projects as well as investments in commercial and residential real estate are on the rise. This publication provides investors, property developers and advisers with a practical guideline to the legal, tax and commercial framework for real estate investments in Germany.

**Contents**


**Fields of interest**

Private International Law, International & Foreign Law, Comparative Law; Commercial Law; Management/Business for Professionals

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012, XIV, 345 p. 20 illus. Hardcover

69,95 €

ISBN 978-3-642-19099-5

**Steuerrecht - Schnell erfasst**


**Features**

Das Steuerrecht erscheint auf den ersten Blick wie ein undurchdringlicher Dschungel. Der Autor dieses Bandes aus der Reihe "Recht - schnell erfasst" ist daher besonders darauf bedacht, die schwierige Materie übersichtlich und verständlich darzustellen und auch Anfängern einen leichten Einstieg zu ermöglichen. Ausgehend von der Systematik der verschiedenen Steuerarten werden alle einschlägigen Gesetze in [...] Features

**Contents**


**Fields of interest**

Financial Law / Fiscal Law

**Target groups**

Lower undergraduate

**Type of publication**

Undergraduate textbook

**Usually dispatched within 3 to 5 business days**

2012, IX, 366 S. (Recht - schnell erfasst) Softcover

18,64 €

ISBN 978-3-642-22932-9

E. Dezza, Universität Pavia, Italien; S. Seminara, Universität Pavia, Italien; Th. Vormbaum, FernUniversität in Hagen, Deutschland (Ed.)

M. Mütze, Mütze Korsch Rechtsanwaltsgeellschaft mbH, Düsseldorf, Germany; Th. Senff, Mütze Korsch Rechtsanwaltsgeellschaft mbH, Düsseldorf, Germany; J.C. Möller, BBORS Kreuznacht Rechtsanwälte, Düsseldorf, Germany (Eds.)
Strategic Issues in Air Transport
Legal, Economic and Technical Aspects

There are broadly four strategic issues in aviation: safety; security; environmental protection; and sustainability in air transport. These issues will remain for a long time as key considerations in the safe, regular, efficient and economic development of air transport. Within these four broad categories come numerous subjects that require attention of the aviation industry as well as the States. In six chapters, this book engages in detailed discussions on these subjects as they unravelled in events of recent years. The issue of safety is addressed first, following an introduction of the regulatory regime covering the four issues. Within the area of safety, the book covers such areas as safety management systems, safety and aeronautics, safety and meteorology, the use of airspace, unmanned aircraft systems and safety oversight audits. In the security area, subjects covered include cyber terrorism, the integrity of travel documents, full body scanners, civil unrest and aviation, the suppression of [..]

Contents

Fields of interest
Law of the Sea, Air and Outer Space; Aerospace Technology and Astronautics; Production / Logistics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIV, 424 p. Hardcover
99,95 €
ISBN 978-3-642-21959-7

The European Union and Member State Territorial: A New Legal Framework Under the EU Treaties

The book reviews the EU Treaties provisions governing relations between the EU and Member State territories, such as the Netherlands Antilles, the UK Channel Islands and the French Overseas Departments. The book includes an overview of each of the relevant territories, including their present constitutional relations with their Member State and their legal relations with the EU. Prior to the entry into force of the Lisbon Treaty, the over-arching Treaty provision for this relationship was Article 299 of the EC Treaty. Having traced the development of Article 299 from 1957 to the present Lisbon framework, the book identifies many inconsistencies and issues with this current framework and proposes a new model framework, one that is more concise and up-to-date and which is adaptable to possible future developments. Useful for EU Law departments and Research Centres, EU Think Tanks, EU Institutions Libraries, Permanent Representatives to the EU and law firms specializing in EU law.

Contents

Fields of interest
European Law; Public International Law

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 285 p. Hardcover
99,95 €

The Law of Business Organizations
A Concise Overview of German Corporate Law

This book gives a concise introduction to the German law of business organizations. After outlining the corporate legal framework within Germany, the book addresses some basic issues of international and European business law, such as the law applicable to corporations engaged in cross-border activities. Special emphasis is placed on some recent developments in the European Common Market. The book then [..]

Fields of interest
Private International Law, International & Foreign Law, Comparative Law; Commercial Law; Management/Business for Professionals

Types of publication
Professional/practitioner

Usually dispatched within 3 to 5 business days

2012. XI, 204 p. 11 illus. Hardcover
49,95 €
ISBN 978-3-642-17792-7
Bacteriology; Agriculture

Perspectives and Applications in Stress

Improves Plant Health Under Stress Conditions.-
Management.- Hormonal Signaling by PGPR
Cold tolerant PGPRs as Bioinoculants for Stress
Legumes and Rhizobia Under Stress Conditions.-
Products and Soil Stresses.- Interactions Between
as Alleviators for Soil Degradation.- Microbial
Plant Growth Promoting Rhizobacteria (PGPR)
in Stressed Environment with Rhizobacteria.-
Management of Soil Quality and Plant Productivity
Priming of Plant Defences by PGPR against
Fungal and Bacterial Plant Foliar Pathogens.- The
Management of Soil Quality and Plant Productivity
in Stressed Environment with Rhizobacteria.-
Plant Growth Promoting Rhizobacteria (PGPR)
as Alleviators for Soil Degradation.- Microbial
Products and Soil Stresses.- Interactions Between
Legumes and Rhizobia Under Stress Conditions.-
Cold tolerant PGPRs as Bioinoculants for Stress
Management.- Hormonal Signaling by PGPR
Improves Plant Health Under Stress Conditions.-
Microbial ACC-Deaminase Biotechnology: Perspectives and Applications in Stress[...]

Contents

Field of interest
Bacteriology; Agriculture

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 333 p. 20 illus., 1 in color. Hardcover
149,95 €
ISBN 978-3-642-23464-4

Bio-Geo Interactions in Metal-Contaminated Soils

Metal contamination is an increasing ecological and eco-toxicological risk. Understanding the processes involved in metal mobilization, sorption and mineralization in soils are key features for soil bioremediation. Following an introduction to the physical, chemical and biological components of contaminated soils, various chapters address the interactions of soil, microorganisms, plants and the water.[...]

Features

Metal contamination is an increasing ecological and eco-toxicological risk. Understanding the processes involved in metal mobilization, sorption and mineralization in soils are key features for soil bioremediation. Following an introduction to the physical, chemical and biological components of contaminated soils, various chapters address the interactions of soil, microorganisms, plants and the water.[...]

Contents

Contaminated Soil: Physical, Chemical and Biological Components.- Biogeochemistry in Heavy Metal Contaminated Soils.- The Role of Mineralogy and Geochemistry in Hazard Potential Assessment of Mining Areas.- Rare Earth Elements in Biotic and Abiotic Systems.- Geomicrobial Manganese Redox Reactions in Metal Contaminated Soil Substrates.- Natural Bimetalimerization in the Contaminated Sediment-Water System at the Ungaritsch Abandoned Mine.- Spectrion of Uranium in Seepage Water and Pore Water of Heavy Metal Contaminated Soil.- Plant microbe interaction in heavy metal contaminated[...]

Fields of interest
Microbiology; Plant Physiology; Biogeochemistry; Soil Science & Conservation; Terrestrial Pollution

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. IX, 243 p. 67 illus., 20 in color. (Soil Biology, Vol. 31) Hardcover
149,95 €
ISBN 978-3-642-23326-5

Biochemische und physiologische Versuche mit Pflanzen

für Studium und Unterricht im Fach Biologie


Features

In vorliegendem Buch veröffentlicht Professor Aloysius Wild, seit 1983 Leiter des Fachdidaktikseminars Pflanzenphysiologische Versuche in der Schule, zusammen mit Volker Schmitt die praktischen Erfahrungen zahlreicher Studierenden-Generationen. Dieses biologische Arbeitsbuch behandelt biochemische und pflanzenphysiologische Versuche für das Biologiestudium und für den Schulunterricht. Alle Versuche sind mit[...]

Contents


Fields of interest
Plant Physiology; Plant Sciences; Plant Biochemistry

Target groups
Upper undergraduate

Type of publication
German textbook

Usually dispatched within 3 to 5 business days

2012. XVIII, 446 S. 130 Abb. Softcover
32,66 €
ISBN 978-3-8274-2818-9
Biology of Marine Fungi

The diversity, ecological role and biotechnological applications of marine fungi have been addressed in numerous scientific publications in the last few years. This enormous spurt of information has led to a dire need among students and professionals alike for a source, which contains comprehensive reviews of various aspects of marine fungi. This book addresses this need, especially since it is written by reputed marine mycologists. The latest information on topics including molecular taxonomy and phylogeny, ecology of fungi in different marine habitats such as deep sea, corals, dead sea, fungi in extreme marine environments and their biotechnological applications is reviewed. The book presents a comprehensive source of information and analysis aimed at marine fungi for researchers, teachers and students of marine mycology.

Features
- The diversity, ecological role and biotechnological applications of marine fungi have been addressed in numerous scientific publications in the last few years. This enormous spurt of information has led to a dire need among students and professionals alike for a source, which contains comprehensive reviews of various aspects of marine fungi. This book addresses this need, especially since it is written by reputed marine mycologists. The latest information on topics including molecular taxonomy and phylogeny, ecology of fungi in different marine habitats such as deep sea, corals, dead sea, fungi in extreme marine environments and their biotechnological applications is reviewed. The book presents a comprehensive source of information and analysis aimed at marine fungi for researchers, teachers and students of marine mycology.

Contents
- Thraustochytrids, a neglected component of organic matter decomposition and food webs in marine sediments.
- Diseases of fish and shellfish caused by marine fungi.
- Fungal endosymbionts of seaweeds.
- Diversity and biochemical function of planktonic fungi in the Ocean.
- Fungi and their Role in Corals and Coral Reef Ecosystems.
- Fungal life in the Dead Sea.
- The Mycobiota of the Salterns.
- Morphological evaluation of peridial wall, ascus and ascospore characteristics in the delineation of genera with unfurling ascospore appendages (Halophaeziaceae).
- Cultured and uncultured fungal...

Fields of interest
- Freshwater & Marine Ecology; Marine & Freshwater Sciences; Biodiversity; Microbial Ecology; Coastal Sciences

Target groups
Research

Type of publication
Contributed volume


Patents protecting biotechnological invention are becoming ever more important. Because biotechnology has many differences with respect to other technologies, lessons learned in other fields of technology cannot simply be transferred to adopt a suitable strategy for dealing with biotechnology inventions. In this volume, general aspects of biopatent law will be discussed. This involves questions of patentability, including ethical issues and issues of technicality, as well as questions of patent exhaustion in cases were reproducible subject matter, like cells or seeds, is protected. Moreover, active and passive patent strategies are addressed. Further, insight will be given into patent lifetime management and additional protective measures, like supplementary protection certificates and data exclusivity. Here, strategies are discussed how market exclusivity can be extended as long as possible, which is particularly important for biopharmaceutical drugs, which create high R&D costs.

Features
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Contents
- Ulrich Storz: Patent Lifetime Management, SPCs and Data Exclusivity.

Fields of interest
- Cell Biology; Pharmaceutical Sciences / Technology; Microbiology; Biochemistry; Biotechnology; Commercial Law

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. XII, 44 p. 1 illus. in color. (SpringerBriefs in Biotech Patents) Softcover

49,95 €
ISBN 978-3-642-24845-0
Edible Medicinal and Non-Medicinal Plants

Volume 1, Fruits

This multi-compendium is a comprehensive, illustrated and scientifically up-to-date work covering more than a thousand species of edible medicinal and non-medicinal plants. This work will be of significant interest to scientists, researchers, medical practitioners, pharmacologists, ethnomedicalists, horticulturists, food nutritionists, agronomists, botanists, herbalists, conservationists, teachers, lecturers, students and the general public. Topics covered included: taxonomy (botanical name and synonyms), common English and vernacular names; origin and distribution; agro-ecological requirements; edible plant part and uses; botany; nutritive and medicinal/ pharmacological properties, medicinal uses and current research findings; non-edible uses; and selected/cited references. Each volume covers about a hundred species arranged according to families and species. Each volume has separate scientific and common names indices and separate scientific and medical glossaries.

Features
Edible Medicinal and Non-medicinal Plants is a comprehensive and scientifically up-to-date work covering more than a thousand species of plants in a multi-compendium format. The aim is to create awareness and interest in the rich and diverse array of such plants. The edible species dealt with in this work include a larger extent lesser-known, wild and underutilized crops and also common and widely distributed species.

Contents

Fields of interest
Agriculture; Plant Sciences; Biomedicine (general); Medicine (general); Biodiversity

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XV, 835 p. 420 illus. in color. Hardcover
149,95 €

Essentials of Biochemistry

This textbook, Essentials of Biochemistry is aimed at chemistry and biochemistry undergraduate students and first year biochemistry graduate students. It incorporates the lectures of the authors given to students with a strong chemistry background. An emphasis is placed on metabolism and reaction mechanisms and how they are studied. As the title of the book implies, the text lays the basis for an understanding of the fundamentals of biochemistry.

Features
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Contents

Fields of interest
Biochemistry; Bioorganic Chemistry

Target groups
Lower undergraduate

Type of publication
Undergraduate textbook

Online orders shipping within 2-3 days.

2012. XVIII, 364 p. 349 illus., 209 in color. Hardcover
40,95 €
ISBN 978-3-642-19623-2
Herpetological Osteopathology

Annotated Bibliography of Amphibians and Reptiles

As scientific analysis of testable hypotheses has replaced the speculative approach to study of bone disease in recent and fossil amphibians and reptiles, the field has advanced from simply reporting observations to analyzing their implications. This process is predicated upon a reproducible data base which explains/diagnoses the nature of bony alterations and a secure review of the literature. Thereby hangs the rub. The herpetological literature are difficult to access (let alone read) and are scattered through many prominent and eclectic journals and in the lay literature. While older diagnoses often have not stood the test of time, the clarity of report descriptions usually allows confident identification of the underlying pathology.

Features

Sir William Osler, a famous 19th century physician, observed that diagnosis without knowing the literature is like going to sea without charts. This book provides the database for identifying the state of the art/knowledge related to herpetological species and diagnoses. It identifies what has been clearly documented and areas for future investigation, providing guidance to epidemiology as [...]

Contents


Fields of interest

Animal Ecology; Animal Anatomy / Morphology / Histology; Animal Physiology; Veterinary Medicine

Target groups

Graduate

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XI, 450 p. 90 illus., 78 in color. Hardcover

149.95 €

Interplay between Metal Ions and Nucleic Acids

Interplay between Metal Ions and Nucleic Acids provides in an authoritative and timely manner in 12 stimulating chapters, written by 24 internationally recognized experts from 8 nations, and supported by nearly 1500 references, about 20 tables, and 125 illustrations, many in color, a most up-to-date view on metal ion-nucleic acid interactions; the characterization of which is covered in solution and in the solid state. The volume concentrates on modern developments encompassing topics in the wide range from G-quadruplexes via DNAzymes, catalysis at the DNA scaffold, and metal-mediated base pairs to peptide nucleic acids (PNAs) as thus of relevance, e.g., for chemistry and nanotechnology but also for molecular biology and (genetic) diagnostics.

Features

The Metal Ions in Life Sciences series links coordination chemistry and biochemistry in their widest sense and thus increases our understanding of the relationship between the chemistry of metals and life processes. The series reflects the interdisciplinary nature of Biological Inorganic Chemistry and coordinates the efforts of scientists in fields like biochemistry, inorganic [...]
Long-Term Field Studies of Primates

Some primate field studies have been ongoing for decades, covering significant portions of individual life cycles or even multiple generations. In this volume, leading field workers report on the history and infrastructure of their projects in Madagascar, Africa, Asia and South America. More importantly, they provide summaries of their long-term research efforts on primate behaviour, ecology and life history, highlighting insights that were only possible because of the long-term nature of the study. The chapters of this volume collectively outline the many scientific reasons for studying primate behaviour, ecology and demography over multiple generations. This kind of research is typically necessitated by the relatively slow life histories of primates. Moreover, a complete understanding of social organization and behaviour, factors often influenced by rare but important events, requires long-term data collection. Finally, long-term field projects are also becoming increasingly important foci of research.[...]

Features

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Contents


Fields of interest

Behavioural Sciences; Animal Ecology; Evolutionary Biology; Conservation Biology / Ecology

Target groups

Graduate

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012, X, 414 p. 61 illus., 24 in color. Softcover

69,95 €

ISBN 978-94-007-2231-6

Managing Forest Carbon in a Changing Climate

The aim of this book is to provide an accessible overview for advanced students, resource professionals such as land managers, and policy makers to acquaint themselves with the established science, management practices and policies that facilitate sequestration and allow for the storage of carbon in forests. The book has value to the reader to better understand: a) carbon science and management of forests and wood products; b) the underlying social mechanisms of deforestation; and c) the policy options in order to formulate a coherent strategy for implementing forest carbon projects and ultimately reducing emissions from forest land use.

Features

The goal of this volume is to provide guidance for advanced students, land managers and policymakers seeking to understand the complex science and policy of forest carbon as it relates to tangible problems of forest management and the more abstract problems of addressing drivers of deforestation and negotiating policy frameworks for reducing emissions from forests. It is an attempt at a comprehensive approach.[...]

Contents


Fields of interest

Forestry; Climate Change; Environmental Management; Sustainable Development; Ecosystems

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012, X, 460 p. 102 illus., 24 in color. Hardcover

149,95 €

ISBN 978-3-642-22513-0

Microorganisms in Environmental Management

Microbes and Environment

Microbes and their biosynthetic capabilities have been invaluable in finding solutions for several intractable problems mankind has encountered in maintaining the quality of the environment. They have, for example, been used to positive effect in human and animal health, genetic engineering, environmental protection, and municipal and industrial waste treatment. Microorganisms have enabled feasible and cost-effective responses which would have been impossible via straightforward chemical or physical engineering methods. Microbial technologies have of late been applied to a range of environmental problems, with considerable success. This survey of recent scientific progress in useful applying microbes to both environmental management and biotechnology is informed by acknowledgement of the polluting effects on the world around us of soil erosion, the unwanted migration of sediments, chemical fertilizers and pesticides, and the improper treatment of human and animal wastes. These harmful phenomena[...]

Features

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Contents


Fields of interest

Microbiology; Agriculture; Biotechnology; Applied Microbiology

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012, XXI, 819 p. 108 illus. Hardcover

199,95 €

ISBN 978-94-007-2228-6
Microorganisms in Sustainable Agriculture and Biotechnology

This review of recent developments in our understanding of the role of microbes in sustainable agriculture and biotechnology covers a research area with enormous untapped potential. Chemical fertilizers, pesticides, herbicides and other agricultural inputs derived from fossil fuels have increased agricultural production, yet growing awareness and concern over their adverse effects on soil productivity and environmental quality cannot be ignored. The high cost of these products, the difficulties of meeting demand for them, and their harmful environmental legacy have encouraged scientists to develop alternative strategies to raise productivity, with microbes playing a central role in these efforts. One application is the use of soil microbes as bioinoculants for supplying nutrients and/or stimulating plant growth. Some rhizospheric microbes are known to synthesize plant growth-promoters, siderophores and antibiotics, as well as aiding phosphorous uptake. The last 40 years have seen rapid strides made[...]

Mitochondrial Disorders

Biochemical and Molecular Analysis

Due to the complexity of the mitochondrial system and the myriad genes involved in their function, the clinical manifestations of mitochondrial diseases are remarkably variable and heterogeneous. The laboratory and clinical methodologies used to evaluate dysfunction may vary widely, and thusly a systematic presentation of the numerous protocols that are applied to the assessment of these clinically and genetically heterogeneous disorders has proven to be essential. Mitochondrial Disorders: Biochemical and Molecular Analysis strives to fill this need with a collection of key protocols provided by leading experts in the field. Beginning with overviews of complexity of mitochondrial and nuclear genome disorders, the book continues with a section devoted to current biochemical protocols and a part focused on the DNA-based approaches used to identify molecular defects. Written in the highly successful Methods in Molecular Biology® series format, chapters contain introductions to their respective[...]

Features

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Contents


Mucins

Methods and Protocols

Epithelial mucins are large complex cell surface and secreted glycoproteins produced by mucosal epithelial cells. In, Mucins: Methods and Protocols expert researchers in the field detail many of the methods which are now commonly used to study Mucins. These include methods and techniques for the best approaches to analysing each specific area of mucin biochemistry, physiology and biophysics before providing individual detailed experimental protocols together with troubleshooting and interpretation tips. Written in the highly successful Methods in Molecular Biology™ series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and key tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, Mucins: Methods and Protocols is designed to be a useful resource for those entering the mucin field and to facilitate those already studying mucins to broaden their.[...]

Contents


Fields of interest

Biochemistry; Proteomics

Target groups

Professional/practitioner

Type of publication

Contributed volume

NanoCellBiology of Secretion

Imaging Its Cellular and Molecular Underpinnings

Understanding live cells at the single molecule level is the most important and single major challenge facing biology and medicine today. Over the past 15 years, there has been a renewed understanding of living cells at the molecular level. Atomic Force Microscopy, Laser Force Microscopy, single secretory vesicle patch clamp studies, high resolution electron microscopy, and x-ray diffraction, are some of the tools now being used to unravel the intricacies of a living cell at the molecular level. Opening with an explanation of Materials and Methods, NanoCellBiology then moves through discussions of porosome discovery, calcium and SNARE-induced fusion, and vesicle swelling before winding up in a final chapter of conclusions and future studies. Succinctly packaged as SpringerBrief, this book is a must for those studying or conducting research in cell biology, biochemistry or nanobiology/nanotechnology. This book will be invaluable to faculty & graduate students involved in Nano Courses; Cell Biology.[...]

Contents


Fields of interest

Biological Microscopy; Nanoscale Science and Technology; Cell Biology

Target groups

Professional/practitioner

Type of publication

Brief

Usually dispatched within 3 to 5 business days

2012. XII, 70 p. 38 illus., 33 in color. (SpringerBriefs in Biological Imaging) Softcover

49,95 €
ISBN 978-1-4614-2437-6

Planar Cell Polarity

Methods and Protocols

Planar cell polarity (PCP), or the alignment of a collection of cells within a cell sheet, has proven, over time, to be vital in not only normal development but also in disease states. In Planar Cell Polarity: Methods and Protocols, expert researchers in the field present a number of detailed and well-designed protocols used successfully in their labs around the world. As a volume in the highly successful Methods in Molecular Biology™ series, the chapters contain introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Timely and authoritative, Planar Cell Polarity: Methods and Protocols serves as a valuable reference for both novices and experts in this dynamic and versatile area of study.

Contents


Fields of interest

Cell Biology; Cell Physiology

Target groups

Professional/practitioner

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days


94,95 €
ISBN 978-1-61779-509-1
Receptor-like Kinases in Plants
From Development to Defense

Sequencing projects have revealed the presence of at least several hundred receptor kinases in a typical plant genome. Receptor kinases are therefore the largest family of primary signal transducers in plants, and their abundance suggests an immense signaling network that we have only just begun to uncover.

Recent research findings indicate that individual receptor kinases fulfill important roles in growth and development, in the recognition of pathogens and symbionts or, in a few examples, in both growth and defense. This volume will focus on the roles of receptor kinases, their signaling pathways, and the ways in which these important signaling proteins are regulated.

Secretions and Exudates in Biological Systems

Secretions and emissions in biological systems play important signaling roles within the organism but also in its communications with the surrounding environment. This volume brings together state-of-the-art information on the role of secretions and emissions in different organs and organisms ranging from flowers and roots of plants to nematodes and human organs. The plant chapters relate information regarding the biochemistry of flower volatiles and root exudates, and their role in attracting pollinators and soil microbial communities respectively. Microbial chapters explain the biochemistry and ecology of quorum sensing and how microbial communities highly co-adapted to plants can aid in bio-energy applications by degrading ligno-cellulosic materials. Other chapters explain the biology of secretions by nematodes, algae and humans, among other organisms. This volume will be a welcome addition to the literature, as no other book covers aspects related to biological secretion in such a holistic and...[

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Contents

Fields of interest
Membrane Biology; Protein-Ligand Interactions; Receptors; Plant Physiology; Cell Biology

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, VIII, 313 p. 40 illus., 23 in color. (Signaling and Communication in Plants, Vol. 13) Hardcover

149,95 €
ISBN 978-3-642-23043-1

Two Hybrid Technologies
Methods and Protocols

Protein-protein interactions (PPIs) are strongly predictive of functional relationships among proteins in virtually all processes that take place in the living cell. Therefore, the comprehensive exploration of interactome networks is one of the major goals in systems biology. The aim of Two Hybrid Technologies: Methods and Protocols is to provide a compendium of state-of-the-art protocols for the investigation of binary PPIs with the classical yeast two-hybrid (Y2H) approach. Y2H variants and other in vivo methods for PPI mapping. Divided into two convenient sections, the first gives a survey of protocols that are currently employed for Y2H high-throughput screens by different expert labs in the field. Rather than detailing the principles of screening, which have been described previously, the focus is on different implementations of Y2H interactome mapping. The second section of the book considers innovative PPI detection methods that have the potential to emerge as alternative high-throughput[...]

Features
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Materials Science

A. Öçoren, Technical University of Malaysia, Johor, Malaysia; L.F.M.d Silva, Universidade do Porto, Porto, Portugal; H. Altenbach, Martin-Luther-Universität Halle-Wittenberg, Halle (Saale), Germany (Eds.)

Analysis and Design of Biological Materials and Structures

This collection provides researchers and scientists with advanced analyses and materials design techniques in Biomaterials and presents mechanical studies of biological structures. In 16 contributions well known experts present their research on Stress and Strain Analysis, Material Properties, Fluid and Gas mechanics and they show related problems.

Features

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Contents

Numerical stress analysis of C3-C5 cervical porcine vertebrae under compressive loading using 3-D scanner and 3-D Computed Tomography. - Stresses and Strains Analysis of a Longitudinal Heterogeneous Arterial Wall. - Stresses and Strains Analysis in the Left Ventricular wall with Finite Deformations. - Stress distribution at the interface Bone-implant in dental prosthesis with stress barrier. - Biomechanical behaviour analyse of sap ascent in vascular plants. - Experimental Investigation of the Surface Tension of Lipid Membranes. - Finite element analysis of traction force induced by cell on[...]

Fields of interest

Biomaterials; Biomedical Engineering; Continuum Mechanics and Mechanics of Materials; Biophysics and Biological Physics

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


99,95 €
ISBN 978-3-642-22130-9

S. Pearton, University of Florida, Gainesville, FL, USA (Ed.)

GaN and ZnO-based Materials and Devices

The AlInGaN and ZnO materials systems have proven to be one of the scientifically and technologically important areas of development over the past 15 years, with applications in UV/visible optoelectronics and in high-power/high-frequency microwave devices. The pace of advances in these areas has been remarkable and the wide band gap community relies on books like the one we are proposing to provide a review and summary of recent progress.

Features

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Contents


Fields of interest

Optical and Electronic Materials; Crystallography; Surfaces and Interfaces, Thin Films, Applied Optics, Optoelectronics, Optical Devices, Nanotechnology and Microengineering, Nanoscience and Technology

Target groups

Graduate

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


119,95 €
ISBN 978-3-642-23520-7
Materials Challenges and Testing for Supply of Energy and Resources

One major goal of the World Materials Research Institute Forum - WMRIF is to promote young scientists in the field of materials science and engineering. To enhance the international knowledge exchange between young postdoctoral scientists all over the world, WMRIF meanwhile regularly organizes joint workshops among the member institutes. These workshops also represent an increasingly appreciated platform to get known to each other and to build co-operations. For such workshops, various topics are selected, pointing to future perspectives and challenges in the field of Materials Science and Engineering. This time, the presentations of the workshop focused on the four subjects Challenges in conclusive, realistic and system oriented materials testing, Materials challenges for water supply, Materials challenges in the extraction and recovery of scarce elements and minerals, Materials challenges for nuclear fission and fusion. This book comprises the peer-reviewed contributions during the 2nd International [...]
Algèbre

Chapitre 8

Ce huitième chapitre du Livre d'Algèbre, deuxième Livre des Éléments de mathématique, est consacré à l'étude de certaines classes d'anneaux et des modules sur ces anneaux. Il ouvre les notions de module et d'anneau noethérien et artinien, ainsi que celle de radical. Ce chapitre décrit également la structure des anneaux semi-simples. Nous y donnons aussi la définition de divers groupes de Grothendieck qui jouent un rôle universel pour les invariants de modules et plusieurs descriptions du groupe de Brauer qui intervient dans la classification des anneaux simples. Une note historique en fin de volume, reprise de l'édition précédente, retrace l'émergence d'une grande partie des notions développées. Ce volume est une deuxième édition entièrement refondue de l'édition de 1958.

Features

Ce huitième chapitre du Livre d'Algèbre, deuxième Livre des Éléments de mathématique, est consacré à l'étude de certaines classes d'anneaux et des modules sur ces anneaux. Il ouvre les notions de module et d'anneau noethérien et artinien, ainsi que celle de radical. Ce chapitre décrit également la structure des anneaux semi-simples. Nous y donnons aussi la définition de divers groupes de Grothendieck.

Contents


Fields of interest

Commutative Rings and Algebras; Associative Rings and Algebras

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days
Analytic Inequalities

Recent Advances

For more than a century, the study of various types of inequalities has been the focus of great attention by many researchers, interested both in the theory and its applications. In particular, there exists a very rich literature related to the well known Cesàro, Grüss, Trapezoid, Ostrowski, Hadamard and Jensen type inequalities. The present monograph is an attempt to organize recent progress related to the above inequalities, which we hope will widen the scope of their applications. The field to be covered is extremely wide and it is impossible to treat all of these here. The material included in the monograph is recent and hard to find in other books. It is accessible to any reader with a reasonable background in real analysis and an acquaintance with its related areas. All results are presented in an elementary way and the book could also serve as a textbook for an advanced graduate course. The book deserves a warm welcome to those who wish to learn the subject and it will also be most valuable[...]

Features

For more than a century, the study of various types of inequalities has been the focus of great attention by many researchers, interested both in the theory and its applications. In particular, there exists a very rich literature related to the well known Cesàro, Grüss, Trapezoid, Ostrowski, Hadamard and Jensen type inequalities. The present monograph is an attempt to organize recent progress related to the [...] Contents


Fields of interest

Real Functions

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


Hardcover

89,95 €


Approximate Deconvolution Models of Turbulence

Analysis, Phenomenology and Numerical Analysis

This volume presents a mathematical development of a recent approach to the modeling and simulation of turbulent flows based on methods for the approximate solution of inverse problems. The resulting Approximate Deconvolution Models or ADMs have some advantages over more commonly used turbulence models – as well as some disadvantages. Our goal in this book is to provide a clear and complete mathematical development of ADMs, while pointing out the difficulties that remain. In order to do so, we present the analytical theory of ADMs, along with its connections, motivations and complements in the phenomenology of and algorithms for ADMs.

Features

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Fields of interest

Numerical Analysis; Engineering Fluid Dynamics

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, VIII, 184 p. 22 illus., 11 in color. (Lecture Notes in Mathematics, Vol. 2042) Softcover

34,95 €

ISBN 978-3-642-24408-7

Approximation Algorithms and Semidefinite Programming

Semidefinite programs constitute one of the largest classes of optimization problems that can be solved with reasonable efficiency - both in theory and practice. They play a key role in a variety of research areas, such as combinatorial optimization, approximation algorithms, computational complexity, graph theory, geometry, real algebraic geometry and quantum computing. This book is an introduction to selected aspects of semidefinite programming and its use in approximation algorithms. It covers the basics but also a significant amount of recent and more advanced material. There are many computational problems, such as MAXCUT, for which one cannot reasonably expect to obtain an exact solution efficiently, and in such case, one has to settle for approximate solutions. For MAXCUT and its relatives, exciting recent results suggest that semidefinite programming is probably the ultimate tool. Indeed, assuming the Unique Games Conjecture, a plausible but as yet unproven hypothesis, it was shown that[...]

Features

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Fields of interest

Applications of Mathematics: Theory of Computation; Algorithm Analysis and Problem Complexity; Discrete Mathematics in Computer Science; Algorithms; Optimization

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012, XI, 251 p. 23 illus. Hardcover

49,95 €

ISBN 978-3-642-22014-2
**Boolean Function Complexity**

*Advances and Frontiers*

Boolean function complexity is the combinatorics of computer science and involves many intriguing problems that are easy to state and explain, even for the layman. This book is a comprehensive description of basic lower bound arguments, covering many of the gems of this "complexity Waterloo" that have been discovered over the past several decades, right up to results from the last year or two. Many open problems, marked as Research Problems, are mentioned along the way. The problems are mainly of combinatorial flavor but their solutions could have great consequences in circuit complexity and computer science. The book will be of interest to graduate students and researchers in the fields of computer science and discrete mathematics.

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**Contents**


**Fields of interest**

Information and Communication, Circuits; Theory of Computation; Combinatorics; Mathematics of Computing

**Target groups**

Graduate

**Type of publication**

Graduate/advanced undergraduate textbook

**Usually dispatched within 3 to 5 business days**


64,95 €

ISBN 978-3-642-24507-7

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**Combinatorial Optimization**

*Theory and Algorithms*

This comprehensive textbook on combinatorial optimization places special emphasis on theoretical results and algorithms with provably good performance, in contrast to heuristics. It is based on numerous courses on combinatorial optimization and specialized topics, mostly at graduate level. This book reviews the fundamentals, covers the classical topics (paths, flows, matching, matroids, NP-completeness, approximation algorithms) in detail, and proceeds to advanced and recent topics, some of which have not appeared in a textbook before. Throughout, it contains complete but concise proofs, and also provides numerous exercises and references. This fifth edition has again been updated, revised, and significantly extended, with more than 60 new exercises and new material on various topics, including Cayley’s formula, blocking flows, faster b-matching separation, multidimensional knapsack, multicommodity max-flow min-cut ratio, and sparsest cut. Thus, this book represents the state of the art of...

**Features**

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**Contents**


**Fields of interest**

Combinatorics; Calculus of Variations and Optimal Control; Optimization; Mathematics of Computing; Operation Research / Decision Theory

**Target groups**

Graduate

**Type of publication**

Graduate/advanced undergraduate textbook

**Usually dispatched within 3 to 5 business days**


64,95 €

ISBN 978-3-642-24487-2

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**Complex Monge–Ampère Equations and Geodesics in the Space of Kähler Metrics**

The purpose of these lecture notes is to provide an introduction to the theory of complex Monge–Ampère operators (definition, regularity issues, geometric properties of solutions, approximation) on compact Kähler manifolds (with or without boundary). These operators are of central use in several fundamental problems of complex differential geometry (Kähler–Einstein equation, uniqueness of constant scalar curvature metrics), complex analysis and dynamics. The topics covered include, the Dirichlet problem (after Bedford–Taylor), Monge–Ampère foliations and laminated currents, polynomial hulls and Peron envelopes with no analytic structure, a self-contained presentation of Krylov regularity results, a modernized proof of the Calabi–Yau theorem (after Yau and Kolodziej), an introduction to infinite dimensional riemannian geometry, geometric structures on spaces of Kähler metrics (after Mabuchi, Semmes and Donaldson), generalizations of the regularity theory of Caffarelli–Kohn–Nirenberg–Spruck (after[...])

**Features**

The purpose of these lecture notes is to provide an introduction to the theory of complex Monge–Ampère operators (definition, regularity issues, geometric properties of solutions, approximation) on compact Kähler manifolds (with or without boundary). These operators are of central use in several fundamental problems of complex differential geometry (Kähler–Einstein equation, uniqueness of constant scalar [...]

**Contents**


**Fields of interest**

Several Complex Variables and Analytic Spaces; Differential Geometry; Partial Differential Equations; Algebraic Geometry

**Target groups**

Research

**Type of publication**

Contributed volume

**Usually dispatched within 3 to 5 business days**

2012. VIII, 310 p. 4 illus. (Lecture Notes in Mathematics, Vol. 2038) Softcover

69,95 €

ISBN 978-3-642-23668-6
Convexity and Optimization in Banach Spaces

An updated and revised edition of the 1986 title Convexity and Optimization in Banach Spaces, this book provides a self-contained presentation of basic results of the theory of convex sets and functions in infinite-dimensional spaces. The main emphasis is on applications to convex optimization and convex optimal control problems in Banach spaces. A distinctive feature is a strong emphasis on the connection between theory and application. This edition has been updated to include new results pertaining to advanced concepts of subdifferential for convex functions and new duality results in convex programming. The last chapter, concerned with convex control problems, has been rewritten and completed with new research concerning boundary control systems, the dynamic programming equations in optimal control theory and periodic optimal control problems. Finally, the structure of the book has been modified to highlight the most recent progress in the field including fundamental results on the theory of [...]

Contents
- Fundamentals of Functional Analysis
- Convex Functions
- Convex Programming
- Convex Control Problems in Banach Spaces

Fields of interest
- Optimization
- Research

Type of publication
- Monograph

Usually dispatched within 3 to 5 business days

2012, XI, 368 p. (Springer Monographs in Mathematics) Hardcover

89,95 €
ISBN 978-94-007-2246-0
Dissipative Ordered Fluids

Theories for Liquid Crystals

This is a book on the dissipative dynamics of ordered fluids, with a particular focus on liquid crystals. It covers a wide range of different theories, mainly concerned with nematic liquid crystals in both their chiral and nonchiral variants. The authors begin by giving a detailed account of the molecular origins of orientational order in fluids. They then go on to develop a general framework in which continuum theories for ordered fluids can be phrased. Within this unified setting, they cover both well-established classical theories and new ones with aspects that are not yet completely settled. The book treats a wide range of hydrodynamic theories for liquid crystals, from the original 1960s works by Ericksen and Leslie to new, fast-developing ideas of liquid crystal science. The final chapter is devoted to nematocoustics and its applications. Old experiments on the propagation of ultrasound waves in nematic liquid crystals are interpreted and explained in the light of a new theory developed.

Contents

Molecular Theories.- Dynamics of Dissipative Fluids.- Director Theories.- Order Tensor Theories.- Nematocoustics.- Notation and Basic Concepts.- References.- Index.

Fields of interest

Mathematical Physics; Mechanics; Classical Continuum Physics

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. IX, 325 p. 16 illus. Hardcover

89,95 €
ISBN 978-0-387-87814-0

Dynamical Systems and Ergodic Theory at Saint-Flour


Features

Founded in 1971, the Saint-Flour Probability Summer School is organised every year by the mathematics department of the Université Blaise Pascal at Clermont-Ferrand, France, and held in the pleasant surroundings of an 18th century seminary building in the city of Saint-Flour, located in the French Massif Central, at an altitude of 900 m. It attracts a mixed audience of up to 70 PhD students, [...]
Mathematics

C. Norman, Royal Holloway, University of London, UK

Finitely Generated Abelian Groups and Similarity of Matrices over a Field

At first sight, finitely generated abelian groups and canonical forms of matrices appear to have little in common. However, reduction to Smith normal form, named after its originator H.J.S. Smith in 1861, is a matrix version of the Euclidean algorithm and is exactly what the theory requires in both cases. Starting with matrices over the integers, Part 1 of this book provides a measured introduction to such groups: two finitely generated abelian groups are isomorphic if and only if their invariant factor sequences are identical. The analogous theory of matrix similarity over a field is then developed in Part 2 starting with matrices having polynomial entries: two matrices over a field are similar if and only if their rational canonical forms are equal. Under certain conditions each matrix is similar to a diagonal or nearly diagonal matrix, namely its Jordan form. The reader is assumed to be familiar with the elementary properties of rings and fields. Also a knowledge of abstract linear algebra is needed.

Features
At first sight, finitely generated abelian groups and canonical forms of matrices appear to have little in common. However, reduction to Smith normal form, named after its originator H.J.S. Smith in 1861, is a matrix version of the Euclidean algorithm and is exactly what the theory requires in both cases. Starting with matrices over the integers, Part 1 of this book provides a measured introduction to such groups. Part 2 starting with matrices having polynomial entries: two matrices over a field are similar if and only if their rational canonical forms are equal. Under certain conditions each matrix is similar to a diagonal or nearly diagonal matrix, namely its Jordan form. The reader is assumed to be familiar with the elementary properties of rings and fields. Also a knowledge of abstract linear algebra is needed.

Contents

Fields of interest
Field Theory and Polynomials; Group Theory and Generalizations; Linear and Multilinear Algebras, Matrix Theory; Algorithms

Target groups
Upper undergraduate

Type of publication
Undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XII, 381 p. 8 illus. (Springer Undergraduate Mathematics Series, 0) Softcover

34.95 €
ISBN 978-1-4471-2729-1

Frontiers in Numerical Analysis - Durham 2010

This book contains detailed lecture notes on four topics at the forefront of current research in computational mathematics. Each set of notes presents a self-contained guide to a current research area and has an extensive bibliography. In addition, most of the notes contain detailed proofs of the key results. The notes start from a level suitable for first year graduate students in applied mathematics, mathematical analysis or numerical analysis, and proceed to current research topics. The reader should therefore be able to gain quickly an insight into the important results and techniques in each area without recourse to the large research literature. Current (unsolved) problems are also described and directions for future research are given. This book is also suitable for professional mathematicians who require a succinct and accurate account of recent research in areas parallel to their own, and graduates in mathematical sciences.

Features
This book contains detailed lecture notes on four topics at the forefront of current research in computational mathematics. Each set of notes presents a self-contained guide to a current research area and has an extensive bibliography. In addition, most of the notes contain detailed proofs of the key results. The notes start from a level suitable for first year graduate students in applied mathematics. Current (unsolved) problems are also described and directions for future research are given. This book is also suitable for professional mathematicians who require a succinct and accurate account of recent research in areas parallel to their own, and graduates in mathematical sciences.

Contents

Fields of interest
Partial Differential Equations; Functional Analysis

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days


49.95 €
ISBN 978-3-642-23913-7

Functional Spaces for the Theory of Elliptic Partial Differential Equations

The theory of elliptic boundary problems is fundamental in analysis and the role of spaces of weakly differentiable functions (also called Sobolev spaces) is essential in this theory as a tool for analysing the regularity of the solutions. This book offers on the one hand a complete theory of Sobolev spaces, which are of fundamental importance for elliptic linear and non-linear differential equations, and explains on the other hand how the abstract methods of convex analysis can be combined with this theory to produce existence results for the solutions of non-linear elliptic boundary problems. The book also considers other kinds of functional spaces which are useful for treating variational problems such as the minimal surface problem. The main purpose of the book is to provide a tool for graduate and postgraduate students interested in partial differential equations, as well as a useful reference for researchers active in the field. Prerequisites include a knowledge of classical analysis.

Features
Linear and non-linear elliptic boundary problems are a fundamental subject in analysis and the spaces of weakly differentiable functions (also called Sobolev spaces) are an essential tool for analysing the regularity of its solutions. The complete theory of Sobolev spaces is covered whilst also explaining how abstract convex analysis can be combined with this theory to produce existence results.

Contents

Fields of interest
Partial Differential Equations; Functional Analysis

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XVIII, 465 p. 11 illus. (Universitext) Softcover

59.95 €
Groups

An Introduction to Ideas and Methods of the Theory of Groups

Groups are a means of classification, via the group action on a set, but also the object of a classification. How many groups of a given type are there, and how can they be described? Hölder’s program for attacking this problem in the case of finite groups is a sort of leitmotiv throughout the text. Infinite groups are also considered, with particular attention to logical and decision problems. Abelian, nilpotent and solvable groups are studied both in the finite and infinite case. Permutation groups are also studied, disguised within the framework of the cohomology theory of groups; the latter with special emphasis on the extension problem. The sections are followed by exercises; hints to the solution are given, and for most of them a complete solution is provided.

Contents

Normal Subgroups, Conjugation and Isomorphism Theorems. - Group Actions and Permutation Groups. - Generators and Relations. - Nilpotent Groups and Solvable Groups. - Representations. - Extensions and Cohomology. - Solution to the exercises.

Fields of interest

Algebra; Group Theory and Generalizations; Commutative Rings and Algebras.

Target groups

Graduate

Type of publication

Undergraduate textbook

Online orders shipping within 2-3 days.

High Performance Computing in Science and Engineering '11

Transactions of the High Performance Computing Center, Stuttgart (HLRS) 2011

This book presents the state-of-the-art in simulation on supercomputers. Leading researchers present results achieved on systems of the High Performance Computing Center Stuttgart (HLRS) for the year 2011. The reports cover all fields of computational science and engineering, ranging from CFD to computational physics and chemistry, to computer science, with a special emphasis on industrially relevant applications. Presenting results for both vector systems and microprocessor-based systems, the book also offers excellent insights into the potential of vector systems. The book covers the main methods used in high-performance computing. Its outstanding results in achieving highest performance for production codes are of particular interest for scientists and engineers alike. The book comes with a...)

Features

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Inequalities

Theorems, Techniques and Selected Problems

This book is about inequalities which play an important role in mathematical Olympiads. It contains 175 solved problems in the form of exercises and, in addition, 310 solved problems. The book also covers the theoretical background of the most important theorems and techniques required for solving inequalities. It is written for all middle and high-school students, as well as for graduate and undergraduate students. School teachers and trainers for mathematical competitions will also gain benefit from this book.

Contents

Basic (elementary) inequalities and their application. - Inequalities between means, (with two and three variables). - Geometric (triangle) inequalities. - Bernoulli’s inequality, the Cauchy–Schwarz inequality, Chebyshev’s inequality, Surányi’s inequality. - Inequalities between means (general case). - Points of incidence in applications of the AM–GM inequality. - The rearrangement inequality. - Convexity, Jensen’s inequality. - Trigonometric substitutions and their application for proving algebraic inequalities. - The most usual forms of trigonometric substitutions. - Characteristic examples, etc.

Fields of interest

Algebra; Popular Science in Mathematics / Natural Science / Technology; Mathematics Education; Popular Science.

Target groups

Popular/general

Type of publication

Reference work

Usually dispatched within 3 to 5 business days.
Interacting Particle Systems at Saint-Flour


Features
Founded in 1971, the Saint-Flour Probability Summer School is organised every year by the mathematics department of the Université Blaise Pascal at Clermont-Ferrand, France, and held in the pleasant surroundings of an 18th century seminary building in the city of Saint-Flour, located in the French Massif Central, at an altitude of 900 m. It attracts a mixed audience of up to 70 PhD students, [...] 

Contents
Introduction aux processus de Markov à paramètre dans $\mathbb{Z}^d$. - The stochastic evolution of infinite systems of interacting particles. - Topics in propagation of chaos. - Ten lectures on particle systems.

Fields of interest
Probability Theory and Stochastic Processes; Quantum Computing

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


34,95 €
ISBN 978-3-642-25297-6

Interfacial Convection in Multilayer Systems

This book gives a systematic investigation of convection in systems comprised of liquid layers with deformable interfaces. This new edition includes completely updated and new material on flows in ultra thin films and brings up to date progress made in the technology on micro and nano scales. Also, this revised edition will reflect progress in the dynamics of complex fluids.

Features
The interfacial convection is a widespread phenomenon which has numerous applications. This book describes the basic models of interfacial convection used on different spatial scales. It presents a variety of physical mechanisms and types of instability characteristic for liquid systems with interfaces. The book summarizes results obtained in the field of interfacial convection during a number of [...] 

Contents

Fields of interest
Partial Differential Equations; Fluid- and Aerodynamics; Theoretical, Mathematical and Computational Physics; Applications of Mathematics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


74,95 €

Intersections of Hirzebruch–Zagier Divisors and CM Cycles

This monograph treats one case of a series of conjectures by S. Kudla, whose goal is to show that Fourier of Eisenstein series encode information about the Arakelov intersection theory of special cycles on Shimura varieties of orthogonal and unitary type. Here, the Eisenstein series is a Hilbert modular form of weight one over a real quadratic field, the Shimura variety is a classical Hilbert modular surface, and the special cycles are complex multiplication points and the Hirzebruch–Zagier divisors. By developing new techniques in deformation theory, the authors successfully compute the Arakelov intersection multiplicities of these divisors, and show that they agree with the Fourier coefficients of derivatives of Eisenstein series.

Features
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Contents

Fields of interest
Number Theory

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VIII. 140 p. (Lecture Notes in Mathematics, Vol. 2041) Softcover

34,95 €
ISBN 978-3-642-23978-6
Iris Runge

A Life at the Crossroads of Mathematics, Science, and Industry

This book concerns the origins of mathematical problem solving at the internationally active Osram and Telefunken Corporations during the golden years of broadcasting and electron tube research. The woman scientist Iris Runge, who received an interdisciplinary education at the University of Göttingen, was long employed as the sole mathematical authority at these companies in Berlin. It will be shown how mathematical connections were made between statistics and quality control, and between physical-chemical models and the actual problems of mass production. The organization of industrial laboratories, the relationship between theoretical and experimental work, and the role of mathematicians in these settings will also be explained. By investigating the social, economic, and political conditions that unfolded from the time of the German Empire until the end of the Second World War, the book hopes to build a bridge between specialized fields – mathematics and engineering – and the general culture of a[...]

Features

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Contents

Foreword.- Author's Preface.- 1 Introduction.- 2 Formative Groups.- 3 Mathematics at The Osram and Telefunken Corporations.- 4 Interactions Between Science, Politics, And Society.- 5 Post-War Developments And Concluding Remarks.- Appendix.- Bibliography.- Index of Names.

Fields of interest

History of Mathematics; History of Science

Target groups

History of Mathematics; Algebraic Geometry; Mathematics (general)

Type of publication

Biography

Online orders shipping within 2-3 days.

2012. XXII, 442 p. 40 illus., 34 in color. (Science Networks. Historical Studies, Vol. 43) Hardcover

109.95 €
ISBN 978-3-0348-0229-1

Late Style – Yuri I. Manin Looking Back on a Life in Mathematics

This documentary follows Yuri Ivanovich Manin’s stellar career in the ‘golden years’ of Moscow mathematics during the 1960s and 1970s. He was one of the key players in the development of algebraic geometry, at a time when a constellation of brilliant minds — of which Manin’s was but one — were conducting outstanding mathematical research. This happened under the strictures of a closed society that put severe restrictions on academics (despite diplomatic détente) right up to the fall of the Iron Curtain in 1989. Yuri Manin’s brilliance, and his unwavering integrity, helped him evade the pitfalls of Soviet-era academia. His full cooperation with this documentary allows the world a fascinating glimpse into an era of scientific enquiry that is as celebrated as it is underreported. It is about the exceptional life of a mathematician in unusual times, whose passion for his subject, as well as his breadth of thinking, allowed him to forge his own freedom. Internationally recognized for his contribution[...]

Features

This biographical documentary follows Yuri Ivanovich Manin’s stellar career in the ‘golden years’ of Moscow mathematics during the 1960s and 1970s. He was one of the key players in the development of algebraic geometry, at a time when a constellation of brilliant minds — of which Manin’s was but one — were conducting outstanding mathematical research. This happened under the strictures of a closed society[...]

Fields of interest

History of Mathematics; Algebraic Geometry; Mathematics (general)

Target groups

Popular/general

Type of publication

Biography

Online orders shipping within 2-3 days.

2012. 16 p. DVD. (Springer VideoMATH)
29.95 €
ISBN 978-3-642-24482-7

Late Style – Yuri I. Manin Looking Back on a Life in Mathematics

This documentary follows Yuri Ivanovich Manin’s stellar career in the ‘golden years’ of Moscow mathematics during the 1960s and 1970s. He was one of the key players in the development of algebraic geometry, at a time when a constellation of brilliant minds — of which Manin’s was but one — were conducting outstanding mathematical research. This happened under the strictures of a closed society that put severe restrictions on academics (despite diplomatic détente) right up to the fall of the Iron Curtain in 1989. Yuri Manin’s brilliance, and his unwavering integrity, helped him evade the pitfalls of Soviet-era academia. His full cooperation with this documentary allows the world a fascinating glimpse into an era of scientific enquiry that is as celebrated as it is underreported. It is about the exceptional life of a mathematician in unusual times, whose passion for his subject, as well as his breadth of thinking, allowed him to forge his own freedom. Internationally recognized for his contribution[...]

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Fields of interest

History of Mathematics; Algebraic Geometry; Mathematics (general)

Target groups

Popular/general

Type of publication

Biography

Online orders shipping within 2-3 days.

2012. 16 p. 13 illus., 7 in color. DVD. (Springer VideoMATH)
29.95 €
ISBN 978-3-642-24522-0


### Lectures on Gaussian Processes

Gaussian processes can be viewed as a far-reaching infinite-dimensional extension of classical normal random variables. Their theory presents a powerful range of tools for probabilistic modelling in various academic and technical domains such as Statistics, Forecasting, Finance, Information Transmission, Machine Learning - to mention just a few. The objective of these Briefs is to present a quick and condensed treatment of the core theory that a reader must understand in order to make his own independent contributions. The primary intended readership are PhD/Masters students and researchers working in pure or applied mathematics. The first chapters introduce essentials of the classical theory of Gaussian processes and measures with the core notions of reproducing kernel, integral representation, isoperimetric property, large deviation principle. The brevity being a priority for teaching and learning purposes, certain technical details and proofs are omitted. The later chapters touch important[...]

**Contents**

- Preface
- 1. Gaussian Vectors and Distributions
- 2. Examples of Gaussian Vectors, Processes and Distributions
- 3. Gaussian White Noise and Integral Representations
- 4. Measurable Functionals and the Kernel
- 5. Cameron-Martin Theorem
- 6. Isoperimetric Inequality
- 7. Measure Concavity and Other Inequalities
- 8. Large Deviation Principle
- 10. Metric Entropy and Sample Path Properties
- 11. Small Deviations
- 12. Expansions of Gaussian Vectors
- 13. Quantization of Gaussian Vectors
- 14. Invitation to Further Reading

**Fields of interest**

- Probability Theory and Stochastic Processes

**Type of publication**

- Graduate

**Usually dispatched within 3 to 5 business days**

2012, X, 121 p. (SpringerBriefs in Mathematics) Softcover

49,95 €

ISBN 978-3-642-24938-9

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### Linear Algebra and Linear Models

Linear Algebra and Linear Models comprises a concise and rigorous introduction to linear algebra required for statistics followed by the basic aspects of the theory of linear estimation and hypothesis testing. The emphasis is on the approach using generalized inverses. Topics such as the multivariate normal distribution and distribution of quadratic forms are included. For this third edition, the material has been reorganised to develop the linear algebra in the first six chapters, to serve as a first course on linear algebra that is especially suitable for students of statistics or for those looking for a matrix theoretic approach to the subject. Other key features include: coverage of topics such as rank additivity, inequalities for eigenvalues and singular values; a new chapter on linear mixed models; over seventy additional problems on rank: the matrix rank is an important and rich topic with connections to many aspects of linear algebra such as generalized inverses, idempotent matrices and[...]

**Contents**

- Vector Spaces and Subspaces
- Rank, Inner Product and Non-singularity
- Eigenvalues and Positive Definite Matrices
- Generalized Inverses
- Inequalities for Eigenvalues and Singular Values
- Rank Additivity and Matrix Partial Orders
- Linear Estimation
- Tests of Linear Hypotheses
- Linear Mixed Models
- Miscellaneous Topics
- Additional Exercises on Rank

**Fields of interest**

- Linear and Multilinear Algebra, Matrix Theory
- Statistical Theory and Methods
- Statistics for Business, Economics, Mathematical Finance, Insurance

**Target groups**

- Graduate

**Type of publication**

- Graduate/advanced undergraduate textbook

**Usually dispatched within 3 to 5 business days**

2012, VIII, 167 p. 1 illus. (Universitext) Softcover

39,95 €

Markov Semigroups at Saint-Flour


Features
Founded in 1971, the Saint-Flour Probability Summer School is organised every year by the mathematics department of the Université Blaise Pascal at Clermont-Ferrand, France, and held in the pleasant surroundings of an 18th century seminary building in the city of Saint-Flour, located in the French Massif Central, at an altitude of 900 m. It attracts a mixed audience of up to 70 PhD students, [...]

Contents

Fields of interest
Probability Theory and Stochastic Processes

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. VI, 359 p. (Probability at Saint-Flour) Softcover

34,95 €
ISBN 978-3-642-25937-1

Mathematical Methods for Signal and Image Analysis and Representation

Mathematical Methods for Signal and Image Analysis and Representation presents the mathematical methodology for generic image analysis tasks. In the context of this book an image may be any m-dimensional empirical signal living on an n-dimensional smooth manifold (typically, but not necessarily, a subset of spacetime). The existing literature on image methodology is rather scattered and often limited to either a deterministic or a statistical point of view. In contrast, this book brings together these seemingly different points of view in order to stress their conceptual relations and formal analogies. Furthermore, it does not focus on specific applications, although some are detailed for the sake of illustration, but on the methodological frameworks on which such applications are built, making it an ideal companion for those seeking a rigorous methodological basis for specific algorithms as well as for those interested in the fundamental methodology per se. Covering many topics at the forefront of [...]

Features
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Contents

Fields of interest
Mathematics (general); Image Processing and Computer Vision; Mathematical Applications in Computer Science

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 317 p. 96 illus., 50 in color. (Computational Imaging and Vision, Vol. 41) Hardcover

109,95 €
ISBN 978-1-4471-2352-1
Mathematical Modeling for Complex Fluids and Flows

Mathematical Modeling for Complex Fluids and Flows provides researchers and engineering practitioners encountering fluid flows with state-of-the-art knowledge in continuum concepts and associated fluid dynamics. In doing so it supplies the means to design mathematical models of these flows that adequately express the engineering physics involved. It exploits the implicit link between the turbulent flow of classical Newtonian fluids and the laminar and turbulent flow of non-Newtonian fluids such as those required in food processing and polymeric flows. The book develops a descriptive mathematical model articulated through continuum mechanics concepts for these non-Newtonian, viscoelastic fluids and turbulent flows. Each complex fluid and flow is examined in this continuum context as well as in combination with the turbulent flow of viscoelastic fluids. Some details are also explored via kinetic theory, especially viscoelastic fluids and their treatment with the Boltzmann equation. Both solution and [...]
Multiscale and Adaptivity: Modeling, Numerics and Applications

C.I.M.E. Summer School, Cetraro, Italy 2009Editors: Giovanni Naldi, Giovanni Russo

This book is a collection of lecture notes for the CIME course on ’Multiscale and Adaptivity: Modeling, Numerics and Applications,’ held in Cetraro (Italy), in July 2009. Complex systems arise in several physical, chemical, and biological processes, in which length and time scales may span several orders of magnitude. Traditionally, scientists have focused on methods that are particularly applicable in only one regime, and knowledge of the system on one scale has been transferred to another scale only indirectly. Even with modern computer power, the complexity of such systems precludes their being treated directly with traditional tools, and new mathematical and computational instruments have had to be developed to tackle such problems. The outstanding and internationally renowned lecturers, coming from different areas of Applied Mathematics, have themselves contributed in an essential way to the development of the theory and techniques that constituted the subjects of the courses.

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Contents

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

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, XII, 314 p. 72 illus., 24 in color. (C.I.M.E. Foundation Subseries, Vol. 2040) Softcover

69,95 €
ISBN 978-3-642-24078-2

H. Holden, Norwegian University of Science and Technology, Trondheim, Norway; K.H. Karlsen, University of Oslo, Norway (Eds.)

Nonlinear Partial Differential Equations

The Abel Symposium 2010

The topic of the 2010 Abel Symposium, hosted at the Norwegian Academy of Science and Letters, Oslo, was Nonlinear Partial Differential Equations, the study of which is of fundamental importance in mathematics and in almost all of natural sciences, economics, and engineering. This area of mathematics is currently in the midst of an unprecedented development worldwide. Differential equations are used to model phenomena of increasing complexity, and in areas that have traditionally been outside the realm of mathematics. New analytical tools and numerical methods are dramatically improving our understanding of nonlinear models. Nonlinearity gives rise to novel effects reflected in the appearance of shock waves, turbulence, material defects, etc., and offers challenging mathematical problems. On the other hand, new mathematical developments provide new insight in many applications. These proceedings present a selection of the latest exciting results by world leading researchers.

Features
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Contents

Fields of interest
Partial Differential Equations; Mathematical Methods in Physics

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012, XVI, 360 p. 44 illus., 14 in color. (Abel Symposia, Vol. 7) Hardcover

109,95 €
ISBN 978-3-642-25360-7

I.G. Graham, Th. Y. Hou, O. Lakkis, R. Scheichl (Eds.)

Numerical Analysis of Multiscale Problems

The 91st London Mathematical Society Durham Symposium took place from July 5th to 15th 2010, with more than 100 international participants attending. The Symposium focused on Numerical Analysis of Multiscale Problems and this book contains 10 invited articles from some of the meeting’s key speakers, covering a range of topics of contemporary interest in this area. Articles cover the analysis of forward and inverse PDE problems in heterogeneous media, high-frequency wave propagation, atomistic-continuum modeling and high-dimensional problems arising in modeling uncertainty. Novel upsampling and preconditioning techniques, as well as applications to turbulent multi-phase flow, and to problems of current interest in materials science are all addressed. As such this book presents the current state-of-the-art in the numerical analysis of multiscale problems and will be of interest to both practitioners and mathematicians working in those fields.

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

Target groups
Upper undergraduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days


59,95 €
ISBN 978-3-642-22060-9
Pen-and-Paper User Interfaces
Integrating Printed and Digital Documents

Even at the beginning of the 21st century, we are far from becoming paperless. Pen and paper is still the only truly ubiquitous information processing technology. Pen-and-paper user interfaces bridge the gap between paper and the digital world. Rather than replacing paper with electronic media, they seamlessly integrate both worlds in a hybrid user interface. Classical paper documents become interactive. This opens up a huge field of novel computer applications at our workplaces and in our homes. This book provides readers with a broad and extensive overview of the field, so as to provide a full and up-to-date picture of pen-and-paper computing. It covers the underlying technologies, reviews the variety of modern interface concepts and discusses future directions of pen-and-paper computing. Based on the author’s award-winning dissertation, the book also provides the first theoretical interaction model of pen-and-paper user interfaces and an integrated set of interaction techniques for knowledge.[…]

Features
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Contents

Fields of interest
Applications of Mathematics; User Interfaces and Human Computer Interaction

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XII, 189 p. 86 illus., 22 in color. (Human–Computer Interaction Series) Hardcover

79,95 €
ISBN 978-3-642-20275-9
Scheduling
Theory, Algorithms, and Systems

This new edition of the well established text Scheduling - Theory, Algorithms, and Systems provides an up-to-date coverage of important theoretical models in the scheduling literature as well as significant scheduling problems that occur in the real world. It again includes supplementary material in the form of slide-shows from industry and movies that show implementations of scheduling systems. The main structure of the book as per previous edition consists of three parts. The first part focuses on deterministic scheduling and the related combinatorial problems. The second part covers probabilistic scheduling models; in this part it is assumed that processing times and other problem data are random and not known in advance. The third part deals with scheduling in practice; it covers heuristics that are popular with practitioners and discusses system design and implementation issues. All three parts of this new edition have been revamped and streamlined. The...[

Contents

Fields of interest
Operations Research, Mathematical Programming; Industrial and Production Engineering; Probability Theory and Stochastic Processes; Systems Theory, Control

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XX, 673 p. Hardcover
64,95 €

Scientific Computing in Electrical Engineering SCEE 2010

Selected from papers presented at the 8th Scientific Computation in Electrical Engineering conference in Toulouse in 2010, the contributions to this volume cover every angle of numerically modelling electronic and electrical systems, including computational electromagnetics, circuit theory and simulation and device modelling. On computational electromagnetics, the chapters examine cutting-edge material ranging from low-frequency electrical machine modelling problems to issues in high-frequency scattering. Regarding circuit theory and simulation, the book details the most advanced techniques for modelling networks with many thousands of components. Modelling devices at microscopic levels is covered by a number of fundamental mathematical physics papers, while numerous papers on model order reduction help engineers and systems designers to bring their modelling of industrial-scale systems within the reach of present-day computational power. Complementing these more specific papers, the volume also...[

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Contents
Applications of Mathematics; Numerical and Computational Physics; Appl. Mathematics / Computational Methods of Engineering

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

109,95 €
ISBN 978-3-642-22452-2

Spectral Analysis on Graph-like Spaces

Small-radius tubular structures have attracted considerable attention in the last few years, and are frequently used in different areas such as Mathematical Physics, Spectral Geometry and Global Analysis. In this monograph, we analyse Laplace-like operators on thin tubular structures (“graph-like spaces”), and their natural limits on metric graphs. In particular, we explore norm resolvent convergence, convergence of the spectra and resonances. Since the underlying spaces in the thin radius limit change, and become singular in the limit, we develop new tools such as norm convergence of operators acting in different Hilbert spaces, an extension of the concept of boundary triples to partial differential operators, and an abstract definition of resonances via boundary triples. These tools are formulated in an abstract framework, independent of the original problem of graph-like spaces, so that they can be applied in many other situations where the spaces are perturbed.

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Contents
1 Introduction. - 2 Graphs and associated Laplacians. - 3 Scales of Hilbert space and boundary triples. - 4 Two operators in different Hilbert spaces. - 5 Manifolds, tubular neighbourhoods and their perturbations. - 6 Plummer’s shop: Estimates for star graphs and related spaces. - 7 Global convergence results.

Fields of interest
Analysis; Functional Analysis; Operator Theory; Mathematical Physics; Partial Differential Equations; Graph Theory

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XV, 431 p. 28 illus. (Lecture Notes in Mathematics, Vol. 2039) Softcover
69,95 €
ISBN 978-3-642-23839-0
Stochastic Differential Games. Theory and Applications

The subject theory is important in finance, economics, investment strategies, health sciences, environment, industrial engineering, etc.

Features
The subject theory is important in finance, economics, investment strategies, health sciences, environment, industrial engineering, etc.

Contents

Fields of interest
Mathematics (general); Probability Theory and Stochastic Processes; Applications of Mathematics; Game Theory / Mathematical Methods; Operation Research / Decision Theory

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days


79,95 €

Stochastic Filtering at Saint-Flour


Features
Founded in 1971, the Saint-Flour Probability Summer School is organised every year by the mathematics department of the Université Blaise Pascal at Clermont-Ferrand, France, and held in the pleasant surroundings of an 18th century seminary building in the city of Saint-Flour, located in the French Massif Central, at an altitude of 900 m. It attracts a mixed audience of up to 70 PhD students, instructors and researchers interested in probability theory, statistics, and their applications, and lasts 2 weeks. Each summer it provides, in three high-level courses presented by international specialists, a comprehensive study of some subfields in probability theory or statistics. The participants thus have the opportunity to interact with these specialists and also to present their own research work in short lectures. The lecture courses are written up by their authors for publication in the LNM series.

Fields of interest
Probability Theory and Stochastic Processes; Systems Theory, Control

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


33,13 €
ISBN 978-3-642-25429-1

Superprocesses at Saint-Flour

Founded in 1971, the Saint-Flour Probability Summer School is organised every year by the mathematics department of the Université Blaise Pascal at Clermont-Ferrand, France, and held in the pleasant surroundings of an 18th century seminary building in the city of Saint-Flour, located in the French Massif Central, at an altitude of 900 m. It attracts a mixed audience of up to 70 PhD students, instructors and researchers interested in probability theory, statistics, and their applications, and lasts 2 weeks. Each summer it provides, in three high-level courses presented by international specialists, a comprehensive study of some subfields in probability theory or statistics. The participants thus have the opportunity to interact with these specialists and also to present their own research work in short lectures. The lecture courses are written up by their authors for publication in the LNM series.

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Fields of interest
Probability Theory and Stochastic Processes

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


34,95 €
ISBN 978-3-642-25431-4
Symmetry
A Mathematical Exploration

This textbook is perfect for a math course for non-math majors, with the goal of encouraging effective analytical thinking and exposing students to elegant mathematical ideas. It includes many topics commonly found in sampler courses, like Platonic solids, Euler’s formula, irrational numbers, countable sets, permutations, and a proof of the Pythagorean Theorem. All of these topics serve a single compelling goal: understanding the mathematical patterns underlying the symmetry that we observe in the physical world around us. The exposition is engaging, precise and rigorous. The theorems are visually motivated with intuitive proofs appropriate for the intended audience. Students from all majors will enjoy the many beautiful topics herein, and will come to better appreciate the powerful cumulative nature of mathematics as these topics are woven together into a single fascinating story about the ways in which objects can be symmetric.

Features
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Contents
Preface.- 1 Introduction to Symmetry.- 2 The Algebra of Symmetry.- 3 Isomorphism.- 4 The Classification Theorems.- 5 Subgroups and Product Groups.- 6 Permutations.- 7 Symmetries of Solid Objects.- 8 The Five Platonic Solids.- 9 Symmetry and Optimization.- 10 What is a Number?- 11 Cantor’s Infinity.- 12 Euclidean Space.- 13 Symmetry and Matrices.- Index

Fields of interest
Mathematics (general); Geometry; Mathematics in the Humanities and Social Sciences; Mathematics in Art and Architecture

Target groups
Lower undergraduate

Type of publication
Undergraduate textbook

Online orders shipping within 2-3 days.

The Arithmetic of Fundamental Groups
PIA 2010

In the more than 100 years since the fundamental group was first introduced by Henri Poincaré it has evolved to play an important role in different areas of mathematics. Originally conceived as part of algebraic topology, this essential concept and its analogies have found numerous applications in mathematics that are still being investigated today, and which are explored in this volume, the result of a meeting at Heidelberg University that brought together mathematicians who use or study fundamental groups in their work with an eye towards applications in arithmetic. The book acknowledges the varied incarnations of the fundamental group: pro-finite, $\ell$-adic, $p$-adic, pro-algebraic and motivic. It explores a wealth of topics that range from anabelian geometry (in particular the section conjecture), the $\ell$-adic polylogarithm, gonality questions of modular curves, vector bundles in connection with monodromy, and relative pro-algebraic completions, to a motivic version of Minhyong Kim’s non-abelian[—]...

Features
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Contents
Part I Lecture Notes.- Part II Contributions.

Fields of interest
Number Theory; Algebraic Geometry; Topology

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XII, 380 p. 66 illus., 1 in color. (Contributions in Mathematical and Computational Sciences, Vol. 2) Hardcover

109.95 €
ISBN 978-3-642-23904-5

The Crossing of Heaven
Memoirs of a Mathematician

Among the group of physics honors students huddled in 1957 on a Colorado mountain watching Sputnik bisect the heavens, one young scientist was destined, three short years later, to become a key player in America’s own top-secret spy satellite program. One of our era’s most prolific mathematicians, Karl Gustafson was given just two weeks to write the first US spy satellite’s software. The project would fundamentally alter America’s Cold War strategy, and this autobiographical account of a remarkable academic life spent in the top flight tells this fascinating inside story for the first time. Gustafson takes you from his early pioneering work in computing, through fascinating encounters with Nobel laureates and Fields medalists, to his current observations on mathematics, science and life. He tells of brushes with death, being struck by lightning, and the beautiful women who have been a part of his journey.

Features
As one of the most prolific mathematicians of our time, Karl Gustafson has been a central figure in the astonishing technological revolution of the last half-century—a revolution which has transformed human life. His, own account of his journey through those decades, takes the reader from his early pioneering work in computing and espionage, where his contribution was vital to the American Cold War [—]

Contents

Fields of interest
Mathematics (general); Applications of Mathematics; Quantitative Finance; Computational Mathematics and Numerical Analysis; History of Mathematics; Data Structures, Cryptology and Information Theory

Target groups
Popular/general

Type of publication
Biography

Usually dispatched within 3 to 5 business days

2012. XVI, 176 p. 26 illus., 18 in color. Hardcover

39.95 €
ISBN 978-3-642-22557-4
The Dirichlet Problem for Elliptic-Hyperbolic Equations of Keldysh Type

Partial differential equations of mixed elliptic-hyperbolic type arise in various areas of physics and geometry, including fluid and plasma dynamics, optics, cosmology, traffic engineering, projective geometry, geometric variational theory, and the theory of isometric embeddings. And yet even the linear theory of these equations is at a very early stage. This text examines various Dirichlet problems which can be formulated for equations of Keldysh type, one of the two main classes of linear elliptic-hyperbolic equations. Open boundary conditions (in which data are prescribed on only part of the boundary) and closed boundary conditions (in which data are prescribed on the entire boundary) are both considered. Emphasis is on the formulation of boundary conditions for which solutions can be shown to exist in an appropriate function space. Specific applications to plasma physics, optics, and analysis on projective spaces are discussed. (From the preface)

Features
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**Acceptable Risk in Biomedical Research**

**European Perspectives**

This book is the first major work that addresses a core question in biomedical research: the question of acceptable risk. The acceptable level of risks is regulated by the requirement of proportionality in biomedical research law, which state that the risk and burden to the participant must be in proportion to potential benefits to the participant, society or science. This investigation addresses research on healthy volunteers, children, vulnerable subjects, and includes placebo controlled clinical trials. It represents a major contribution towards clarifying the most central, but also the most controversial and complex issue in biomedical research law and bioethics. The EU Clinical Trial Directive, the Council of Europe’s Oviedo Convention (and its Additional Protocol), and national regulation in member states are covered. It is a relevant work for lawyers and ethicists, and the practical approach makes a valuable tool for researchers and members of research ethics committees supervising biomedical.[…]

**Features**

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**Contents**

1. Introduction.
2. Method and material.
3. Initial conceptual clarifications.
5. The purpose of the requirement of proportionality.
6. Introduction: Part II. Which risks, burdens and potential benefits are relevant? How to estimate risks, burdens, and potential benefits. The requirement of proportionality – initial clarifications.
7. Nontherapeutic research.
8. Nontherapeutic research on “vulnerable” participants.
9. Non-interference with necessary […]

**Fields of interest**

Theory of Medicine / Bioethics; Medical Law; Biomedicine (general)

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2012. XV, 293 p. 1 illus. (International Library of Ethics, Law, and the New Medicine, Vol. 50) Hardcover

99.95 €


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**Atlas of Dermatology in Internal Medicine**

Atlas of Dermatology in Internal Medicine is the only concise text-atlas to cover the most common and most important cutaneous manifestations of systemic disease in children and adults. It features more than 150 clinical photographs that are accompanied by format-driven, clinically focused text on the diagnosis and management of cutaneous manifestations of connective tissue, pulmonary, renal, GI, endocrine, malignant, infectious, and HIV disease. There is also a separate chapter on skin diseases commonly seen in the ICU. A special feature is its systematic coverage of clinically relevant dermatopathology. The book is a helpful tool for physicians and trainees in internal medicine, family medicine, pediatrics, emergency medicine, and critical care medicine, as well as family, emergency, and critical care nurse practitioners.

**Features**

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**Contents**


**Fields of interest**

Primary Care Medicine; Dermatology; Internal Medicine; General Practice / Family Medicine; Pediatrics; Emergency Medicine

**Target groups**

Professional/practitioner

**Type of publication**

Professional book

**Usually dispatched within 2-3 days.**

2012. XIV, 148 p. 129 illus. in color. Softcover

39,95 €

Bariatric Surgery

Technical Variations and Complications

The increasing prevalence of obesity in many countries means that it should now be considered a pandemic. It is widely recognized that obesity increases the risk of a variety of life-threatening conditions, including heart disease, diabetes, and hypertension. Bariatric surgery is often the most effective way to treat such morbid obesity. Nevertheless, while various bariatric procedures have been proposed, to date standards have been lacking. In this book, leading experts from around the world discuss all aspects of bariatric surgery and present their own favored versions of surgical procedures with the aid of informative illustrations. Technical nuances are carefully described, and detailed attention is devoted to potential complications and how to avoid them. The expertise of the authors and the range of techniques considered guarantee that both trainees in bariatric surgery and experienced surgeons will find this book to be an invaluable source of information and guidance in their daily work.

Features

The increasing prevalence of obesity in many countries means that it should now be considered a pandemic. It is widely recognized that obesity increases the risk of a variety of life-threatening conditions, including heart disease, diabetes, hypertension, and severe joint problems. Bariatric surgery is often the most effective way to treat such morbid obesity. Nevertheless, while various bariatric procedures have been proposed, to date standards have been lacking.

Contents

From the content: History of Bariatric Surgery. - Gastric Banding. - Gastric Bypass, Sleeve Resection. - etc.

Fields of interest

Surgery; Gastroenterology

Target groups

Professional/practitioner

Type of publication

Professional book

Online orders shipping within 2-3 days.

2012, XIX, 217 p. 251 illus., 213 in color. Hardcover

139.95 €
ISBN 978-3-642-16244-2

W. Steigel, Waltraud Steigel, St. Pölten

Bewegung, Mobilisation und Lagerungen in der Pflege

Praxitipps für Bewegungsübungen und Positionswechsel


Features

Color Atlas of Chemical Peels

Chemical peeling is a well-known method used to restore a more youthful appearance and improve dermatologic defects. This book is the first atlas on chemical peels and has been significantly revised and updated since the first edition so as to reflect the state of the art in the field. The various types of chemical peel and peeling techniques are discussed in a step-by-step manner with the aid of supporting illustrations. Pathogenesis and treatment options are then considered, with each author reporting on his or her personal experience and preferred approach for different diseases and conditions. A new section addresses how to deal with side-effects and complications of the different procedures. This atlas will serve as an ideal reference tool for dermatologists who deal with cosmetology. In particular, by providing clear information on the different peeling procedures and their indications, it will prove invaluable for dermatologists and other doctors who wish to start performing chemical peels.

Features
Chemical peeling is a well-known method used to restore a more youthful appearance and improve dermatologic defects. In recent years the technique has been marked by constant innovation. This book is the first atlas on chemical peels and has been significantly revised and updated since the first edition so as to reflect the state of the art in the field. The various types of chemical peel and peeling [...]
**Deutsch für Ärztinnen und Ärzte**

Kommunikationstraining für Klinik und Praxis


**Features**

Deutsch als Fremdsprache im Klinikalltag meistern! Der berufliche Erfolg eines jeden Arztes basiert auf der gekonnten Kommunikation mit Patienten und Kollegen. Sei es im Anamnese- Gespräch, bei der körperlichen Untersuchung oder der Diskussion von Differenzialdiagnosen. Internationale Ärzte stellen die Arbeit in deutschen Kliniken und Praxen vor eine besonders große Aufgabe, da sie sich [..]

**Contents**


**Fields of interest**

Medicine (general); Personnel Management; Language Education; Medical Education

**Target groups**

Professional/practitioner

**Type of publication**

Professional book

**Online orders shipping within 2-3 days.**

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**Dupuytren’s Disease and Related Hyperproliferative Disorders**

Principles, Research, and Clinical Perspectives

This book is based on results of the 2010 International Symposium on Dupuytren's disease held in Miami, Florida, but it also includes new data and additional chapters. It is hoped that it will raise awareness of this underestimated condition and promote cooperative efforts to work towards a cure. Up to date information is provided on the epidemiology, biology, and pathology of the disease. The principles and specifics of treatment are explored in detail. The indications for and techniques of radiotherapy, minimally invasive treatments and open surgery are fully explained. The role of physical therapy is considered as well as the care of relapse and complications. The treatment of Ledderhose’s disease and Peyronie’s disease is also discussed. This book provides invaluable information for hand surgeons, podiatrists, orthopedists, radiation therapy specialists and general practitioners. It will help to foster an interdisciplinary approach to the understanding and management of this debilitating disorder.

**Features**

Until a cure exists, Dupuytren’s disease and related disorders such as Ledderhose’s disease will pose lifelong threats of functional impairment for affected individuals. A better understanding of the onset of disease, early detection and functional preservation are of the utmost importance to minimize the impact of these conditions. This book is based on presentations and discussions at the 2010 [..]

**Contents**

Epidemiology & Biology & Pathology - Principles of Medical Treatment - Principles of Minimal Invasive Treatment - Radiotherapy in Early Stage Disease - Principles of Open Surgical Treatment - Special Care for Relapse & Complications - Non-medical Treatment of Functional Impairment - Physical Therapy - Related Topics: Radiotherapy in Early Stage Morbus Ledderhose - Surgical Treatment of Advanced Morbus Ledderhose - Section: Various Grouped Topics

**Fields of interest**

Orthopedics; Surgical Orthopedics; General Practice / Family Medicine; Dermatology

**Target groups**

Professional/practitioner

**Type of publication**

Contributed volume

**Online orders shipping within 2-3 days.**

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**Encyclopedia of Immigrant Health**

There is increasing interest in the scientific literature on immigrant health and its impact on disease transmission, disease prevention, health promotion, well-being on an individual and population level, health policy, and the cost of managing all these issues on an individual, institutional, national, and global level. The need for accurate and up-to-date information is particularly acute due to the increasing numbers of immigrants and refugees worldwide as a result of natural disasters, political turmoil, the growing numbers of immigrants to magnet countries, and the increasing costs of associated health care that are being felt by governments around the world. Format and Scope: The first portion of the Encyclopedia will contain chapters that are approximately 25 to 40 manuscript pages in length. Each overview chapter will include a list of references and suggested readings for cross referencing within the Encyclopedia. Currently, the opening chapters are planned to be: Immigration in the[..]

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**Fields of interest**

Medicine (general); Sociology, general; Anthropology; Health Promotion and Disease Prevention

**Target groups**

Research

**Type of publication**

Encyclopedia

**Online orders shipping within 2-3 days.**

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999,00 €

ISBN 978-1-4419-5660-6

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2012. XII, 160 S. 34 Abb. Mit CD-ROM. Softcover

32,66 €

ISBN 978-3-642-24922-8

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2012. XXIII, 474 p. 253 illus., 198 in color. Hardcover

179,95 €

ISBN 978-3-642-22696-0
Encyclopedia of Immigrant Health

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Femoroacetabular Impingement

This book is the first monograph to examine all aspects of femoroacetabular impingement (FAI), an important disease first described early in the twenty-first century. Comprising 27 chapters and including many color illustrations, the book contains a variety of points of view from more than 50 experts from 11 countries and represents an up-to-date compilation of professional knowledge on FAI. The full range of available surgical treatments is carefully described and evaluated, including arthroscopic treatment, the open and mini-open approaches, periacetabular osteotomy, hip resurfacing arthroplasty, and combined techniques. Differential diagnosis, imaging, postoperative management, and treatment outcome are also discussed in appropriate detail. It is hoped that this book will promote a comprehensive approach to what is a common pathology and thereby encourage further improvement in treatment.

Features
Since the first description of femoroacetabular impingement (FAI) by Ganz early in the twenty-first century, hundreds of publications have addressed diagnostic and therapeutic issues and contributed to rapid advances in our knowledge of the disease. This book, however, is the first monograph to examine all aspects of FAI. Comprising 27 chapters and including many color illustrations, the book contains a [...] Contents


Fields of interest
Surgical Orthopedics; Orthopedics; Sports Medicine; Imaging / Radiology; Rehabilitation; Physiotherapy

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

Frozen Section Library: Gynecologic Pathology Intraoperative Consultation

Frozen sections are performed while a patient is undergoing surgery as a basis for making an immediate diagnosis that will impact treatment decisions. Frozen section diagnosis is often a highly demanding situation for the pathologist who must render a diagnosis quickly, based on careful gross examination of specimens to select optimal areas for microscopic examination. The Frozen Section Library series will provide concise, user-friendly, site specific handbooks that are well illustrated and highlight the pitfalls, artifacts and differential diagnosis issues that arise in the hurried frozen section scenario. Donna M. Coffey, M.D., is Assistant Professor, Department of Pathology and Laboratory Medicine, The Methodist Hospital, Houston, Texas and Weill Medical College of Cornell University, New York, New York. Ibrahim Ramzy, M.D., is Professor of Pathology - Laboratory Medicine & Obstetrics-Gynecology, University of California, Irvine, Irvine, California and Adjunct Professor of Pathology, Baylor College of [...] Features

Frozen sections are performed while a patient is undergoing surgery as a basis for making an immediate diagnosis that will impact treatment decisions. Frozen section diagnosis is often a highly demanding situation for the pathologist who must render a diagnosis quickly, based on careful gross examination of specimens to select optimal areas for microscopic examination. The Frozen Section Library [...] Contents


Fields of interest
Pathology; Gynecology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

Handbook of Burns

Volume 1+2

Based on evolving knowledge and modern treatment options the final outcome of burn patients has improved far beyond survival alone. This new comprehensive work consists of two volumes that cover all aspects of modern burn care: It ranges from the complex management of burned patients in the acute phase (volume 1) to burn reconstruction and long-term rehabilitation (volume 2). Compiled and edited by the world’s leading authorities, this work is designed to be an essential reference source for burn surgeons, reconstructive surgeons, anesthesiologists, critical care physicians, burn nurses and all other health care professionals involved in modern burn care and burn care research.

Features
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Surgery; Plastic Surgery; Emergency Medicine; Dermatology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

2012. XIII, 274 p. 204 illus., 138 in color. Hardcover

159.95 €
ISBN 978-3-642-22768-4

D.M. Coffey, The Methodist Hospital, Houston, TX, USA; I. Ramzy, University of California, Irvine, CA, USA

2012. 600 p. 3-volume-set.
ISBN 978-3-7091-1151-2

L.-P. Kamolz, M.G. Jeschke, P. Brychta, R.E. Horch, M. Küntscher (Eds.)

2012. XI, 240 p. 205 illus., 204 in color. (Frozen Section Library, Vol. 11) Softcover

139.95 €
Handbook of Pain and Palliative Care

Biobehavioral Approaches for the Life Course

Pain has long been regarded as an unpleasant sensory consequence of neuronal activity in specific nociceptive pathways that is triggered by noxious stimuli, inflammation, or damage to the nervous system structure or function. However, classic models of disease and pain mechanisms do not adequately explain the commonly observed discrepancies between the extent of pathology levels of reported pain, the impact of experience of illness, disability, or in certain instances death, on the lived experience of pain. In other words, pain is not only a sensory event but a biobehavioral event as well. As such, it is subjective and therefore a significant cause of psychological suffering and even existential questioning. Thus treatment for many chronic pain syndromes, early in life, over the life course, and certainly at the end of life, remains an inexact science. The broad aim of this edited volume is to take a multidisciplinary, biobehavioral, and life course approach to understanding chronic pain. By way of…

Features

Handbook of Pain and Palliative Care: Biobehavioral Approaches for the Life Course Rhonda J. Moore, editor Chronic pain sends millions to doctors every year—yet for many, due to professional caution, incomplete assessment, or other reasons, their treatment is less than adequate in relieving their suffering. With the rise of integrative perspectives and the emphasis on overall quality of life rather than…

Contents

A Biopsychosocial Approach to Understanding Chronic Pain and Disability. - Part I: Communication and Pain. - Pain and Intercultural Communication. - Truth telling and Palliative Care. - Communication and Palliative Care: E-health Interventions and Pain Management. - Educating Patients and Caregivers about Pain Management: What clinicians need to know. - Part II: Assessment. - Pain Assessment Tools in Palliative Care and Cancer. - Quality Indicators for Pain in Palliative Care. - Palliative Care Clinical Trials: Generalizability and Applicability in Hospice and Palliative Care Practice. -

Fields of interest

Pain Medicine; Health Psychology; Rehabilitation; Neurology

Target groups

Research

Type of publication

Handbook

Usually dispatched within 3 to 5 business days

2012. XXVI, 865 p. 58 illus., 32 in color. Hardcover

399,00 €

ISBN 978-1-4419-1650-1

Head and Neck Cancer Imaging

Imaging is crucial in the multidisciplinary approach to head and neck cancer management. The rapid technological development of recent years makes it necessary for all members of the multidisciplinary team to understand the potential applications, limitations, and advantages of existing and evolving imaging technologies. It is equally important that the radiologist has sufficient clinical background knowledge to understand the clinical significance of imaging findings. This book provides an overview of the findings obtained using different imaging techniques during the evaluation of head and neck neoplasms, both before and after therapy. All anatomic areas in the head and neck are covered, and the impact of imaging on patient management is discussed in detail. The authors are recognized experts in the field, and numerous high-quality images are included. This second edition provides information on the latest imaging developments in this area, including the application of PET-CT and…

Features

Imaging is crucial in the multidisciplinary approach to head and neck cancer management. The rapid technological development of recent years makes it necessary for all members of the multidisciplinary team to understand the potential applications, limitations, and advantages of existing and evolving imaging technologies. It is equally important that the radiologist has sufficient clinical background knowledge to understand the clinical significance of imaging findings. This book provides an overview of the findings obtained using different imaging techniques during the evaluation of head and neck neoplasms, both before and after therapy. All anatomic areas in the head and neck are covered, and the impact of imaging on patient management is discussed in detail. The authors are recognized experts in the field, and numerous high-quality images are included. This second edition provides information on the latest imaging developments in this area, including the application of PET-CT and…

Contents


Fields of interest

Imaging / Radiology; Diagnostic Radiology; Head and Neck Surgery; Oncology; Radiotherapy; Nuclear Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

Online orders shipping within 2-3 days.

2012. XIV, 413 p. 357 illus., 78 in color. (Diagnostic Imaging) Hardcover

239,00 €

ISBN 978-3-642-17868-9

Heimhilfe

Praxisleitfaden für die mobile Betreuung zuhause


Features


Fields of interest

Nursing; Nursing Management / Nursing Research

Target groups

Professional/practitioner

Type of publication

Professional book

Online orders shipping within 2-3 days.

2012. 283 S. 10 Abb. Softcover

27,22 €

ISBN 978-3-7091-0678-5
### How to set up an Acute Stroke Service

Although it is widely recognized that time is of the essence in the management of stroke, there are currently few efficient stroke centers that prospective new centers may emulate. This book offers a concise and practical guide on how to set up and run an acute stroke service tailored to the needs of the individual center as a provider of primary, secondary or tertiary care. All aspects of the subject are tackled. Essential knowledge on current imaging and treatment options is provided and guidance is offered on organizing a site-specific stroke pathway so as to ensure the quickest possible provision of treatment. The authors played an integral part in the development and operation of one of Europe’s most successful early stroke centers and also have experience of the factors that can undermine the creation of world-class stroke units. This handbook will be an invaluable source of information for every member of the stroke team.

**Contents**


### Humidification in the Intensive Care Unit

**The Essentials**

Inadequate humidification of inspired gases can cause a variety of serious problems, and humidification has accordingly become an important aspect of modern intensive care medicine. This book is designed to serve as a practical guide for clinicians, providing information on the theoretical background of humidification, the equipment, and its optimal use. The book starts by examining the physiological basis of humidification. Current devices are then discussed, with careful attention to factors influencing their performance and methods to evaluate their effectiveness. The two scenarios of mechanical and non-mechanical ventilation are considered, and the issue of ventilator-associated pneumonia is addressed in detail. Further chapters focus on such topics as humidification following tracheostomy, humidification of the artificial airway during secretion management, measurement of inspired gas temperature in the ventilated neonate, and humidification in the home care setting.

**Features**

Inadequate humidification of inspired gases can cause a variety of serious problems, and humidification has accordingly become an important aspect of modern intensive care medicine. The array of available devices is now formidable, and appropriate advice on their use is essential. Accordingly, this book is designed to serve as a practical guide for clinicians, providing information on the theoretical.

### Images in Urology

**Diagnosis and Management**

Images in Urology is a unique book that integrates images of urological conditions within their clinical context. Improvements in imaging techniques have meant greater diagnostic power and a dramatic rise in the number and quality of images obtained and viewed by practicing clinicians. None more so than in the field of urology, where static and dynamic images are fundamental to the diagnosis and treatment of almost all conditions. This book presents images of radiological and radionuclide scans, macroscopic and microscopic histopathology specimens, urodynamic traces and photographs of dermatological conditions relating to urology. Each section has a series of questions, often relating to a clinical scenario, about the images. A comprehensive answer provides a description of each image and of the condition shown. Details of how to interpret the image and the use of contrast or staining methods to help differentiate normal anatomy from pathology are included. Images in Urology is an essential tool.

**Features**

Images in Urology is a unique book that integrates images of urological conditions within their clinical context. Improvements in imaging techniques have meant greater diagnostic power and a dramatic rise in the number and quality of images obtained and viewed by practicing clinicians. None more so than in the field of urology, where static and dynamic images are fundamental to the diagnosis and...

**Contents**


**Fields of interest**

Urology / Andrology; Diagnostic Radiology; Imaging / Radiology

**Target groups**

Professional/practitioner

**Type of publication**

Contributed volume

**Online orders shipping within 2-3 days.**

2012, XII, 436 p. 305 illus., 152 in color. Hardcover

119.95 €
ISBN 978-0-85729-768-6

2012, XXI, 198 p. 236 illus., 163 in color. Softcover

39.95 €
ISBN 978-3-642-21404-2

2012, X, 288 p. 49 illus., 22 in color. Hardcover

99.95 €
ISBN 978-3-642-02973-8
Imaging in Pediatric Pulmonology

Imaging in Pediatric Pulmonology is a definitive reference to imaging and differential diagnosis for pediatric pulmonology. Diseases and disorders seen in everyday clinical practice are featured, including infections, developmental disorders, airway abnormalities, diffuse lung diseases, focal lung diseases, and lung tumors. Organized to support the clinical thought process, the text begins with a series of clinical algorithms that provide a starting point for formulating a diagnosis. The physician will be able to identify the differentials by symptom complex and accordingly determine what test would be effective and how to proceed. The balance of the book is image-based and presents a comprehensive, multi-modality approach, with an emphasis on plain film and cross-sectional imaging. The imaging sections are correlated with pathology and clinical findings to help readers learn what the modality of choice can enable them to see. Edited by Robert H. Cleveland, MD, Professor of Radiology at...[1]

Contents

Fields of interest
Imaging / Radiology; Pneumology/Respiratory System; Diagnostic Radiology; Pediatrics; Internal Medicine

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days
2012. XIV, 389 p. 318 illus., 48 in color. Hardcover
159.95 €
ISBN 978-1-4419-3871-6

Injury Research

Injury is recognized as a major public health issue worldwide. In most countries, injury is the leading cause of death and disability for children and young adults age 1 to 39 years. Each year in the United States, injury claims about 170,000 lives and results in over 30 million emergency room visits and 2.5 million hospitalizations. Injury can be medically defined as organ/tissue damages inflicted upon oneself or by an external agent either accidentally or deliberately. Injury encompasses the undesirable consequences of a wide array of events, such as motor vehicle crashes, poisoning, burns, falls, and drowning. Medical error, adverse effects of drugs, suicide and homicide. The past two decades have witnessed a remarkable growth in injury research, both in scope and in depth. To address the tremendous health burden of injury morbidity and mortality at the global level, the World Health Organization in 2000 created the Department of Injury and Violence Prevention, which has produced several influential...[3]

Features
Injury Research Theories, Methods, and Approaches
 Guohua Li and Susan Baker, editors From the long-held popular belief, "accidents will happen," it is now recognized that this needn't be the case. More and more, injury is being seen as no accident, not only predictable, but preventable—and an important public health issue requiring rigorous study and multiple levels...[4]

Contents

Fields of interest
Medicine (general); Health Promotion and Disease Prevention; Health Informatics

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days
2012. XXII, 676 p. 115 illus., 37 in color. Hardcover
249.00 €

Integration of Medical and Dental Care and Patient Data

This book informs readers of the needs and rationale for the integration of medical and dental care and information with an international perspective as to how and where medical and dental care separated into specific domains. It provide high level guidance on issues involved with care and data integration and how to achieve an integrated model of health care supported by integrated HIT. A patient typically expects that a visit to a dentist can usually be resolved immediately. This expectation places a premium on instant, accurate, thorough, and current information. The state-of-the-art of fully integrated (dental-medical) electronic health record (EHR) is covered and this is contrasted with the current state of dental-medical software. While dentists in the US Veterans Health Administration (VHA), the US Indian Health Service (IHS), or the US military, for example, have access to fully integrated health records, most US clinicians still gather information from separate sources via fax or phone...[6]

Features
This is the story of a simple idea (the mouth is part of the body) and what it means in the context of the complexities in healthcare organization, care delivery, provider education, and care reimbursement, along with recommendations. Integration of Medical and Dental Care and Patient Data seeks to optimize the delivery of healthcare by stating why isolated components of healthcare delivery need to...[7]

Contents
1. Rationale and Need to Articulate Medical and Dental Data.- 2. Informatics and Technology needs and considerations to achieve the In-tegrated Medical-Dental Electronic Health Record.- 3. Metrics and Measurements.- 4. Broader Considerations of Medical and Dental Data Integration.- 5. International Perspectives and Comparisons.- 6. An Integrated Medical-Dental Electronic Health Record Environment: A Marshfield Experience.- 7. Conclusion and Recommendations

Fields of interest
Health Informatics

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days
2012. XXIV, 418 p. 109 illus., 71 in color. (Health Informatics, Vol. 3) Hardcover
59.95 €
ISBN 978-1-4471-2184-8
Integrative Therapies in Lung Health and Sleep

Integrative Therapies in Lung Health and Sleep provides an overview of integrative therapies to assist clinicians caring for patients with acute or chronic lung diseases and sleep disorders—emphasizing the scientific bases for these therapies; and their implementation into clinical practice. This volume focuses on complementary and alternative medicine (CAM) treatments, modalities, and practices that are integrated with conventional medical treatment and for which there is some evidence of safety and efficacy. Whole Medical Systems, with a specific focus on Traditional Chinese Medicine, are also addressed. Individual chapters are devoted to specific health conditions or illnesses, addressing the current state of the science in the four organizing CAM domains, including available information regarding benefits, risks, or safety considerations. Unique aspects of this volume are the chapters related to evaluation of the evidence base for integrative therapies; new animal model research with [...] Features

Integrative Therapies in Lung Health and Sleep provides an overview of integrative therapies to assist clinicians caring for patients with acute or chronic lung diseases and sleep disorders—emphasizing the scientific bases for these therapies; and their implementation into clinical practice. This volume focuses on complementary and alternative medicine (CAM) treatments, modalities, and practices [...] Features

Intra-Operative Neuropathology for the Non-Neuropathologist

A Case-Based Approach

This volume acquaints the non-neuropathologist with the advantages of clinical-radiologic-pathologic correlation in neuropathology specimens, particularly in the intra-operative consultation. As a good cytology preparation can add to, or even supply in isolation, a diagnosis, this volume covers the enormous and sometimes insurmountable artifacts involved with freezing tissue, especially central nervous system tissue. The text presents how to perform, and stain the cytologic preparations, and how to interpret them. The advantages and disadvantages of both frozen sections and cytologic preparations of various kinds are discussed. The presentation and format is very visual with diagrams, tables, with many figures including pearls and pitfalls and therefore easy reading. An introductory chapter presents the pros and cons of cytology, the advantages and disadvantages of frozen sections, and the artifacts in both. Also included is an argument for knowing what the scans reveal, and the impact of relevant [...] Features

This volume acquaints the non-neuropathologist with the advantages of clinical-radiologic-pathologic correlation in neuropathology specimens, particularly in the intra-operative environment. This volume covers the enormous and sometimes insurmountable artifacts involved with freezing tissue, especially central nervous system tissue and how a good cytology preparation can add to, or even supply in isolation. [...] Features

Iron Physiology and Pathophysiology in Humans

Iron Physiology and Pathophysiology in Humans provides health professionals in many areas of research and practice with the most up-to-date and well-referenced volume on the importance of iron as a nutrient and its role in health and disease. This important new volume is the benchmark in the complex area of interrelationships between the essentiality of iron, its functions throughout the body, including its critical role in erythropoiesis, the biochemistry and clinical relevance of iron-containing enzymes and other molecules involved in iron absorption, transport and metabolism, the importance of optimal iron status on immune function, and links between iron and the liver, heart, brain and other organs. Moreover, the interactions between genetic and environmental factors and the numerous co-morbidities seen with both iron deficiency and iron overload in at risk populations are clearly delineated so that students as well as practitioners can better understand the complexities of these [...] Features

Iron Physiology and Pathophysiology in Humans provides health professionals in many areas of research and practice with the most up-to-date and well-referenced volume on the importance of iron as a nutrient and its role in health and disease. This important new volume is the benchmark in the complex area of interrelationships between the essentiality of iron, its functions throughout the body, [...] Features

Contents

Overview of Integrative Therapies and Healing Practices.- Evaluation of Integrative Therapies for Research and Practice.- Integrative Therapies in Chronic Pulmonary Conditions.- Integrative Therapies for People with Asthma.- Integrative Therapies for People with Chronic Obstructive Pulmonary Disease.- Integrative Therapies for People with Interstitial Lung Disease, Idiopathic Pulmonary Fibrosis, and Pulmonary Arterial Hypertension.- Integrative Therapies for People with Cystic Fibrosis.- Integrative Therapies for People with Lung Cancer.- Integrative Therapies for Lung Transplantation [...] Fields of interest

Pneumology/Respiratory System; Internal Medicine; Primary Care Medicine; Complementary & Alternative Medicine

Target groups

Popular/general

Type of publication

Contributed volume

Online orders shipping within 2-3 days.


Contributed volume

usually dispatched within 3 to 5 business days
Magnetic Resonance Angiography
Principles and Applications

Magnetic Resonance Angiography: Principles and Applications is a comprehensive text covering magnetic resonance angiography (MRA) in current clinical use. The first part of the book focuses on techniques, with chapters on contrast-enhanced MRA, time of flight, phase contrast, time-resolved angiography, and coronary MRA, as well as several chapters devoted to new non-contrast MRA techniques. Additionally, chapters describe in detail specific topics such as high-field MRA, susceptibility-weighted imaging, acceleration strategies such as parallel imaging, vessel wall imaging, targeted contrast agents, and low dose contrast-enhanced MRA. The second part of the book covers clinical applications of MRA, with each chapter describing the MRA techniques and protocols for a particular disease and vascular territory, as well as the pathology and imaging findings relevant to the disease state being discussed.

Magnetic Resonance Angiography: Principles and Applications is designed to bring together into a single volume all the findings relevant to the disease state being discussed.

Manual of Fast Track Recovery for Colorectal Surgery

Manual of Fast Track Recovery for Colorectal Surgery provides a broad overview on enhanced recovery, with expert opinions from leaders in the field regarding elements of enhanced recovery care that are generic and specific to colorectal surgery. This book covers the patient journey through such a programme, commencing with optimisation of the patient’s condition, patient education and conditioning of their expectations.

Manual of Fast Track Recovery for Colorectal Surgery investigates the metabolic response to surgery, anaesthetic contributions and optimal fluid management, after surgery. It also details examples of enhanced recovery pathways and practical tips on post-operative pain control, feeding, mobilisation and criteria for discharge.

The Metabolic Stress Response and Enhanced Recovery Care.

Overview: Key Elements and the Impact of Enhanced Recovery Care...

Contents

- Overview: Key Elements and the Impact of Enhanced Recovery Care...
- Pre-Operative Optimisation and Conditioning of Expectations...
- The Metabolic Stress Response and Enhanced Recovery...
- Anaesthetic Contributions in Enhanced Recovery...
- Peri-Operative Fluid Management in Enhanced Recovery...
- Pain Control After Surgery...
- The Role of the Enhanced Recovery Facilitator...
- Colorectal Surgery and Enhanced Recovery...
- Setting up an Enhanced Recovery Programme...
- Success and Failure in Colorectal Enhanced Recovery...
- Data Collection and Audit

Fields of interest

Colorectal Surgery; Surgery; Oncology; Gastroenterology

Target groups

Professional/practitioner

Type of publication

Professional book

Online orders shipping within 2-3 days.

2012. XVI, 412 p. 302 illus., 76 in color. Hardcover
129,95 €

2012. XII, 181 p. 22 illus., 18 in color. (Enhanced Recovery) Softcover
74,95 €

Medical Response to Major Incidents and Disasters

A Practical Guide for All Medical Staff

This book, written by members of the core faculty responsible for European courses on Medical Response to Major Incidents (MRMD), is a practical guide for all medical staff on how to respond to a wide range of disaster scenarios. The entire spectrum of knowledge is covered, from command and coordination through to the management of individual casualties. Central importance is attached to the key component of decision making by explaining what needs to be done for patients in particular situations and the required order and timing of treatment measures. Simplified methods receive due attention, as it is often necessary for medical staff to administer primary treatment outside of their own specialty. This book will prove an invaluable aid to all who may be involved in the response to major accidents and disasters, including medical and nursing staff, ambulance crew, and military personnel as well as medical specialists.

Features

Disaster medicine is constantly gaining in importance owing to the impact of a variety of trends, including the rising global population, increased levels of travel, increasing production and transport of hazardous material, the development of global terrorism, and the increasing likelihood of disasters due to climatic changes. Additional skills are needed to respond effectively to the emergencies that arise.

Contents

The major incident – definitions and demands on the health care system...
- Major incidents: Examples and experiences...
- The prehospital response...
- Triage...
- The hospital response...
- Management of dead victims...
- Incidents caused by physical trauma...
- Incidents caused by fire and toxic gases...
- Incidents in cold and wet environments...
- Incidents caused by hazardous material...
- Incidents caused by fire and toxic gases...
- Incidents caused by physical trauma...
- Incidents caused by hazardous material...
- Incidents caused by irradiation...
- Infectious diseases and biological weapons...
- Incidents caused by changes in nature and climate...
- Combat casualty management...
- Terrorist attacks on the civilian community...
- Scoring systems...

Fields of interest

Disaster Medicine; Emergency Medicine; Surgical Orthopedics

Target groups

Professional/practitioner

Type of publication

Professional book

Online orders shipping within 2-3 days.

2012. XIV, 412 p. 179 illus., 176 in color. Hardcover
99,95 €
ISBN 978-3-642-21894-1
**Medizinisches Know-how für die Heimhilfe**

Körper und Krankheit verstehen


**Features**

Molecular Genetics and Personalized Medicine

Genetic testing has become commonplace, and clinicians are frequently able to use knowledge of an individual's specific genetic differences to guide their course of action. Molecular Genetics and Personalized Medicine highlights developments that have been made in the field of molecular genetics and how they have been applied clinically. It will serve as a useful reference for physicians hoping to better understand the role of molecular medicine in clinical practice. In addition, it should also prove to be an invaluable resource for the basic scientist that wants to better understand how advances in the laboratory are being moved from the bench to the bedside. All chapters are written by experts in their fields and include the most up to date medical information. The authors simplify complex genetic concepts and focus on practical patient related issues. The book will be of great value to pathologists, hematologists/oncologists, clinical geneticists, high-risk obstetricians, general practitioners, [...] Features

Genetic testing has become commonplace, and clinicians are frequently able to use knowledge of an individual's specific genetic differences to guide their course of action. Molecular Genetics and Personalized Medicine highlights developments that have been made in the field of molecular genetics and how they have been applied clinically. It will serve as a useful reference for physicians hoping to better [...] Contents

Molecular Genetic Testing in the Genomic Era.- Array Comparative Genomic Hybridization in Cytogenetics and Molecular Genetics.- Pharmacogenomics: Tailoring Treatment Based upon Genotype.- Somatic Alterations and Targeted Therapy.- Genome Wide Association Studies in Disease Risk Calculation: The Role of Bioinformatics in Patient Care.- Premptory Genetic Testing: Shifting the Emphasis from Reaction to Prevention.- Prenatal Testing: Screening, Diagnosis and Preimplantation Genetic Diagnosis Eugene Pergament.- Newborn Screening for Metabolic Disorders.- The Role of Genetic Counseling in [...] Fields of interest

Pathology; Oncology; Molecular Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

D.H. Best, University of Utah School of Medicine, Salt Lake City, UT, USA; J.J. Swenren, University of Utah School of Medicine, Salt Lake City, UT, USA (Eds.)

Negotiating Public Health in a Globalized World

Global Health Diplomacy in Action

In a new era of global health diplomacy, the most important tool for decision-making is negotiation. Globalization is binding countries, issues and people together as never before. In the domain of public health, traditional international concerns like the spread of infectious diseases have been joined by new concerns and challenges in managing the health impacts of trade and intellectual property rights, and by new opportunities to create effective global public health agreements and programs. To address the major health crises of today and to prevent or mitigate them in the future, countries must seek collective agreement and action within and across their borders. However, the world of international negotiation is not the world in which health decision-makers reside or are most comfortable. The goal of this guide is to provide health policy-makers with practical information and negotiation tools, to help them create better international health agreements and programs. "This is the best book I [...] Features

In a new era of global health diplomacy, the most important tool for decision-making is negotiation. Globalization is binding countries, issues and people together as never before. In the domain of public health, traditional international concerns like the spread of infectious diseases have been joined by new concerns and challenges in managing the health impacts of trade and intellectual property [...] Contents


Health Promotion and Disease Prevention; Environmental Health; Practice Management

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

D. Fairman, Consensus Building Institute, Cambridge, MA, USA; D. Chigas, CDA-Collaborative Learning Projects, Cambridge, MA, USA; E. McClintock, CMPartners LLC, Cambridge, MA, USA; N. Drager, Verso, Switzerland
Personnes âgées et réanimation

Aux États-Unis 50% des patients admis en réanimation ont plus de 65 ans alors qu’en France, les patients de plus de 80 ans représentent plus de 10% du recrutement des services de réanimation. Cette problématique a un impact sur l’offre de soins que sont les décideurs et administrateurs sur le “tri” à l’admission (régulateurs du SAMU, transporteurs, urgentistes), sur la qualité des soins et les outils d’évaluation spécifiques à la population âgée (gériatres), sur les critères de jugement du bien-fondé des décisions d’orientation (urgentistes, réanimateurs) et enfin sur les coûts (économistes, épidémiologistes).

Features

Aux États-Unis 50% des patients admis en réanimation ont plus de 65 ans alors qu’en France, les patients de plus de 80 ans représentent plus de 10% du recrutement des services de réanimation. Cette problématique a un impact sur l’offre de soins que sont les décideurs et administrateurs sur le “tri” à l’admission (régulateurs du SAMU, transporteurs, urgentistes), sur la qualité des soins et les outils […]
Practical Issues in Anesthesia and Intensive Care

The contents of this book are a selection taken from materials that have been developed during the preparation of continuing education courses (distance learning), whose scientific advisor is the volume editor, Professor Allaria, and that have never previously been published. The topics considered are wide ranging; particular attention is devoted to general topics of importance to the practitioner, but specific controversial issues, such as the role of goal-directed hemodynamic therapy, are also addressed. All of the authors are recognized experts on the subjects they discuss. The book is part of a wider project that aims to provide updated information each year not only in anesthesiology but also in other fields, including cardiology, ophthalmology, and nephrology.

Features
This book, written in a straightforward and easy-to-read style, focuses on important and debated current issues in anesthesiology and critical care medicine. The topics considered are wide ranging; particular attention is devoted to general topics of importance to the practitioner such as sedation, sedoanalgesia, diuretics and other drugs correct use, but specific controversial issues, such as the role of [...] 

Contents
Critical care medicine in the elderly: clinical, ethical and economic controversies.- Does GDHT still make sense in the perioperative period in the critical patient?- Abdominal compartment syndrome and intensive care medicine.- Acute liver failure.- The use of diuretics in intensive care medicine.- Hemorrhage and the perioperative period: the hematologist’s opinion.- Hypercapnia.- Are we sure of using drugs in the right way in critical patients? Decontamination of the digestive tract.- Kidneys, heart and lungs during dysrhythmias.- VAP (Ventilator-Associated Pneumonia).- Artificial[...]

Fields of interest
Anesthesiology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days.

2012, XII, 172 p. 15 illus. Softcover

29,95 €

Prevention of Bone Metastases

Bone metastases continue to be a major cause of morbidity in cancer patients, but improved understanding of the biology of bone metastases has led to the identification of drugs that are of potential value in not only their treatment but also their prevention. This book, written by recognized experts in the field, provides a detailed overview of current knowledge on this subject. One important focus of the [...] 

Contents

Fields of interest
Oncology, Surgical Oncology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, IX, 233 p. 23 illus., 13 in color. (Recent Results in Cancer Research, Vol. 192) Hardcover

159,95 €
ISBN 978-3-642-21891-0
Rianimazione in età pediatrica

La gestione e la rianimazione del bambino in condizioni critiche coinvolgono un vasto campo di conoscenze, tecniche e terapie che richiedono una prospettiva del tutto specifica. Questo volume, rivolto ad anestesisti rianimatori, chirurghi pediatrici e neonatologi, affronta tutte le principali tematiche legate alla terapia pediatrica d’urgenza: l’inquadramento del paziente, le condizioni critiche provocate da insufficienze d’organo, trauami, ustioni, disordini endocrinologici e gastrointestinali; argomenti delicati e cruciali come la morte cerebrale e la donazione d’organo, le diverse tecniche di rianimazione, i farmaci off label, le criticità specifiche del neonato pretermine. In quest’opera di particolare vastità, che ha coinvolto un gran numero di esperti, si è cercato di includere tutte le tematiche più decisive nella rianimazione pediatrica, e per questo potrà diventare un esenziale riferimento per tutti gli specialisti del settore.

Features
La gestione e la rianimazione del bambino in condizioni critiche coinvolgono un vasto campo di conoscenze, tecniche e terapie che richiedono una prospettiva del tutto specifica. Questo volume, rivolto ad anestesisti rianimatori, chirurghi pediatrici e neonatologi, affronta tutte le principali tematiche legate alla terapia pediatrica d’urgenza: l’inquadramento del paziente, le condizioni critiche...

Fields of interest
Pediatric, Intensive / Critical Care Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Online orders shipping within 2-3 days.

2012, XX, 788 pagg. 197 figg., 47 a colori. Hardcover
110,58 €
ISBN 978-88-470-2058-0

Rari tumori nei bambini e adolescenti

Questo è il primo libro dedicato esclusivamente a rari tumori nei bambini e adolescenti, e il suo obiettivo è fornire un aggiornamento in tempo reale sulle loro diagnosi e gestione clinica. L'apertura del libro affronta le malattie infanzili più rare e gli argomenti delicati come il trapianto di organi. C'è un'ampia gamma di professionisti che si dedicano a questo tipo di tumori.

Features
Questo è il primo libro dedicato esclusivamente a rari tumori nei bambini e adolescenti, e il suo obiettivo è fornire un aggiornamento in tempo reale sulle loro diagnosi e gestione clinica. L'apertura del libro affronta le malattie infanzili più rare e gli argomenti delicati come il trapianto di organi. C'è un'ampia gamma di professionisti che si dedicano a questo tipo di tumori.

Fields of interest
Pediatric oncology; Surgical Oncology; Pediatrics

Target groups
Professional/practitioner

Type of publication
Professional book

Online orders shipping within 2-3 days.

2012, X, 547 p. 174 ill., 138 in color. (Pediatric Oncology) Hardcover
179,95 €
ISBN 978-3-642-04196-9

Nuclear Medicine

Adolescents

This is the first book to be devoted exclusively to rare tumors in children and adolescents, and its aim is to provide up-to-date information on their diagnosis and clinical management. The opening section addresses general issues including epidemiology, risk factors/etiology, biology and genetics, early detection, and screening. It also discusses solutions to assist in the management of rare tumors, such as international networking and internet platforms. In the second section, specific malignancies are described, with practical guidance on diagnostic workup, multimodal therapy, follow-up, and adverse effects. Discussion of differential diagnosis encompasses both frequent and rare tumor types, which should enable the clinician to take rare entities into account during the diagnostic assessment. Each chapter goes on to provide detailed therapeutic guidelines for specific rare tumors. The authors are a multidisciplinary group of specialists who have dedicated themselves to this group of tumors.

Features
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Réanimation: un combat pour la vie

La réanimation ? C’est quand on est dans le coma ? C’est quand on a eu un accident grave ? C’est quand on a fait un arrêt cardiaque ? On pourrait dire que la « réa », c’est le plus intensif des soins intensifs. Les malades qui y viennent sont dans un état grave, leur vie est menacée. De nombreuses maladies ou traumatismes peuvent conduire en réanimation. Dans toutes ces situations, une ou plusieurs fonctions vitales sont défaillantes : le cœur, la respiration, le rein, le système nerveux, le foie. Néanmoins, un peu plus de 80 % des malades admis en réanimation en sortiront vivants. Une réadaptation ou une rééducation est parfois nécessaire avant le retour à domicile. Pour réaliser ce livre, la SRLF a envoyé un appel aux services de réanimation de France et de pays francophones pour sélectionner des témoignages reçus de patients ou de leurs proches ayant traversé l’épreuve de la réanimation. À partir de ceux-ci, des phrases ou des mots ont été prélevés « à la pince à disséquer » et classés dans [...]©

Features

La réanimation ? C’est quand on est dans le coma ? C’est quand on a eu un accident grave ? C’est quand on a fait un arrêt cardiaque ? On pourrait dire que la « réa », c’est le plus intensif des soins intensifs. Les malades qui y viennent sont dans un état grave, leur vie est menacée. De nombreuses maladies ou traumatismes peuvent conduire en réanimation. Dans toutes ces situations, une [...]©

Fields of interest

Intensive / Critical Care Medicine; Pain Medicine; Internal Medicine; Emergency Medicine

Target groups

Professional/practitioner

Type of publication

Reference work

Online orders shipping within 2-3 days.

2012. IV, 96 p. 100 ill., 20 en couleurs. Hardcover

23,70 €

Scleroderma

From Pathogenesis to Comprehensive Management

This essential resource presents the most up-to-date information on scleroderma. A clear and concise synthesis of current concepts in pathogenesis and modern approaches to management, this book is comprised of the authoritative work of international experts. With an integrated multidisciplinary approach to comprehensive care, this book is easily accessible for health care professionals in many fields. It is a valuable resource for rheumatologists, pulmonologists, cardiologists, gastroenterologists, nephrologists and all those involved in the care of scleroderma patients.

Features

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Contents


Fields of interest

Rheumatology; Internal Medicine; Pneumology/ Respiratory System

Target groups

Professional/practitioner

Type of publication

Contributed volume

Online orders shipping within 2-3 days.

2012. XX, 689 p. 163 illus., 131 in color. Hardcover

199,95 €

Telemedicine in Dermatology

Written by leading teledermatologists and telemedicine experts, this hands-on guide addresses the practical needs of the many emerging teledermatology services worldwide. It covers the medical and technical prerequisites for such services as well as the photographic imaging essentials. It also illustrates the performance of teledermatology by means of clinical examples, discusses teledermatology in underdeveloped countries, and presents specialized methods of teledermatology. The impact of telemedicine on the doctor-patient relationship is explored, and the advantages that accrue from improving access to expert knowledge are explained. In addition, quality assurance, legal assumptions, economic aspects, and the future horizons of such health care services are all considered. A comprehensive appendix provides information on training opportunities, sample protocols, consent forms, information sheets, references, and relevant web links.

Features

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Contents


Fields of interest

Dermatology; Oncology; Plastic Surgery; Pediatrics; Internal Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

Online orders shipping within 2-3 days.

2012. VI, 201 p. 52 illus., 45 in color. Hardcover

139,95 €
ISBN 978-3-642-20800-3
Textbook of Clinical Pediatrics

The second edition of the textbook is planned to become a MRW-textbook. It will be written by 389 eminent pediatricians and scientists from leading university hospitals and health centers in North America, Europe, Asia and Australia. Written with more than 425 chapters, the book will encompass virtually all pediatric subspecialties, covering every pediatric disease and organ system. Its strong clinical focus with a problem based approach will help practicing pediatricians, residents, medical students as well as family practitioners to manage sick children in a practical way, based on scientific evidence. Thus, it will become a valuable reference and resource for all health care practitioners dealing with pediatric patients.

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Contents


Fields of interest

Pediatrics; Internal Medicine; Nephrology; Surgery; Medicine (general); Nursing

Target groups

Professional/practitioner

Type of publication

Handbook

Online orders shipping within 2-3 days.


499,00 €
ISBN 978-3-642-02201-2
An assessment of uncertainties and limitations in simulating tropical cyclone climatology and future

The thesis work was in two major parts: development and testing of a new approach to detecting and tracking tropical cyclones in climate models; and application of an extreme value statistical approach to enable assessment of changes in weather extremes from climate models. The tracking algorithm applied a creative phase-space approach to differentiate between modeled tropical cyclones and their mid-latitude cousins. A feature here was the careful attention to sensitivity to choice of selection parameters, which is considerable. The major finding was that the changes over time were relatively insensitive to these details. This new approach will improve and add confidence to future assessments of climate impacts on hurricanes. The extremes approach utilized the Generalized Pareto Distribution (one of the standard approaches to statistics of extremes) applied to present and future hurricane distributions as modeled by a regional climate model, then applied the changes to current observations.[...]

Features
This thesis is presented in two parts: development and testing of a new approach to detecting and tracking tropical cyclones in climate models; and application of an extreme value statistical approach to enable assessment of changes in weather extremes from climate models. The tracking algorithm applied a creative phase-space approach to differentiate between modeled tropical cyclones and their mid-latitude.[...]

Contents

Fields of interest
Meteorology / Climatology; Climate Change; Physical Geography

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIII, 78 p. 44 illus., 29 in color. (Springer Theses) Hardcover
99.95 €
ISBN 978-3-642-25028-6

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Eddy Covariance
A Practical Guide to Measurement and Data Analysis

This highly practical handbook is an exhaustive treatment of eddy covariance measurement that will be of keen interest to scientists who are not necessarily specialists in micrometeorology. The chapters cover measuring fluxes using eddy covariance technique, from the tower installation and system dimensioning to data collection, correction and analysis. With a state-of-the-art perspective, the authors examine the latest techniques and address the most up-to-date methods for data processing and quality control. The chapters provide answers to data treatment problems including data filtering, footprint analysis, data gap filling, uncertainty evaluation, and flux separation, among others. The authors cover the application of measurement techniques in different ecosystems such as forest, crops, grassland, wetland, lakes and rivers, and urban areas, highlighting peculiarities, specific practices and methods to be considered. The book also covers what to do when you have all your data, summarizing the[...]

Features
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Contents

Fields of interest
Meteorology / Climatology; Climate Change; Physical Geography

Target groups
Research

Type of publication
Encyclopedia

Online orders shipping within 2-3 days.

624.00 €

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Encyclopedia of Global Justice

This two-volume Encyclopedia of Global Justice, published by Springer, along with Springer’s book series, Studies in Global Justice, is a major publication venture toward a comprehensive coverage of this timely topic. The Encyclopedia is an international, interdisciplinary, and collaborative project, spanning all the relevant areas of scholarship related to issues of global justice, and edited and advised by leading scholars from around the world. The wide-ranging entries present the latest ideas on this complex subject by authors who are at the cutting edge of inquiry. The Encyclopedia sets the tone and direction of this increasingly important area of scholarship for years to come. The entries number around 500 and consist of essays of 300 to 5000 words. The inclusion and length of entries are based on their significance to the topic of global justice, regardless of their importance in other areas.

Features
This two-volume Encyclopedia of Global Justice, published by Springer, along with Springer’s book series, Studies in Global Justice, is a major publication venture toward a comprehensive coverage of this timely topic. The Encyclopedia is an international, interdisciplinary, and collaborative project, spanning all the relevant areas of scholarship related to issues of global justice, and edited[...]

Fields of interest
Political Philosophy; Development Economics; Philosophy of Law; Ethics; Political Science, general

Target groups
Research

Type of publication
Encyclopedia
D.K. Chatterjee, University of Utah, Salt Lake City, UT, USA (Ed.)

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**Contents**

Entrepreneurship, Governance and Ethics

The chapters of this book are a selection of papers presented at a joint conference on Law, Ethics, and Finance was held at the York University School of Business, 16-18 September, 2010. This book highlights with empirical data the strong interplay on ethics in organisational efficiency and entrepreneurial activity, and the role of legal settings and governance in facilitating ethical standards. It is hoped these papers encourage future scholars to continue to investigate the role of law and corporate governance in mitigating corruption and facilitating integrity in management, entrepreneurship and finance. Previously published in the Journal of Business Ethics, Volume 95 Supplement 2, 2010

**Features**

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**Fields of interest**

Ethics; Business & Economics (general), Philosophy (general)

**Target groups**

Research

**Type of publication**

Encyclop(a)edia

**Online orders shipping within 2-3 days.**


499,00 €


R. Cressy, University of Birmingham, UK; D. Cumming, York University, Toronto, ON, CA; C. Mallin, University of Birmingham, UK (Eds.)

**Genomics, Obesity and the Struggle over Responsibilities**

This volume addresses the overlapping aspects of the fields of genomics, obesity and (food) ethics. It is unique in its examination of the implications of genomics for obesity from an ethical perspective. Genomics covers the sciences and technologies involved in the pathways that DNA takes until the organism is completely built and sustained: the range of genes (DNA), transcript factors, enhancers, promoters, RNA (copy of DNA), proteins, metabolism of cell, cellular interactions, organisms. Genomics offers a holistic approach, which, when applied to obesity, can have surprising and disturbing implications for the existing networks tackling this phenomenon. The ethical concerns and consideration presented are inspired by the interaction between the procedural perspective emphasizing the necessity of consultative and participatory organizational relationships in the new gray zones between medicine and food, and the substantive perspective that both cherishes individual autonomy and embeds[...]

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**Contents**

Content. - Contributors. - Acknowledgements. - Editor's Preface. - Part I Introduction. - 1 Challenges of Genomics to Obesity and Traditional Ethics; Michael Korthals. - 2 Genomics and Obesity from an Ethical Perspective: The Role of Corruption, Culture, and Law in Investment Fund Manager Fees; Sofia A. Johan and Dorra Najar. - Legal Protection, Corruption and Private Equity Returns in Asia; Douglas Cumming, Grant Fleming, Sofia Johan and Mai Takeuchi. - Exploring the Impact of Legal Systems and Financial Structure on Corporate Responsibility; Céline Gainet. - The UK[...]

**Fields of interest**

Ethics; Human Genetics; Public Health

**Target groups**

Research

**Type of publication**

Monograph

**Usually dispatched within 3 to 5 business days**

2011. VI, 266 p. Hardcover

69,95 €

ISBN 978-94-007-2925-4

M. Korthals, Wageningen University, The Netherlands (Ed.)

**Trends in Genomics and Existing Deficiencies in the Fields of Environmental, Agricultural and Food Ethics**

2011. XV, 240 p. (The International Library of Environmental, Agricultural and Food Ethics, Vol. 18)

**2011. XV, 240 p. (The International Library of Environmental, Agricultural and Food Ethics, Vol. 18)**

**Softcover**

49,95 €

Grundbegriffe der grünen Gentechnik
Wissenschaftstheoretische und naturphilosophische Grundlagen

Debatten über moderne Technologien wie die grüne Gentechnik kranken häufig daran, dass verwendete Termini nicht explizit gemacht werden. Sie werden in unterschiedlichen Bedeutungen in eine Argumentation eingebracht, ohne dass ein Bedeutungswechsel explizit gemacht wird. Dies führt dazu, dass evaluative Schlusfolgerungen einfach auf Fehlschlüssen beruhen und nicht wirklich aus der Argumentation folgen. […]

Handbook of Risk Theory
Epistemology, Decision Theory, Ethics, and Social Implications of Risk

Risk has become one of the main topics in fields as diverse as engineering, medicine and economics, and it is also studied by social scientists, psychologists and legal scholars. But the topic of risk also leads to more fundamental questions such as: What is risk? What can decision theory contribute to the analysis of risk? What does the human perception of risk mean for society? How should we judge whether a risk is morally acceptable or not? Over the last couple of decades questions like these have attracted interest from philosophers and other scholars into risk theory. This handbook provides for an overview into key topics in a major new field of research. It addresses a wide range of topics, ranging from decision theory, risk perception to ethics and social implications of risk, and it also addresses specific case studies. It aims to promote communication and information among all those who are interested in theoretical issues concerning risk and uncertainty. This handbook brings together […] Features
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Content

Fields of interest
Philosophy of Science; Game Theory, Economics, Social and Behav. Sciences; Operation Research / Decision Theory; Quality Control, Reliability, Safety and Risk; Economic Theory; Philosophy of Technology

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days
2012. XII, 224 S. Abb. (Ethics of Science and Technology Assessment, Vol. 39) Hardcover
46,68 €
ISBN 978-3-642-24899-3

2012. XIX, 1187 p. 85 illus., 40 in color. eReference. In 2 volumes, not available separately.
499,00 €

2012. XIX, 1187 p. 85 illus., 40 in color. In 2 volumes, not available separately. Hardcover
499,00 €
ISBN 978-94-007-1432-8
Le vivant et sa naturalisation

Le problème du naturalisme en biologie chez Husserl et le jeune Merleau-Ponty

Ce volume propose une étude articulée de Husserl et de Merleau-Ponty qui prend comme perspective la dimension épistémologique de leur philosophie relativement à la biologie. Chacun à sa manière, ils se sont penchés sur le statut ambigu de la biologie et sur l’épineuse question du naturalisme, à savoir : dans quelle mesure les êtres vivants peuvent-ils être appréhendés comme des ensembles de processus physiques et chimiques ? La confrontation de leurs deux contributions à la question offre un éclairage qui a conservé toute sa pertinence, alors que le développement de la biologie moléculaire et des neurosciences contemporaines a amené un retour du paradigme naturaliste en biologie. L’étude débute sur une mise en perspective avec la théorie biologique de l’autopoïèse élaborée par F. Varela et H. Maturana. L’enjeu final est de proposer une théorie de la biologie qui respecte son irréductibilité tout en tenant compte du rôle de plus en plus important que les approches physico-chimiques jouent dans[...]

Features

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Contents


Fields of interest

Phenomenology; Philosophy of Biology; Epistemology; Philosophy of Medicine

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. IX. 221 p. (Phaenomenologica, Vol. 202)

Hardcover

169,95 €

ISBN 978-94-007-2210-1

Life, Subjectivity & Art

Essays in Honor of Rudolf Bernet

This book contains essays written by eminent phenomenologists & scholars closely related to R. Bernet, a person and a philosopher (colleagues, friends and collaborators, former students). The intellectual and worldwide authority of R. Bernet’s work is well represented by the list of contributors, as well as by the content of their chapters. In a sense, this volume is a good indication of the importance of Bernet’s own books, articles and classes. The editors have chosen to concentrate the contributions on what could be estimated to be one of the three major themes of his philosophical itinerary: life, seen from a phenomenological point of view, its relation to subjectivity, experiences and consciousness, and both seen as the ground for an original reflection on art (paintings).

Features

This is the first and only collection of essays honoring the work of Rudolf Bernet, a philosopher of worldwide authority. The essays are centered on three major themes of Bernet’s philosophical itinerary: life, seen from a phenomenological point of view, its relation to subjectivity, experiences and consciousness, and both seen as the ground for an original reflection on art, specifically[...]

Contents


Fields of interest

Phenomenology; Aesthetics

Target groups

Research

Type of publication

Collected works

Usually dispatched within 3 to 5 business days

2012. X. 536 p. (Phaenomenologica, Vol. 201)

Hardcover

169,95 €


Philosophical Faith and the Future of Humanity

Karl Jaspers, who died in 1969, had a profound impact on 20th-century theology and philosophy. His central thesis called for, among other things, a de-centering of philosophy from its Eurocentric roots and a renewal of its dialogue with other traditions, especially Asian ones. This collection of essays includes unpublished work by Jaspers himself as well as testimonies to his life and career by colleagues, associates, and translators, some of who knew Jaspers personally. Readers will also find commentary and interpretation by researchers who have explored Jaspers’ work for decades, and a biographical account of Jaspers’ student Leonard Ehrlich, who handled much of Jaspers’ English translation. The book interrogates Jaspers’ conceptions of ‘philosophical faith’, his philosophy of communication, and the prospects for world philosophy in the future. Focusing on philosophical faith, it assesses Jaspers’ interpretations of key philosophers such as Kant, Hegel, Schelling, Kierkegaard, Nietzsche, and[...]

Features

Karl Jaspers, who died in 1969, had a profound impact on 20th-century theology and philosophy. His central thesis called for, among other things, a de-centering of philosophy from its Eurocentric roots and a renewal of its dialogue with other traditions, especially Asian ones. This collection of essays includes unpublished work by Jaspers himself as well as testimonies to his life and career by colleagues, [...]
Responsible Leadership

These chapters on ‘Responsible Leadership’ represent the latest thinking on a topic of increasing relevance in a connected world. There are many challenges that still remain when it comes to establishing responsible leadership both in theory and practice. Whilst offering conceptualisations for the improvement of leadership it is a first and perhaps easier response, what is more difficult is to facilitate the actual change to happen. These chapters will not only generate interest in the emerging domain of studies on responsible leadership, but also will pave the way for future research in this area in the years to come. Previously Published in the Journal of Business Ethics, Volume 98 Supplement 2, 2011

Structural Realism

Structure, Object, and Causality

Structural realism has rapidly gained in popularity in recent years, but it has splintered into many distinct denominations, often underpinned by diverse motivations. There is, no monolithic position known as ‘structural realism,’ but there is a general convergence on the idea that a central role is to be played by relational aspects over object-based aspects of ontology. What becomes of causality in a world without fundamental objects? In this book, the foremost authorities on structural realism attempt to answer this and related questions: ‘what is structure?’ and ‘what is an object?’ Also featured are the most recent advances in structural realism, including the intersection of mathematical structuralism and structural realism, and the latest treatments of laws and modality in the context of structural realism. The book will be of interest to philosophers of science, philosophers of physics, metaphysicists, and those interested in foundational aspects of science.

Features

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The Biotechnology Debate

Democracy in the Face of Intractable Disagreement

This book grounds deliberative democratic theory in a more refined understanding of deliberative practice, in particular when dealing with intractable moral disagreement regarding novel technologies. While there is an ongoing, vibrant debate about the theoretical merits of deliberative democracy on the one hand, and more recently, empirical studies of specific deliberative exercises have been carried out, these two discussions fail to speak to one another. Debates about animal and plant biotechnology are examined as a paradigmatic case for intractable disagreement in today's pluralistic societies. This examination reveals that the disagreements in this debate are multi-faceted and multi-dimensional and can often be traced to fundamental disagreements about values or worldviews. "One of the acute insights to emerge from this examination is that deliberation can serve different purposes vis-à-vis different types of problem. In the case of deeply unstructured problems, like the modern biotechnology..."

Features

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The Virtuous Physician

Although modern medicine enjoys unprecedented success in providing excellent technical care, many patients are dissatisfied with the poor quality of care or the unprofessional manner in which physicians sometimes deliver it. Recently, this patient dissatisfaction has led to quality-of-care and professionalism crisis in medicine. In this book, the author proposes a notion of virtuous physician to address these crises. He discusses the nature of the two crises and efforts by the medical profession to resolve them and then he briefly introduces the notion of virtuous physician and outlines its basic features. Further, virtue theory is discussed, along with virtue ethics and virtue epistemology, and specific virtues, especially as they relate to medicine. The author also explores the ontological priority of caring as the metaphysical virtue for grounding the notion of virtuous physician, and two essential ontic virtues—care and competence. In addition to this, he examines the transformation of care and professionalism crises in medicine. In this book, the author proposes a notion of virtuous physician to [...]
Applied Photometry, Radiometry, and Measurements of Optical Losses

Applied Photometry, Radiometry, and Measurements of Optical Losses reviews and analyzes physical concepts of radiation transfer, providing quantitative foundation for the means of measurements of optical losses, which affect propagation and distribution of light waves in various media and in diverse optical systems and components. The comprehensive analysis of advanced methodologies for low-loss detection is outlined in comparison with the classic photometric and radiometric observations, having a broad range of techniques examined and summarized: from interferometric and calorimetric, resonator and polarization, phase-shift and ring-down decay, wavelength and frequency modulation to pulse separation and resonant, acousto-optic and emissive - subsequently compared to direct and balancing methods for studying free-space and polarization optics, fibers and waveguides. The material is focused on applying optical methods and procedures for evaluation of transparent, reflecting, scattering, absorbing, [...]
Binary Liquid Systems of Nonelectrolytes III
supplement to IV/10A, 13A1, 13A2, and IV/23A

Vapor-liquid equilibrium data, heat of mixing (excess enthalpies), and volumetric properties of systems are required for both the applications in design of industrial technological processes and the understanding the structure and the intermolecular interactions in the systems. On the basis of classical thermodynamics the measured experimental data combined together enable us the calculation of non-measurable thermodynamic properties significant for the technological calculations. The present volume is a compilation of experimental and derived property data on subcritical binary homogeneous (single-phase) or heterogeneous (two-phase) liquid-liquid mixtures. All the components are well-defined pure substances, which are organic nonelectrolytes and water. The present volume is divided into three subvolumes (A, B, C). 800 representative data sets that cover all types of properties and chemical systems are selected for Subvolume A. While Subvolume B comprises 1032 data sets for binary mixtures.[…]

Features
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Fields of interest
Physics (general)

Target groups
Research

Type of publication
Reference work

Usually dispatched within 3 to 5 business days

2012. VIII, 596 p. 1 illus. in color. (Physical Chemistry, Subvolume 26C) Hardcover

4.590,00 €
ISBN 978-3-642-22851-3

Biomimetic Membranes for Sensor and Separation Applications

This book addresses the possibilities and challenges in mimicking biological membranes and creating membrane-based sensor and separation devices. Recent advances in developing biomimetic membranes for technological applications will be presented with focus on the use of integral membrane protein mediated transport for sensing and separation. It describes the fundamentals of biosensing as well as separation and shows how the two processes are working in a cooperative manner in biological systems. Biomimetics is a truly cross-disciplinary approach and this is exemplified using the process of forward osmosis will be presented as an illustration of how advances in membrane technology may be directly stimulated by an increased understanding of biological membrane transport. In the development of a biomimetic sensor/separation technology, both channels (ion and water channels) and carriers (transporters) are important. An ideal sensor/separation device requires the supporting biomimetic matrix to be […]

Features
This book addresses the possibilities and challenges in mimicking biological membranes and creating membrane-based sensor and separation devices. It covers recent advances in developing biomimetic membranes for technological applications with a focus on the use of integral membrane protein mediated transport. It describes the fundamentals of biosensing as well as separation and shows how the two […]

Contents
1 Sensing Meets Separation: Water Transport Across Biological Membranes Stanley D. Hillyard, 2 Nature Meets Technology: Forward Osmosis Membrane Technology Filicia Wicaksana, Anthony G. Fan, Chuyang Tang, and Rong Wang, 3 Polymer-Based Biomimetic Membranes for Desalination Manish Kumar, Michelle M. Payne, Sean K. Poust, and Julie L. Zilles; 4 Ion-Selective Biomimetic Membranes Henk Miedema; 5 Vesicle Arrays as Model-Membranes and Biochemical Reactor Systems Sune M. Christensen and Dimitrios Stamou, 6 Active Biomimetic Membranes Fleming Cornelius; 7 Passive Transport Across Biomimetic[…]

Fields of interest
Membranes; Biochemistry; Biomaterials; Biomedical Engineering; Biophysics and Biological Physics

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XV, 284 p. 104 illus., 75 in color. (Biological and Medical Physics, Biomedical Engineering) Hardcover

119,95 €
ISBN 978-94-007-2183-8

Chemical Evolution of Galaxies

The term “chemical evolution of galaxies” refers to the evolution of abundances of chemical species in galaxies, which is due to nuclear processes occurring in stars and to gas flows into and out of galaxies. This book deals with the chemical evolution of galaxies of all morphological types (ellipticals, spirals and irregulars) and stresses the importance of the star formation histories in determining the properties of stellar populations in different galaxies. The topic is approached in a didactical and logical manner via galaxy evolution models which are compared with observational results obtained in the last two decades: The reader is given an introduction to the concept of chemical abundances and learns about the main stellar populations in our Galaxy as well as about the classification of galaxy types and their main observables. In the core of the book, the construction and solution of chemical evolution models are discussed in detail, followed by descriptions and interpretations of […]

Features
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Contents

Fields of interest
Astronomy, Astrophysics and Cosmology

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIII, 225 p. 128 illus., 68 in color. (Astronomy and Astrophysics Library) Hardcover

89,95 €
ISBN 978-3-642-22490-4
Chips 2020
A Guide to the Future of Nanoelectronics

The chips in present-day cell phones already contain billions of sub-100-nanometer transistors. By 2020, however, we will see systems-on-chips with trillions of 10-nanometer transistors. But this will be the end of the miniaturization, because yet smaller transistors, containing just a few control atoms, are subject to statistical fluctuations and thus no longer useful. We also need to worry about a potential energy crisis, because in less than five years from now, with current chip technology, the internet alone would consume the total global electrical power! This book presents a new, sustainable roadmap towards ultra-low-energy (femto-Joule), high-performance electronics. The focus is on the energy-efficiency of the various chip functions: sensing, processing, and communication, in a top-down spirit involving new architectures such as silicon brains, ultra-low-voltage circuits, energy harvesting, and 3D silicon technologies. Recognized world leaders from industry and from the research community[...]

Cosmogenic Radionuclides
Theory and Applications in the Terrestrial and Space Environments

Cosmogenic radionuclides are radioactive isotopes which are produced by natural processes and distributed within the Earth system. With a holistic view of the environment the authors show in this book how cosmogenic radionuclides can be used to trace and to reconstruct the history of a large variety of processes. They discuss the way in which cosmogenic radionuclides can assist in the quantification of complex processes in the present-day environment. The book aims to demonstrate to the reader the strength of analytic tools based on cosmogenic radionuclides, their contribution to almost any field of modern science, and how these tools may assist in the solution of many present and future problems that we face here on Earth. The book provides a comprehensive discussion of the basic principles behind the applications of cosmogenic (and other) radionuclides as environmental tracers and dating tools. The second section of the book discusses in some detail the production of radionuclides by cosmic[...]

D-Brane
Superstrings and New Perspective of Our World

Superstring theory is a promising theory which can potentially unify all the forces and the matters in particle physics. A new multi-dimensional object which is called ‘D-brane’ was found. It drastically changed our perspective of a unified world. We may live on membrane-like hypersurfaces in higher dimensions (‘braneworld scenario’), or we can create blackholes at particle accelerators, or the dynamics of quarks is shown to be equivalent to the higher dimensional gravity theory. All these scenarios are explained in this book with plain words but with little use of equations and with many figures. The book starts with a summary of long-standing problems in elementary particle physics and explains the D-branes and many applications of them. It ends with future roads for a unified ultimate theory of our world.

Features
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Dark Nebulae, Dark Lanes, and Dust Belts

There are ‘voids’ obscuring all kinds of objects in the cosmos. Voids may be within an object, or between an object and us. Dark Nebulae, Dark Lanes, and Dust Lanes looks out into the deep sky at those apparent dark regions in space, which are among the most compelling telescopic destinations for amateur observers. One famous example is Barnard’s dark nebulae - those striking dark clouds set against the background of stars in the Milky Way. But there are countless other less well known examples. These dark regions are often ignored altogether or commented upon only briefly in astronomy books, and it is all too easy to overlook the treasure trove they offer the observer. Dark Nebulae, Dark Lanes, and Dust Lanes is a great source of practical information for observers. Such voids may be successfully observed using conventional observing methods, but they are often far better seen with technologies such as light-pollution filters, CCD video cameras, and image intensifiers. This book explains the [...] Features

As probably the only book of its type, this work is aimed at the observer who wants to spend time with something less conventional than the usual fare. Because we usually see objects in space by means of illumination of one kind or another, it has become routine to see them only in these terms. However, part of almost everything that we see is the defining dimension of dark shading, or even the [...] Contents


Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy

Target groups
Popular/general

Type of publication
Popular science

Usually dispatched within 3 to 5 business days

2012, XI, 243 p. 75 illus. (Patrick Moore’s Practical Astronomy Series) Softcover
39,95 €

Density Matrix Theory and Applications

Written in a clear pedagogic style, this book deals with the application of density matrix theory to atomic and molecular physics. The aim is to precisely characterize states by a vector and to construct general formulas and proofs of general theorems. The basic concepts and quantum mechanical fundamentals (reduced density matrices, entanglement, quantum correlations) are discussed in a comprehensive way. The discussion leads up to applications like coherence and orientation effects in atoms and molecules, decoherence and relaxation processes. This third edition has been updated and extended throughout and contains a completely new chapter exploring nonseparability and entanglement in two-particle spin-1/2 systems. The text discusses recent studies in atomic and molecular reactions. A new chapter explores nonseparability and entanglement in two-particle spin-1/2 systems.

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Fields of interest
Atomic, Molecular, Optical and Plasma Physics; Mathematical Methods in Physics; Quantum Physics; Physical Chemistry; Math. Applications in Chemistry

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XVIII, 343 p. 30 illus. (Springer Series on Atomic, Optical, and Plasma Physics, Vol. 64) Hardcover
119,95 €
ISBN 978-3-642-20560-6

Exploring Macroscopic Quantum Mechanics in Optomechanical Devices

Recent state-of-the-art technologies in fabricating low-loss optical and mechanical components have significantly motivated the study of quantum-limited measurements with optomechanical devices. Such research is the main subject of this thesis. In the first part, the author considers various approaches for surpassing the standard quantum limit for force measurements. In the second part, the author proposes different experimental protocols for using optomechanical interactions to explore quantum behaviors of macroscopic mechanical objects. Even though this thesis mostly focuses on large-scale laser interferometer gravitational-wave detectors and related experiments, the general approaches apply equally well for studying small-scale optomechanical devices. The author is the winner of the 2010 Thesis prize awarded by the Gravitational Wave International Committee.

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Recent state-of-the-art technologies in fabricating low-loss optical and mechanical components have significantly motivated the study of quantum-limited measurements with optomechanical devices. Such research is the main subject of this thesis. In the first part, the author considers various approaches for surpassing the standard quantum limit for force measurements. In the second part, the author proposes [...] Contents


Fields of interest
Astrophysics and Astroparticles; Laser Technology and Physics; Photonics; Measurement Science, Instrumentation; Classical and Quantum Gravitation, Relativity Theory; Applied Optics, Optoelectronics, Optical Devices

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XXI, 205 p. 79 illus. (Springer Theses) Hardcover
99,95 €
ISBN 978-3-642-25639-4
Fowler-Nordheim Field Emission

From the Universe to the Elementary Particles
A First Introduction to Cosmology and the Fundamental Interactions

Fundamentals of Time-Dependent Density Functional Theory

There have been many significant advances in time-dependent density functional theory over recent years, both in enlightening the fundamental theoretical basis of the theory, as well as in computational algorithms and applications. This book, as successor to the highly successful volume Time-Dependent Density Functional Theory (Lect. Notes Phys. 706, 2006) brings together for the first time all recent developments in a systematic and coherent way. First, a thorough pedagogical presentation of the fundamental theory is given, clarifying aspects of the original proofs and theorems, as well as presenting fresh developments that extend the theory into new realms—such as alternative proofs of the original Runge-Gross theorem, open quantum systems, and dispersion forces to name but a few. Next, all of the basic concepts are introduced sequentially and building in complexity, eventually reaching the level of open problems of interest. Contemporary applications of the theory are discussed, from real-time[...]

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GaN-Based Laser Diodes
Towards Longer Wavelengths and Short Pulses

The emergence of highly efficient short-wavelength laser diodes based on the III-V compound semiconductor GaN has not only enabled high-density optical data storage, but is also expected to revolutionize display applications. Moreover, a variety of scientific applications in biophotonics, materials research and quantum optics can benefit from these versatile and cost-efficient laser light sources in the near-UV to green spectral range. This thesis describes the device physics of GaN-based laser diodes, together with recent efforts to achieve longer emission wavelengths and short-pulse emission. Experimental and theoretical approaches are employed to address the individual device properties and optimize the laser diodes toward the requirements of specific applications.

Features
The emergence of highly efficient short-wavelength laser diodes based on the III-V compound semiconductor GaN has not only enabled high-density optical data storage, but is also expected to revolutionize display applications. Moreover, a variety of scientific applications in biophotonics, materials research and quantum optics can benefit from these versatile and cost-efficient laser light sources in the [...]

Contents

Fields of interest
Laser Technology and Physics, Photonics; Semiconductors; Applied Optics, Optoelectronics, Optical Devices

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XIV, 95 p. 57 illus., 27 in color. (Springer Theses) Hardcover
99,95 €
ISBN 978-3-642-24537-4

Grundkurs Theoretische Physik 4
Spezielle Relativitätstheorie, Thermodynamik


Features

Contents

Fields of interest
Thermodynamics, Classical and Quantum Gravity, Relativity Theory; Mathematical Methods in Physics

Target groups
Upper undergraduate

Type of publication
Undergraduate textbook

Online orders shipping within 2-3 days.

2012, XIV, 431 S. 95 Abb. (Springer-Lehrbuch) Softcover
37,34 €
ISBN 978-3-642-24480-3

Grundkurs Theoretische Physik 5/2
Quantenmechanik - Methoden und Anwendungen


Features

Contents

Fields of interest
Quantum Physics; Theoretical, Mathematical and Computational Physics

Target groups
Upper undergraduate

Type of publication
German textbook

Online orders shipping within 2-3 days.

2012, XIV, 588 S. 51 Abb. (Springer-Lehrbuch) Softcover
37,34 €
ISBN 978-3-642-24420-9
Guidebook to the Constellations

Telescopic Sights, Tales, and Myths

This handbook is a guide to exploring the classical night sky and its wonderful telescopic sights. All 88 officially recognized constellations are presented in natural groups which are related by their origin and location in the sky. Each group is explained by a fascinating story which tells what each constellation represents, how it appears in the sky, and why the other constellations of the group are close by, or related in some other manner. Some of these stories are classical myths which show how and why ancient cultures saw the constellations as related groups. Others are about more modern astronomers who sought recognition by filling in the gaps between the ancient constellations with inventions of their own. Both types of stories are crafted to make the constellation groups memorable, so that amateur astronomers can not only locate and recognize the constellations more easily, but also be able to pinpoint the celestial objects they contain more quickly. Specific instructions are given for […]

Features

This handbook is a guide to exploring the night sky and its wonderful telescopic sights. All eighty-eight officially recognized constellations in both hemispheres are presented in natural groups, related by their origin and location. The author, a former astronomy instructor and planetarium director, has for over thirty-five years, researched myths from all cultures saw the constellations as related groups. The author, a former astronomy instructor and planetarium director, has for over thirty-five years, researched myths from all cultures from all cultures.

Contents

How to Observe the Sky Using this Book.- The North Circumpolar Constellations.- The Andromeda Group.- The Orion Group.- The Hercules Group.- The Boötes Group.- The Corvus Group.- The Aquila Group.- The Argo Navis Group.- The Lyra Group.- The Gemini Group.- The Watery Part of the Sky.- Other Northern Constellations.- Modern Constellations Formed by Plancius.- Modern Constellations Formed by Hevelius.- Modern Constellations Formed by Lacaille.- Glossary of Terms.- Appendices.- Index.

Fields of Interest

Astronomy; Observations and Techniques; Popular Science in Astronomy

Target groups

Popular/general

Type of publication

Popular science

Online orders shipping within 2-3 days.

H2O (HOH), Part 1 alpha

Molecular constants mostly from Infrared Spectroscopy

Subvolume C: Nonlinear Triatomic Molecules

With the development of modern instruments and theories, a considerable amount of spectroscopic information is being permanently collected on molecules. The infrared, in particular, is seeing extraordinary activities. Using Fourier transform interferometers and infrared lasers, accurate data are measured often with extreme sensitivity. These data are also analyzed and precise molecular parameters determined. Volume II/20, “Molecular Constants Mostly from Infrared Spectroscopy”, is a recent Landolt-Börnstein publication series bringing together these results. It is made up of several volumes (A, B, C, D) with comprehensive compilation of critically evaluated molecular constants of diatomic (A), linear triatomic (B), nonlinear triatomic (C), and other polyatomic (D) molecules. Subvolume II/20C is devoted to H2O.

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Fields of interest

Physics; Spectra

Target groups

Research

Type of publication

Reference work

Usually dispatched within 3 to 5 business days

2012. 500 p. (Molecules and Radicals, Subvolume 20C1alpha) Hardcover

3.790,00 €

ISBN 978-3-540-56060-9

Handbook of Particle Detection and Imaging

The handbook centers on detection techniques in the field of particle physics, medical imaging and related subjects. It is structured into three parts. The first one is dealing with basic ideas of particle detectors, followed by applications of these devices in high energy physics and other fields. In the last part the large field of medical imaging using similar detection techniques is described. The different chapters of the book are written by world experts in their field. Clear instructions on the detection techniques and principles in terms of relevant operation parameters for scientists and graduate students are given. Detailed tables and diagrams will make this a very useful handbook for the application of these techniques in many different fields like physics, medicine, biology and other areas of natural science.

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Contents

VOLUME 1: PART 1: BASIC PRINCIPLES OF DETECTORS AND ACCELERATORS.


Fields of interest

Particle Acceleration and Detection, Beam Physics; Imaging / Radiology; Nuclear Engineering; Measurement Science, Instrumentation; Archaeology; Extraterrestrial Physics, Space Sciences

Target groups

Research

Type of publication

Handbook

Usually dispatched within 3 to 5 business days

2012. XXII, 1227 p. 558 illus., 100 in color. In 2 volumes, not available separately. Hardcover

499,00 €

ISBN 978-3-642-13270-4
Handbook of Particle Detection and Imaging

The handbook centers on detection techniques in the field of particle physics, medical imaging and related subjects. It is structured into three parts. The first one is dealing with basic ideas of particle detectors, followed by applications of these devices in high energy physics and other fields. In the last part the large field of medical imaging using similar detection techniques is described. Clear instructions on the detection techniques and principles in terms of relevant operation parameters for scientists and graduate students are given. Detailed tables and diagrams will make this a very useful handbook for the application of these techniques in many different fields like physics, medicine, biology and other areas of natural science.

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Contents
VOLUME I: PART 1: BASIC PRINCIPLES OF DETECTORS AND ACCELERATORS.
- Interactions of Particles and Radiation with Matter.
- Electronics Part I.
- Electronics Part II.
- Data Analysis.
- Statistics.
- Accelerators for Particle Physics.
- Synchrotron Radiation and FEL Instrumentation.
- Calibration of Radioactive Sources.
- Radiation Protection.
- PART 2: SPECIFIC TYPES OF DETECTORS.
- Gaseous Detectors.
- Tracking Detectors.
- Photon Detectors.
- Neutrino Detectors.
- Scintillation Counters.
- Semiconductor Counters.
- Gamma-Ray Detectors.
- Cherenkov Counters.
- Muon Spectrometers.
- Calorimeters.

Fields of interest
Particle Acceleration and Detection, Beam Physics; Imaging / Radiology; Nuclear Engineering; Measurement Science, Instrumentation; Archaeology; Extraterrestrial Physics, Space Sciences

Target groups
Research

Type of publication
Handbook

Online orders shipping within 2-3 days.

2012. XXII, 1227 p. 558 illus., 100 in color. eReference. In 2 volumes, not available separately.
499,00 €
ISBN 978-3-642-13271-1

High-Energy Aspects of Solar Flares

This edited volume describes many aspects of current research on solar flares, emphasizing recent progress in understanding their X-ray and gamma-ray emissions. Several of the chapters deal comprehensively with the problems of particle acceleration, conversion of particle energy into various forms of radiation, and the inference of physical processes from observations. Other chapters deal with the full breadth and richness of flare observations, including microflares and nanoflares. This volume is aimed at graduate students and researchers in solar physics and space science. Previously published in Space Science Reviews journal, Vol. 159/1-4, 2011.

Contents

Features
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Fields of interest
Astrophysics and Astroparticles; Plasma Physics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VI, 478 p. 284 illus., 81 in color. Hardcover
129,95 €
ISBN 978-1-4614-3072-8
How Likely is Extraterrestrial Life?

What does existing scientific knowledge about physics, chemistry, meteorology and biology tell us about the likelihood of extraterrestrial life and civilizations? And what does the fact that there is currently no credible scientific evidence for the existence of extraterrestrial biospheres or civilizations teach us? This book reviews the various scientific issues that arise in considering the question of how common extraterrestrial life is likely to be in our galaxy and whether humans are likely to detect it. The book stands out because of its very systematic organization and relatively unbiased treatment of the main open question. It covers all relevant aspects of many disciplines required to present the different possible answers. It has and will provide undergraduates with a stimulating introduction to many of these fields at an early stage in their university careers, when they are still choosing a specialty. The difficulties and the range of possible answers to the title question are[...]

Contents

Fields of interest
Astrobiology; Extraterrestrial Physics, Space Sciences; Biogeosciences; Planetology

Target groups
Upper undergraduate

Type of publication
Brief

Usually dispatched within 3 to 5 business days

Intelligent Textiles and Clothing for Ballistic and NBC Protection

Technology at the Cutting Edge

This volume describes the latest developments in protective clothing against nearly any kind of threat for both military and civilians. It deals with protection through the use of nanotechnology, interactive clothing and biotechnological processes. Factors such as comfort and ballistics are also considered in the book, and several practical examples are discussed. All papers are written by leading experts in their respective fields. Professionals and students alike will benefit from the knowledge and expertise imparted in these outstanding contributions.

Features
This volume describes the latest developments in protective clothing against nearly any kind of threat for both military and civilians. It deals with protection through the use of nanotechnology, interactive clothing and biotechnological processes. Factors such as comfort and ballistics are also considered in the book, and several practical examples are discussed. All papers are written by leading experts in[...]

Fields of interest
Security Science and Technology; Engineering Design; Textile Engineering; Nanotechnology and Microengineering; Microbiology

Target groups
Graduate

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012 X, 220 p. 91 illus., 22 in color. (NATO Science for Peace and Security Series B: Physics and Biophysics) Hardcover

139,95 €

Intelligent Textiles and Clothing for Ballistic and NBC Protection

Technology at the Cutting Edge

This volume describes the latest developments in protective clothing against nearly any kind of threat for both military and civilians. It deals with protection through the use of nanotechnology, interactive clothing and biotechnological processes. Factors such as comfort and ballistics are also considered in the book, and several practical examples are discussed. All papers are written by leading experts in their respective fields. Professionals and students alike will benefit from the knowledge and expertise imparted in these outstanding contributions.

Features
This volume describes the latest developments in protective clothing against nearly any kind of threat for both military and civilians. It deals with protection through the use of nanotechnology, interactive clothing and biotechnological processes. Factors such as comfort and ballistics are also considered in the book, and several practical examples are discussed. All papers are written by leading experts in[...]

Fields of interest
Security Science and Technology; Engineering Design; Textile Engineering; Nanotechnology and Microengineering; Microbiology

Target groups
Graduate

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012 X, 220 p. 91 illus., 22 in color. (NATO Science for Peace and Security Series B: Physics and Biophysics) Softcover

89,95 €
ISBN 978-94-007-0593-7
Laser-Induced Breakdown Spectroscopy
Fundamentals and Applications

This book is a comprehensive source of the fundamentals, process parameters, instrumental components and applications of laser-induced breakdown spectroscopy (LIBS). The effect of multiple pulses on material ablation, plasma dynamics and plasma emission is presented. A heuristic plasma modeling allows to simulate complex experimental plasma spectra. These methods and findings form the basis for a variety of applications to perform quantitative multi-element analysis with LIBS. These application potentials of LIBS have really boosted in the last years ranging from bulk analysis of metallic alloys and non-conducting materials, via spatially resolved analysis and depth profiling covering measuring objects in all physical states: gaseous, liquid and solid. Dedicated chapters present LIBS investigations for these tasks with special emphasis on the methodical and instrumental concepts as well as the optimization strategies for a quantitative analysis. Requirements, concepts, design and characteristic [...] Features
This book is a comprehensive source of the fundamentals, process parameters, instrumental components and applications of laser-induced breakdown spectroscopy (LIBS). The effect of multiple pulses on material ablation, plasma dynamics and plasma emission is presented. A heuristic plasma modeling allows to simulate complex experimental plasma spectra. These methods and findings form the basis for a variety of [...] Contents

Fields of interest
Spectroscopy and Microscopy; Atoms and Molecules in Strong Fields; Laser Matter Interaction; Characterization and Evaluation of Materials; Manufacturing, Machines, Tools

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 543 p. 371 illus., 28 in color. Hardcover

169.95 €
ISBN 978-3-642-20667-2

Lazioni di Cosmologia Teorica

Il libro è basato sulle lezioni attualmente tenute dall'autore presso l'Università di Bari, ed è progettato in modo da rappresentare un testo di riferimento il più possibile moderno, completo e autosufficiente per i corsi semestrali di Cosmologia, Astrofisica o Fisica Astrofisica che compaiono nel piano di studi della Laurea Magistrale in Fisica e in Astronomia. Contiene gli elementi di base della [...] Features
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Fields of interest
Cosmology; Astronomy, Astrophysics and Cosmology; Astrophysics and Astrofisica; Classical and Quantum Gravitation, Relativity Theory; Quantum Field Theories, String Theory

Target groups
Upper undergraduate

Type of publication
Graduate/advanced undergraduate textbook

Online orders shipping within 2-3 days.

2012. X, 240 pagg. 15 figg., 1 a colori. (Collana di Fisica e Astronomia) Softcover

25,91 €
ISBN 978-88-470-2483-0

Magnetic Reconnection

Theoretical and Observational Perspectives

This volume covers different aspects of recent theoretical and observational work on magnetic reconnection, a fundamental plasma-physical process by which energy stored in magnetic field is converted, often explosively, into heat and kinetic energy. This collection of papers from the fields of solar and space physics, astrophysics, and laboratory plasma physics is especially timely in view of NASA's upcoming Magnetospheric Multiscale mission, which will use Earth's magnetosphere as a laboratory to test, through in-situ measurement of the plasma, energetic particles, and electric and magnetic fields, the various and sometimes competing models and theories of magnetic reconnection. This volume is aimed at researchers in solar physics, magnetospheric physics and plasma physics. Previously published in Space Science Reviews journal, Vol. 160/1-4, 2011.

Features
This volume covers different aspects of recent theoretical and observational work on magnetic reconnection, a fundamental plasma-physical process by which energy stored in a magnetic field is converted, often explosively, into heat and kinetic energy. This collection of papers from the fields of solar and space physics, astrophysics, and laboratory plasma physics is especially timely in view of NASA's upcoming [...] Features
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Fields of interest
Extraterrestrial Physics, Space Sciences; Atmospheric Sciences; Plasma Physics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VI, 170 p. 48 illus., 33 in color. Hardcover

99,95 €
### Magnetism

#### Basics and Applications

This textbook is aimed at engineering students who are likely to come across magnetics applications in their professional practice. Whether designing lithography equipment containing ferromagnetic brushes, or detecting defects in aeronautics, some basic knowledge of 21st century magnetism is needed. From the magnetic tape on the pocket credit card to the read head in a personal computer, people run into magnetism in many products. Furthermore, in a variety of disciplines tools of the trade exploit magnetic principles, and many interdisciplinary laboratory research areas cross paths with magnetic phenomena that may seem mysterious to the untrained mind.

Therefore, this course offers a broad coverage of magnetism topics encountered more often in this millennium, revealing key concepts on which many practical applications rest. Some traditional subjects in magnetism are discussed in the first half of the book, followed by areas likely to spark the curiosity of those more interested in today’s [..]

#### Features

This textbook is aimed at engineering students who are likely to come across magnetics applications in their professional practice. Whether designing lithography equipment containing ferromagnetic brushes, or detecting defects in aeronautics, some basic knowledge of 21st century magnetism is needed. From the magnetic tape on the pocket credit card to the read head in a personal computer, [..]

#### Contents

- Traditional Magnetism: The Magnetization Process
- Micromagnetism: Magnetic Nondestructive Testing Techniques
- Uses of the Magneto-Optical Effect
- Magnetoelectric Materials
- Giant Magnetoresistance, Spin Valves
- Introduction to Spintronics
- Some Magnetic Recording Media Developments
- Concluding Remarks

#### Fields of interest

- Magnetism
- Magnetic Materials
- Nanotechnology
- Engineering (general)

#### Target groups

- Graduate

#### Type of publication

- Graduate/advanced undergraduate textbook

**Usually dispatched within 3 to 5 business days**

2012. XXIII, 334 p. 142 illus., 55 in color. Hardcover

69,95 €
ISBN 978-3-642-22976-3

### Mass Metrology

This book presents the practical aspects of mass measurements. Concepts of gravitational, inertial and conventional mass and details of the variation of acceleration of gravity are described. The Metric Convention and International Prototype Kilogram and BIPM standards are described. The effect of change of gravity on the indication of electronic balances is derived with respect of latitude, altitude and earth topography. The classification of weights by OIML is discussed. Maximum permissible errors in different categories of weights prescribed by national and international organizations are presented. Starting with the necessity of redefining the unit kilogram in terms of physical constants, various methods of defining the kilogram in terms of physical constants are described. The kilogram can be defined by Avogadro’s constant, ion collection of some heavy elements, levitation, voltage and Watt Balance. The detection of very small mass of the order of zeptogram through Nanotechnology is also[..]

#### Features

This book presents the practical aspects of mass measurements. Concepts of gravitational, inertial and conventional mass and details of the variation of acceleration of gravity are described. The Metric Convention and International Prototype Kilogram and BIPM standards are described. The effect of change of gravity on the indication of electronic balances is derived with respect of latitude, altitude and earth [..]

#### Contents

- Some Important Definitions.
- Introduction.
- Other Probability Functions.
- Evaluation of Measurement Data.
- Propagation of Errors/Uncertainty.
- Uncertainty and Calibration of Instruments.
- Calculation of Uncertainty.
- Uncertainty in Calibration of a Surface Plate.
- Uncertainty in Volumetric Measurement.
- Uncertainty in Calibration of Electrical Instruments.

#### Fields of interest

- Measurement Science, Instrumentation
- Characterization and Evaluation of Materials
- Theoretical and Applied Mechanics

#### Target groups

- Research

**Usually dispatched within 3 to 5 business days**

2012. XVIII, 353 p. 127 illus., 3 in color. Hardcover

99,95 €
ISBN 978-3-642-20988-8

### Measurement Uncertainties

#### Physical Parameters and Calibration of Instruments

This book fulfills the global need to evaluate measurement results along with the associated uncertainty. In the book, together with the details of uncertainty calculations for many physical parameters, probability distributions and their properties are discussed. Definitions of various terms are given and will help the practicing metrologists to grasp the subject. The book helps to establish international standards for the evaluation of the quality of raw data obtained from various laboratories for interpreting the results of various national metrology institutes in an international inter-comparisons. For the routine calibration of instruments, a new idea for the use of pooled variance is introduced. The uncertainty calculations are explained for (i) independent linear inputs, (ii) non-linear inputs and (iii) correlated inputs. The merits and limitations of the Guide to the Expression of Uncertainty in Measurement (GUM) are discussed. Monte Carlo methods for the derivation of the output[..]

#### Features

This book fulfills the global need to evaluate measurement results along with the associated uncertainty. In the book, together with the details of uncertainty calculations for many physical parameters, probability distributions and their properties are discussed. Definitions of various terms are given and will help the practicing metrologists to grasp the subject. The book helps to establish international [..]

#### Contents

- Some Important Definitions.
- Probability Functions.
- Other Probability Functions.
- Evaluation of Measurement Data.
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- Uncertainty and Calibration of Instruments.
- Calculation of Uncertainty.
- Uncertainty in Calibration of a Surface Plate.
- Uncertainty in Volumetric Measurement.
- Uncertainty in Calibration of Electrical Instruments.

#### Fields of interest

- Measurement Science, Instrumentation
- Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences
- Quality Control, Reliability, Safety and Risk
- Mathematical Methods in Physics
- Appl. Mathematics / Computational Methods of Engineering
- Numerical and Computational Physics

#### Target groups

- Research

**Usually dispatched within 3 to 5 business days**

2012. XIX, 321 p. 23 illus. Hardcover

99,95 €
ISBN 978-3-642-20988-8
Mechanics

An Intensive Course

Mechanics is one of the oldest and at the same time newest disciplines, in the sense that there are methods and principles developed first in mechanics but now widely used in almost all branches of physics: electrodynamics, quantum mechanics, classical and quantum field theory, special and general theory of relativity, etc. More than that, there are some formalisms like Lagrangian and Hamiltonian approaches, which represent the key stone for the development of the above-mentioned disciplines. During the last 20–25 years, classical mechanics has undergone an important revival associated with the progress in non-linear dynamics, applications of Noether’s theorem and the extension of variational principles in various interdisciplinary sciences (for instance, magnetofluid dynamics). Thus, there ought to exist a book concerned with the applied analytical formalism, first developed in the frame of theoretical mechanics, which has proved to be one of the most efficient tools of investigation in the entire [...] 

Contents


Fields of interest

Mechanics; Applications of Mathematics; Appl. Mathematics / Computational Methods of Engineering; Mathematical Methods in Physics

Target groups

Upper undergraduate

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

Modern Theories of Many-Particle Systems in Condensed Matter Physics

Condensed matter systems where interactions are strong are inherently difficult to analyze theoretically. The situation is particularly interesting in low-dimensional systems, where quantum fluctuations play a crucial role. Here, the development of non-perturbative methods and the study of integrable field theory have facilitated the understanding of the behavior of many quasi one- and two-dimensional strongly correlated systems. In view of the same rapid development that has taken place for both experimental and numerical techniques, as well as the emergence of novel testing grounds such as cold atoms or graphene, the current understanding of strongly correlated condensed matter systems differs quite considerably from standard textbook presentations. The present volume of lecture notes aims to fill this gap in the literature by providing a collection of authoritative tutorial reviews, covering such topics as quantum phase transitions of antiferromagnets and cuprate-based high-temperature [...] 

Features

Condensed matter systems where interactions are strong are inherently difficult to analyze theoretically. The situation is particularly interesting in low-dimensional systems, where quantum fluctuations play a crucial role. Here, the development of non-perturbative methods and the study of integrable field theory have facilitated the understanding of the behavior of many quasi one- and two-dimensional [...] 

Contents


Fields of interest

Strongly Correlated Systems, Superconductivity; Statistical Physics, Dynamical Systems and Complexity; Magnetism, Magnetic Materials; Quantum Information Technology; Spintronics; Phase Transitions and Multiphase Systems

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days
Nanomedicine and Nanobiotechnology

This book presents the laboratory, scientific and clinical aspects of nanomaterials used for medical applications in the fields of regenerative medicine, dentistry and pharmacy. It gives a broad overview on the in vitro compatibility assessment of nanostructured materials implemented in the medical field by the combination of classical biological protocols and advanced non-destructive nano-precision techniques with special emphasis on the topographical, surface energy, optical and electrical properties. Materials in the physical form of nanoparticles, nanotubes, and thin films are addressed in terms of their toxicity. The different pillars of the Nanomedicine field are also highlighted. The book takes an interdisciplinary approach of medicine, biology, pharmacy, physics, chemistry, engineering, nanotechnology and materials science. The international group of authors specifically chosen for their distinguished expertise belong to the academic and industrial world in order to provide a broader[...]

Features
This book presents the laboratory, scientific and clinical aspects of nanomaterials used for medical applications in the fields of regenerative medicine, dentistry and pharmacy. It gives a broad overview on the in vitro compatibility assessment of nanostructured materials implemented in the medical field by the combination of classical biological protocols and advanced non-destructive nano-precision[...]

Nanostructured Materials and Their Applications

This book gives an overview of nanostructures and nanomaterials applied in the fields of energy and organic electronics. It combines the knowledge from advanced deposition and processing methods of nanomaterials such as laser-based growth and nanopatterning and state-of-the-art characterization techniques with special emphasis on the optical, electrical, morphological, surface and mechanical properties. Furthermore it contains theoretical and experimental aspects for different types of nanomaterials such as nanoparticles, nanotubes and thin films for organic electronics applications. The international group of authors specifically chosen for their distinguished expertise belong to the academic and industrial world in order to provide a broader perspective. The authors take an interdisciplinary approach of physics, chemistry, engineering, materials science and nanotechnology. It appeals to researchers and graduate students.

Features
This book gives an overview of nanostructures and nanomaterials applied in the fields of energy and organic electronics. It combines the knowledge from advanced deposition and processing methods of nanomaterials such as laser-based growth and nanopatterning and state-of-the-art characterization techniques with special emphasis on the optical, electrical, morphological, surface and mechanical properties. [...]
### Non-Centrosymmetric Superconductors

**Introduction and Overview**

Superconductivity in materials without inversion symmetry in the respective crystal structures occurs in the presence of antisymmetric spin-orbit coupling as a consequence of an emerging electric field gradient. The superconducting condensate is then a superposition of spin-singlet and spin-triplet Cooper pairs. This scenario accounts for various experimental findings such as nodes in the superconducting gap or extremely large upper critical magnetic fields. Spin-triplet pairing can occur in non-centrosymmetric superconductors in spite of Anderson’s theorem that spin-triplet pairing requires a crystal structure that exhibits inversion symmetry. This book, authored and edited by leading researchers in the field, is both an introduction to and overview on this exciting branch of novel superconductors. Its self-contained and tutorial style makes it particularly suitable for self-study and as source of teaching material for special seminars and courses. At the same time it constitutes an up-to-date and [..]

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**Contents**

- Non-Centrosymmetric Superconductors: Strong vs. Weak Electronic Correlations.

**Fields of interest**

- Strongly Correlated Systems, Superconductivity, Surface and Interface Science, Thin Films; Solid State Physics

**Target groups**

- Research

**Type of publication**

- Monograph

**Usually dispatched within 3 to 5 business days**

2012. XII, 357 p. 151 illus. (Lecture Notes in Physics, Vol. 847) Softcover

69,95 €

ISBN 978-3-642-24623-4

### Nonlinear Waves and Solitons on Contours and Closed Surfaces

This volume is an introduction to nonlinear waves and soliton theory in the special environment of compact spaces such as closed curves and surfaces and other domain contours. It assumes familiarity with basic soliton theory and nonlinear dynamical systems. The first part of the book introduces the mathematical concept required for treating the manifolds considered, providing relevant notions from topology and differential geometry. An introduction to the theory of motion of curves and surfaces - as part of the emerging field of contour dynamics - is given. The second and third parts discuss the modeling of various physical solitons on compact systems, such as filaments, loops and drops made of almost incompressible materials thereby intersecting with a large number of physical disciplines from hydrodynamics to compact object astrophysics. This book is intended for graduate students and researchers in mathematics, physics and engineering. This new edition has been thoroughly revised, expanded and updated.

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**Contents**


**Fields of interest**

- Nonlinear Dynamics; Differential Geometry; Mathematical Methods in Physics; Fluid- and Aerodynamics; Soft and Granular Matter; Complex Fluids and Microfluidics; Surface and Interface Science, Thin Films

**Target groups**

- Research

**Type of publication**

- Monograph

**Usually dispatched within 3 to 5 business days**

2012. XVIII, 489 p. 141 illus. (Springer Series in Synergetics) Hardcover

99,95 €

ISBN 978-3-642-22894-0
Observational Astrophysics

This is the updated, widely revised, restructured and expanded third edition of Lena et al.’s successful work Observational Astrophysics. It presents a synthesis on tools and methods of observational astrophysics of the early 21st century. Written specifically for astrophysicists and graduate students, this textbook focuses on fundamental and sometimes practical limitations on the ultimate performance that an astronomical system may reach, rather than presenting particular systems in detail. In little more than a decade there has been extraordinary progress in imaging and detection technologies, in the fields of adaptive optics, optical interferometry, in the sub-millimetre waveband, observation of neutrinos, discovery of exoplanets, to name but a few examples. The work deals with ground-based and space-based astronomy and their respective fields. And it also presents the ambitious concepts behind space missions aimed for the next decades. Avoiding particulars, it covers the whole of the...[–]

Features
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Contents

Fields of interest
Extraterrestrial Physics, Space Sciences; Popular Science in Astronomy

Target groups
Popular/general

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XV, 719 p. 128 illus., 71 in color. (Astronomy and Astrophysics Library) Hardcover

129,95 €
ISBN 978-3-642-21814-9

Our Explosive Sun
A Visual Feast of Our Source of Light and Life

The Sun, which is our own star at the center of the Solar System, gives rise to all life on Earth and is the driver of photosynthesis in plants and the source of all food and energy for living things. As seen with the naked eye, the Sun appears as a static and quiet yellow disk in the sky. However, it is a stormy and ever-changing star that contributes much more than light and heat. For example, it is the source of the beautiful northern lights and can affect our technology-based society in many ways. Our Explosive Sun: A Visual Feast of our Source of Light and Life is a great introduction to the Sun for general readers as well as scientists who are not solar physicists. The book presents the basic properties of the Sun, describes how it has fascinated humans throughout history, and shows how it influences our current technologies. The book includes a large number of illustrations and video materials for SpringerExtras, along with a PowerPoint presentation that provides a useful resource for...[–]

Features
The center of our Solar System is a star, one among billions of stars in our own galaxy. This star, which we call the Sun, gives rise to all life on Earth, is the driver of the photosynthesis in plants, and is the source of all food, energy, and fossil fuels on Earth. For us humans, the Sun as seen with the naked eye appears as a static and quiet yellow disk in the sky. However, it is in fact a stormy...[–]

Contents

Fields of interest
Extraterrestrial Physics, Space Sciences; Popular Science in Astronomy

Target groups
Popular/general

Type of publication
Monograph

Usually dispatched within 2-3 days

2012. X, 158 p. 149 illus., 147 in color. With online files/ update. Hardcover

29,95 €

Plasma Turbulence in the Solar System

Dynamics of astrophysical systems is often described by plasma physics, yet understanding the nature of plasma turbulence remains a challenge in physics in both theories and experiments. This book is an up-to-date summary and review of recent results in research on waves and turbulence in near-Earth space plasma turbulence, obtained by Cluster, the multi-spacecraft mission. Spatial and temporal structures of solar wind turbulence as well as its interaction with the bow shock ahead of the Earth are presented using Cluster data. The book presents (1) historical developments, (2) theoretical background of plasma physics, turbulence theories, and the plasma physical picture of the solar system, (3) analysis methods for multi-spacecraft data, (4) results of Cluster data analysis, and (5) impacts on astrophysics and Earth sciences.

Features
Dynamics of astrophysical systems is often described by plasma physics, yet understanding the nature of plasma turbulence remains a challenge in physics in both theories and experiments. This book is an up-to-date summary and review of recent results in research on waves and turbulence in near-Earth space plasma turbulence, obtained by Cluster, the multi-spacecraft mission. Spatial and temporal...[–]

Contents
Theoretical background.- Multi-spacecraft measurements.- Turbulence properties in space plasma.- Impacts on related subjects.

Fields of interest
Fluid- and Aerodynamics; Geophysics and Geodynamics; Plasma Physics; Astronomy, Astrophysics and Cosmology; Fluid- and Aerodynamics; Geophysics and Environmental Physics; Signal, Image and Speech Processing

Target groups
Graduate

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. VIII, 102 p. 33 illus. (SpringerBriefs in Physics) Softcover

49,95 €
ISBN 978-3-642-25666-0
Probability in Physics

What is the role and meaning of probability in physical theory, in particular in two of the most successful theories of our age, quantum physics and statistical mechanics? Laws once conceived as universal and deterministic, such as Newton’s laws of motion, or the second law of thermodynamics, are replaced in these theories by inherently probabilistic laws. This collection of essays by some of the world’s foremost experts presents an in-depth analysis of the meaning of probability in contemporary physics. Among the questions addressed are: How are probabilities defined? Are they objective or subjective? What is their explanatory value? What are the differences between quantum and classical probabilities? The result is an informative and thought-provoking book for the scientifically inquisitive.

Features

What is the role and meaning of probability in physical theory, in particular in two of the most successful theories of our age, quantum physics and statistical mechanics? Laws once conceived as universal and deterministic, such as Newton’s laws of motion, or the second law of thermodynamics, are replaced in these theories by inherently probabilistic laws. This collection of essays by some of the world’s [...] Contents


Statistical Physics, Dynamical Systems and Complexity; Quantum Physics; Probability Theory and Stochastic Processes; Philosophy of Science

Target groups

Research

Type of publication

Monograph

Online orders shipping within 2-3 days.

2012, XII, 321 p. (The Frontiers Collection) Hardcover

69.95 €

ISBN 978-3-642-21328-1

Quantum Triangulations

Research on polyhedral manifolds often points to unexpected connections between very distinct aspects of Mathematics and Physics. In particular triangulated manifolds play quite a distinguished role in such settings as Riemann moduli space theory, strings and quantum gravity, topological quantum field theory, condensed matter physics, and critical phenomena. Not only do they provide a natural discrete analogue to the smooth manifolds on which physical theories are typically formulated, but their appearance is rather often a consequence of an underlying structure which naturally calls into play non-trivial aspects of representation theory, of complex analysis and topology in a way which makes manifest the basic geometric structures of the physical interactions involved. Yet, in most of the existing literature, triangulated manifolds are still merely viewed as a convenient discretization of a given physical theory to make it more amenable for numerical treatment. The motivation for these lectures [...] Features

Research on polyhedral manifolds often points to unexpected connections between very distinct aspects of Mathematics and Physics. In particular triangulated manifolds play quite a distinguished role in such settings as Riemann moduli space theory, strings and quantum gravity, topological quantum field theory, condensed matter physics, and critical phenomena. Not only do they provide a natural discrete [...] Contents


Fields of interest

Physics (general); Mathematical Physics; Quantum Physics; Manifolds and Cell Complexes (incl. Diff. Topology); Classical and Quantum Gravitation, Relativity Theory; Mathematical Applications in the Physical Sciences

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XVII, 284 p. 90 illus., 10 in color. (Lecture Notes in Physics, Vol. 845) Softcover

44.95 €

ISBN 978-3-642-24439-1
Radiation Damage in Biomolecular Systems

Since the discovery of X-rays and radioactivity, ionizing radiations have been widely applied in medicine both for diagnostic and therapeutic purposes. The risks associated with radiation exposure and handling led to the parallel development of the field of radiation protection. Pioneering experiments done by Sanche and co-workers in 2000 showed that low-energy secondary electrons, which are abundantly generated along radiation tracks, are primarily responsible for radiation damage through successive interactions with the molecular constituents of the medium. Apart from ionizing processes, which are usually related to radiation damage, the level of low-energy electrons can induce molecular fragmentation via dissociative processes such as internal excitation and electron attachment. This prompted collaborative projects between different research groups from European countries together with other specialists from Canada, the USA and Australia. This book summarizes the advances achieved by [...]
Solved Problems in Quantum and Statistical Mechanics

This work arises from our teaching this subject during many years. The vast majority of these exercises are the exams we gave to our students in this period. We carefully selected the subjects of the exercises to cover all the material which is most needed and which is treated in the most well known texts on these subjects. Each exercise is carefully solved in full details, explaining the theory behind the solution with particular care for those issues that, from our experience, are found most difficult from the average student. Indeed, several exercises are designed to throw light on aspects of the theory that, for one reason or another, are usually neglected with the result to make the students feel uneasy about them. In fact most students get acquainted just with the more common manipulations, which are illustrated by many examples in textbooks. Our exercises never require extensive calculations but tend to be somewhat unusual and force the solver to think about the problem starting from [...] Contents

- Introduction to Quantum Mechanics
- Problems on Quantum Mechanics
- Problems on Statistical Mechanics
- Fields of interest
  - Quantum Physics
  - Thermodynamics
  - Statistical Physics
  - Dynamical Systems and Complexity
- Target groups
  - Lower undergraduate
- Type of publication
  - Undergraduate textbook
- Online orders shipping within 2-3 days.

Spin Squeezing and Non-linear Atom Interferometry with Bose-Einstein Condensates

Interferometry, the most precise measurement technique known today, exploits the wave-like nature of the atoms or photons in the interferometer. As expected from the laws of quantum mechanics, the granular, particle-like features of the individually independent atoms or photons are responsible for the precision limit, the shot noise limit. However this "classical" bound is not fundamental and it is the aim of quantum metrology to overcome it by employing entanglement among the particles. This work reports on the realization of spin-squeezed states suitable for atom interferometry. Spin squeezing was generated on the basis of motional and spin degrees of freedom, whereby the latter allowed the implementation of a full interferometer with quantum-enhanced precision.

Features

- Interferometry, the most precise measurement technique known today, exploits the wave-like nature of the atoms or photons in the interferometer.
- As expected from the laws of quantum mechanics, the granular, particle-like features of the individually independent atoms or photons are responsible for the precision limit, the shot noise limit. However this "classical" bound is not fundamental and it is the aim of quantum metrology to overcome it by employing entanglement among the particles.

Contents

- Introduction
- Spin Squeezing, Entanglement, and Quantum Metrology
- Squeezing Two Mean Field Modes of a Bose-Einstein Condensate
- Non-linear Interferometry Beyond the Standard Quantum Limit
- Outlook
- Appendices

Fields of interest

- Quantum Gases and Condensates
- Measurement Science
- Instrumentation

Target groups

- Research

Type of publication

- Monograph

Usually dispatched within 3 to 5 business days

2012. XI, 113 p. 58 illus. (Springer Theses) Hardcover
99.95 €
ISBN 978-3-642-25636-3

Studying Atomic Dynamics with Coherent X-rays

Diffusion in solids at moderate temperatures is a well-known phenomenon. However, direct experimental evidence about the responsible atomic-scale mechanisms has been scarce, due to difficulties in probing the relevant length- and time-scales. The present thesis deals with the application of X-ray Photon Correlation Spectroscopy (XPCS) for answering such questions. This is an established method for the study of slow dynamics on length-scales of a few nanometres. The scattered intensity in the diffuse regime, i.e. corresponding to atomic distances, is very low, however, and so it has so far been considered impossible to use XPCS for this problem. Threefold progress is reported in this work: It proposes a number of systems selected for high diffuse intensity, it optimizes the photon detection and data evaluation procedures, and it establishes theoretical models for interpreting the results. Together these advances allowed the first successful atomic-scale XPCS experiment, which elucidated the role of [...] Contents

- Introduction
- Theory
- Linking Theory to Experiments
- Characteristics of Diffusion in Selected Systems
- Data Evaluation
- Considerations Concerning the Experiment
- Experimental Results
- Outlook
- Appendix

Fields of interest

- Solid State Physics
- Spectroscopy and Microscopy
- Crystallography

Target groups

- Research

Type of publication

- Monograph

Usually dispatched within 3 to 5 business days

2012. X, 96 p. 37 illus., 9 in color. (Springer Theses) Hardcover
99.95 €
ISBN 978-3-642-24120-8
Technological Innovations in Sensing and Detection of Chemical, Biological, Radiological, Nuclear Threats and Ecological Terrorism

This book arises from the NATO Advanced Study Institute “Technological Innovations in Detection and Sensing of CBRN Agents and Ecological Terrorism” held in Chisinau, Republic of Moldova in June 2010. It comprises a variety of invited contributions by highly experienced educators, scientists, and industrialists, and is structured to cover important aspects of the field that include developments in chemical-biological, and radiation sensing, synthesis and processing of sensors, and applications of sensors in detecting/monitoring contaminants introduced/dispersed inadvertently or intentionally in air, water, and food supplies. The book emphasizes nanomaterials and nanotechnology based sensing and also includes a section on sensing and detection technologies that can be applied to information security. Finally, it examines regional, national, and international policies and ethics related to nanomaterials and sensing. It will be of considerable interest and value to those already pursuing or considering [...]
The Classical Theory of Fields

Electromagnetism

The study of classical electromagnetic fields is an adventure. The theory is complete mathematically and we are able to present it as an example of classical Newtonian experimental and mathematical philosophy. There is a set of foundational experiments, on which most of the theory is constructed. And then there is the bold theoretical proposal of a field-field interaction from James Clerk Maxwell. This textbook presents the theory of classical fields as a mathematical structure based solidly on laboratory experiments. Here the student is introduced to the beauty of classical field theory as a gem of theoretical physics. To keep the discussion fluid, the history is placed in a beginning chapter and some of the mathematical proofs in the appendices. Chapters on Green’s Functions and Laplace’s Equation and a discussion of Faraday’s Experiment further deepen the understanding. The chapter on Einstein’s relativity is an integral necessity to the text. Finally, chapters on particle motion and waves in a[...]

Features

The study of classical electromagnetic fields is an adventure. The theory is complete mathematically and we are able to present it as an example of classical Newtonian experimental and mathematical philosophy. There is a set of foundational experiments, on which most of the theory is constructed. And then there is the bold theoretical proposal of a field-field interaction from James Clerk[...]

Contents


Fields of interest

Classical Electrodynamics, Wave Phenomena; Magnetism, Magnetic Materials; Classical and Quantum Gravitation, Relativity Theory

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XIII, 449 p. 132 illus. (Graduate Texts in Physics) Hardcover

69.95 €
ISBN 978-3-642-23204-6
Unconventional Superconductors

Anisotropy and Multiband Effects

This book presents the anisotropy and multiband effects in newly discovered unconventional superconductors: cuprate superconductors, borocarbides, magnesium-diboride and oxynitrides. The physical properties of these unconventional superconductors and the application of the two-band Ginzburg-Landau theory to these superconducting compounds are explained. Temperature dependencies of fundamental superconducting parameters are calculated using the GL theory taking into account multiband and anisotropy effects. A comparison of theoretical results and experimental data is conducted. Additionally, the analytical solution of the microscopic Eliashberg theory and of the BCS theory is developed for two-band and anisotropic superconductors. Fluctuation effects in newly discovered superconductors are also discussed.

Features

This book deals with the new class of materials superconductors. Fluctuation effects in newly discovered unconventional superconductors, cuprate compounds, borocarbides, magnesium-diboride and oxynitrides. It gives a systematical review of physical properties of novel superconductors. The theoretical explanation is supplemented by temperature dependencies of fundamental superconducting parameters which are relevant to future applications, opening new possibilities. The theoretical explanation is supplemented by an analytical solution of the microscopic Eliashberg theory and of the BCS theory. The book also presents a comparison of theoretical results and experimental data.

Contents


Fields of interest

Low Temperature Physics; Condensed Matter Physics; Structural Materials

Type of publication

Research

Target groups

Research

Published by

Springer

Z = 1-29. Excited Nuclear States

The Square Kilometre Array: Paving the way for the new 21st century radio astronomy paradigm

Proceedings of Symposium 7 of JENAM 2010

The Square Kilometre Array (SKA) will provide more than one order of magnitude improvement in sensitivity compared with any existing radio telescope over a wavelength range of several hundred to one, from decametric to microwave wavelengths. It will revolutionize the study of the most abundant element in the Universe, hydrogen, from the epoch of reionisation to the present-day, probing the onset formation period of the very first stars, will closely scan proto-planets and, through the precision timing of pulsars, will detect the distortions of space-time due to gravitational radiation. The SKA is a sensing network spanning 3000 km from its centre and with a collecting area of more than 1 square kilometre, using technologies of the 21st century. The SKA will make the study of a wide range of phenomena initially studied at other wavelengths possible at radio wavelengths, as well as opening a new discovery window on new phenomena at radio wavelengths. Symposium 7 of the JENAM 2010 aimed at bringing together astronomers, astrophysicists, and technologists with an interest in the SKA project and the potential of the SKA in various fields of astronomy.

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Contents

The SKA Challenge; The SKA new Instrumentation; Aperture Arrays; AGN, Star Formation, and the nanolky Sky; Using HI absorption to trace outflows from galaxies and feeding of AGN; Galaxy Dynamics; Transient Phenomena; Opportunities for New Discoveries; Cosmic Magnetism; Current Status and Outlook to the SKA; The SKA and “High-Resolution” Science; Precision Astrometry: from VLB1 to Gaia and SKA; Ultra Steep Spectrum radio sources in the Lockman Hole: SERVS identifications and redshift distribution at the faintest radio fluxes; Probing the Very First Galaxies with the SKA.

Fields of interest

Astronomy, Observations and Techniques

Type of publication

Proceedings

Published by

Springer

High-Resolution Science.

Precision Astrometry:

from VLB1 to Gaia and SKA.

Ultra Steep Spectrum

radio sources in the Lockman Hole: SERVS

identifications and redshift distribution at the

faintest radio fluxes.

Probing the Very First Galaxies with the SKA.

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Astronomy, Observations and Techniques

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Probing the Very First Galaxies with the SKA.
**Popular Science**

**Glückliche Menschen leben länger**

**Experimental Streifzüge in die Psychologie der Lebensführung**


**Features**


**Contents**


**Fields of interest**

- Popular Science, Psychology (general), Health Promotion and Disease Prevention

**Target groups**

- Popular/general

**Type of publication**

- Popular science

**Online orders shipping within 2-3 days.**

2012. VIII, 200 S. 20 Abb. Softcover

13,97 €
ISBN 978-3-8274-2856-1

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**Z.N. Soroko, St. Petersburg Nuclear Physics Inst., Russia; S.I. Sukhoruchkin, St. Petersburg Nuclear Physics Inst., Russia; U. Knei, Universität Stuttgart, Germany; P. Descouvemont, Université Libre de Bruxelles, Belgium; A. Zilges, Universität zu Köln, Germany; H. Schopper, CERN, Geneva, Switzerland (Ed.)**

**Z = 30-47. Excited Nuclear States**

Volume I/25B is the second one in a series of volumes on the properties of the excited states of all nuclei. The data presented are collected from all kinds of nuclear reactions, including measurements of reactions with neutrons and γ-rays not yet fully considered in previous compilations. The nuclei considered also comprise nuclei far from the stability line. The properties of excited nuclear states are of importance for scientific and practical applications. No systematic compilation of such data has been performed so far. The present compilation has been prepared by eminent experts in the field. One of the characteristics of Landolt-Börnstein is that data are evaluated before they are accepted for compilation. The idea is to present 'best values' which can be used with confidence by non-experts. The present Volume I/25B is providing new data (energy levels, branching ratios, cross-sections, spectroscopic factors, etc.) for nuclei with atomic numbers Z ranging from 30 (Zn) to 47 (Ag) published in[...]

**Features**

- Provides systematic compilation of the properties of excited nuclear states
- Provides recent data from all types of nuclear reactions, including reactions with neutrons and γ-rays
- Covers all nuclei, including unstable nuclei far from the stability line
- Describes nuclear resonance fluorescence
- Describes cluster models in nuclear astrophysics
- Written by competent experts in the field

**Fields of interest**

- Physics (general); Astronomy, Astrophysics and Cosmology; Medical and Radiation Physics; Geophysics and Environmental Physics; Nuclear Engineering; Waste Management / Waste Technology

**Target groups**

- Research

**Type of publication**

- Reference work

**Usually dispatched within 3 to 5 business days**

2012. 600 p. 2 illus., 1 in color. (Elementary Particles, Nuclei and Atoms, Subvolume 25B) Hardcover

4,490,00 €
ISBN 978-3-642-22929-9

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**Popular Science**

**Gehirn und Geist**

**Eine Entdeckungsreise ins Innere unserer Köpfe**


**Features**

- Bildgebende Verfahren haben uns in den letzten Jahren faszinierende Einblicke in die Aktivitätsmuster unseres Gehirns ermöglicht. Sind die modernen Hirnradios vielleicht schon in der Lage, unsere Gedanken und Erinnerungen, unsere Stimmungen und Wünsche sichtbar zu machen – so wie Röntgenbilder unsere Knochen zeigen? Wie weit sind die Hirnforscher mit dem tiefen Blick in unsere grauen Zellen? Gehirn und Geist lädt zu einer Entdeckungsreise in das Innere unserer Köpfe ein. Es erläutert die grundlegenden Struktur und Funktionsweise des menschlichen Denkorgans und zeigt, wie es in der Zusammenarbeit verschiedener Gehirnregionen seine vielfältigen Aufgaben-

**Fields of interest**

- Physics (general); Astronomy, Astrophysics and Cosmology; Medical and Radiation Physics; Geophysics and Environmental Physics; Nuclear Engineering; Waste Management / Waste Technology

**Target groups**

- Research

**Type of publication**

- Reference work

**Usually dispatched within 3 to 5 business days**

2012. 600 p. 2 illus., 1 in color. (Elementary Particles, Nuclei and Atoms, Subvolume 25B) Hardcover

4,490,00 €
ISBN 978-3-642-22929-9

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**J. Quoidbach, Université de Liège, France**

**Glückliche Menschen leben länger**

**Experimental Streifzüge in die Psychologie der Lebensführung**


**Features**


**Contents**


**Fields of interest**

- Popular Science, Psychology (general), Health Promotion and Disease Prevention

**Target groups**

- Popular/general

**Type of publication**

- Popular science

**Online orders shipping within 2-3 days.**

2012. VIII, 200 S. 20 Abb. Softcover

13,97 €
ISBN 978-3-8274-2856-1
Psychology

R.J.R. Levesque, Indiana University, Bloomington, IN, USA (Ed.)

Encyclopedia of Adolescence

The Encyclopedia of Adolescence breaks new ground as an important central resource for the study of adolescence. Comprehensive in breadth and textbook in depth, the Encyclopedia of Adolescence – with entries presented in easy-to-access A to Z format – serves as a reference repository of knowledge in the field as well as a frequently updated conduit of new knowledge long before such information trickles down from research to standard textbooks. By making full use of Springer’s print and online flexibility, the Encyclopedia is at the forefront of efforts to advance the field by pushing and creating new boundaries and areas of study that further our understanding of adolescents and their place in society. Substantively, the Encyclopedia draws from four major areas of research relating to adolescence. The first broad area includes research relating to ‘Self, Identity and Development in Adolescence’. This area covers research relating to identity, from early adolescence through emerging adulthood; [basic[…]

Features

The Encyclopedia of Adolescence breaks new ground as an important central resource for the study of adolescence. Comprehensive in breadth and textbook in depth, the Encyclopedia of Adolescence – with entries presented in easy-to-access A to Z format – serves as a reference repository of knowledge in the field as well as a frequently updated conduit of new knowledge long before such information […]

Contents

Approximately 700 entries, in A to Z format, dealing in depth with such major topics as: self, identity, and development in adolescence; adolescents’ social and personal relationships; adolescents in social institutions; and adolescent psychopathology and mental health.

Fields of interest

Child and School Psychology; Psychiatry; Developmental Psychology; Criminology & Criminal Justice; Sociology; general; Sociology of Education

Target groups

Research

Type of publication

Encyclopedia

Online orders shipping within 2-3 days.


1,875,00 €


Handbook of Accessible Achievement Tests for All Students

Bridging the Gaps Between Research, Practice, and Policy

The Handbook of Accessible Achievement Tests for All Students: Bridging the Gaps Between Research, Practice, and Policy presents a wealth of evidence-based solutions designed to move the assessment field beyond "universal" standards and policies toward practices that enhance learning and testing outcomes. Drawing on an extensive research and theoretical base as well as emerging areas of interest, the volume focuses on major policy concerns, instructional considerations, and test design issues, including: The IEP team’s role in sound assessment. The relationships among opportunity to learn, assessment, and learning outcomes. Innovations in computerized testing and the "6D" framework for standard setting. Legal issues in the assessment of special populations. Guidelines for linguistically accessible assessments. Evidence-based methods for making item modifications that increase the validity of inferences from test scores. Strategies for writing clearer test items. Methods for including student input in[…]

Features

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Contents


Fields of interest

Child and School Psychology; Educational Psychology; Social Work; Teaching and Teacher Education

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2012. XIV, 341 p. Softcover

42,95 €
Laufen psychotherapeutisch nutzen

**Grundlagen, Praxis, Grenzen**

Breitensport für die Therapie nutzbar gemacht

**Features**

Breitensport für die Therapie nutzbar gemacht
Joggen, Laufen und Walking scheinen eine hohe Akzeptanz zu haben. Inzwischen ist auch ihre therapeutische Wirksamkeit nachgewiesen.

**Contents**

Psychologie

Professionelle Beziehungen

Theorie und Praxis der Balintgruppenarbeit


Features


Contents


Psychologie der Religion

Autobiografische Accounts


Features

Psychologie der Religion: Autobiografische Accounts. Jacob A. Belzen, editor In recent years, psychology of religion has experienced a remarkable comeback: research is expanding rapidly, benefiting from a genial scientific infrastructure. An important issue in psychology over a century ago, only a few decades later it vanished almost completely. Its unexpected international [...] Contents The comeback of the psychology of religion: The aims of the present volume. - My concern with psychology of religion: Defending psychology, respecting religion. - The path of least resistance. - Pastoral psychology as a point of transfer from systematic theology to the psychology of religion. - Toward a mainstream psychology of religion beyond systematic theology. - Writing heavenly language: My research on Pentecostalism and Glossolalia. - Psychology of religion: A personal narrative. - Changing ways of doing things: An autobiographical account of some of my experiences in the psychology of religion. - Fields of interest Psychology (general); Psychoanalysis; Religious Studies; Social Sciences (general); History; Psychotherapy and Counseling. Target groups Professional/practitioner. Type of publication Professional book. Usually dispatched within 3 to 5 business days.


Tackling Long-Term Global Energy Problems

The Contribution of Social Science

This book makes a case for a multidisciplinary and transdisciplinary approach to energy research—one that brings more of the social sciences to bear. Featuring eight studies from across the spectrum of the social sciences, each applying multiple disciplines to one or more energy-related problems, the book demonstrates the strong analytical and policy-making potential of such a broadened perspective. Case studies include: energy transitions of households in developing countries, the ‘curse of oil’, politics and visions for renewables, economics and ethics in emissions trading, and carbon capture and storage.

Features


Social Sciences

D. Hava, Hebrew University in Jerusalem, Israel; C. Kwok-bun, Chan Institute of Social Studies, Ap Lei Chau, Hong Kong

Charismatic Leadership in Singapore

Three Extraordinary People

This volume explores the nature of charisma as it accounts for the success of leaders. Charisma is deconstructed and illustrated through the “case studies” of three influential leaders in Singapore. Cultural issues are discussed and leadership qualities in general are explored.

Features
Charismatic Leadership in Singapore: Three Extraordinary People Hava Dayan and Chan Kwok-bun: What makes some lead while others follow? How do the great leaders keep their influence over the long term? These questions may be simple, but the answers have never been. Charisma holds important clues to the gaining and holding of power, yet it can easily be undervalued as mere [...] Contents

Fields of interest
Neuropsychology; Rehabilitation; Clinical Psychology; General Practice / Family Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. XII, 163 p. Hardcover
29,95 €

Handbook of Tourism and Quality-of-Life Research

Enhancing the Lives of Tourists and Residents of Host Communities

Quality of life (QOL) research in tourism has gained much momentum over the last two decades. Academics working in this area research issues related to tourists and host communities. Practitioners are becoming increasingly interested in understanding the science that allows them to develop better marketing and managerial programs designed to enhance the quality of life of tourists. Tourism bureaus and government agencies are increasingly interested in issues of sustainable tourism, specifically in understanding and measuring the impact of tourism on the quality of life of the residents of the host communities. This handbook covers all relevant topics and is divided into two parts: research relating to travelers/tourists, and research relating to the residents of host communities. It is the only state-of-the-art reference book in its field and will prove invaluable to academics interested in QOL research, as well as tourism practitioners interested in applying the science of QOL in the tourism industry.

Features
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Fields of interest
Quality of Life Research; Sustainable Development; Economic Geography; Cultural Heritage; Regional Science

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days

249,00 €
ISBN 978-94-007-2287-3
Human Security

Securing East Asia’s Future

Human security is becoming increasingly pronounced in recent years due to changes in the security landscape of world politics. Yet, interstate relations have continued to dominate security concerns in East Asia. This has, unfortunately, eluded the broader understanding of issues and challenges facing the peoples of East Asia. Home to nations with rapid economic growth and development, East Asia is at the core of what some individuals have termed as the coming Asian Century. Years of economic liberalization and exposure to globalization have permitted the region to achieve high levels of interconnectedness from within and without in unprecedented ways. This has certainly reduced state control and opened up spaces for cross-border human activities. While economic wealth have increased substantially over the years, it has also brought about bigger income disparities, unsustainable safety nets and a surge in social problems from health issues to migratory concerns that threaten the safety and [...] features.

Contents


Fields of interest

Sociology, general; Regional and Cultural Studies; Social Policy; Interdisciplinary Studies; Migration

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

Models of Science Dynamics

Encounters Between Complexity Theory and Information Sciences

Models of Science Dynamics aims to capture the structure and evolution of science, the emerging arena in which scholars, science and the communication of science become themselves the basic objects of research. In order to capture the essence of phenomena as diverse as the structure of co-authorship networks or the evolution of citation diffusion patterns, such models can be represented by conceptual models based on historical and ethnographic observations, mathematical descriptions of measurable phenomena, or computational algorithms. Despite its evident importance, the mathematical modeling of science still lacks a unifying framework and a comprehensive study of the topic. This volume fills this gap, reviewing and describing major threads in the mathematical modeling of science dynamics for a wider academic and professional audience. The model classes presented cover stochastic and statistical models, system-dynamics approaches, agent-based simulations, population-dynamics models, and [...] features.

Contents


Fields of interest

Methodology of the Social Sciences; Socio- and Econophysics, Population and Evolutionary Models; Information Systems Applications (incl.Internet); Complexity

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days
Mortality and Causes of Death in 20th-Century Ukraine

The Ukraine faced two very different kinds of health crises during the twentieth century. First, in the 1930s and 1940s, famine, war and political upheaval caused massive population losses. Previous evaluations of overall losses have given an idea of the scale of these catastrophes but do not distinguish between crisis mortality, birth shortfall and loss through emigration. Based on a painstaking work of reconstitution, this study is the first to provide a detailed estimation of the hecatomb in terms of number of deaths and life expectancy. The famine of 1933 was alone responsible for the deaths of 2.6 million Ukrainians and reduced male and female life expectancies to 7 and 11 years respectively. Once the crises of the 1930s and 1940s were over, the earlier trend in health resumed and mortality declined steadily until the 1960s. At this point, however, a new type of crisis appeared that caused a sustained reversal in the existing trends. Life expectancy for women stopped increasing altogether. [...].Features

The Ukraine faced two very different kinds of health crises during the twentieth century. First, in the 1930s and 1940s, famine, war and political upheaval caused massive population losses. Previous evaluations of overall losses have given an idea of the scale of these catastrophes but do not distinguish between crisis mortality, birth shortfall and loss through emigration. Based on a painstaking work of [...] 

Contents


Fields of interest

Migration; Public Health; History; Political Science, general

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


99,95 €

ISBN 978-94-007-2432-7

Opportunities and Challenges for Applied Demography in the 21st Century

Applied demography continues its rapid pace of evolution in concert with the emerging trends of the 21st century. One significant area of change is the extension of applied demography beyond the United States; this book includes material dealing with applied demography in Australia, Canada, Estonia, and Mexico. Opportunities and Challenges for Applied Demography in the 21st Century presents a score of selected papers from the Second Post-2000 National Conference on Applied Demography, held in San Antonio, Texas, in January, 2010, under the sponsorship of the Institute for Demographic and Socioeconomic Research at the University of Texas at San Antonio. Coverage includes the assembly of data by government agencies, with a focus on issues facing the United States; demographic issues associated with globalization; business demography and health demography, as well as a section examining methodological advances in the areas of estimation and projection.

Features

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Contents


Fields of interest

Demography; Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law; Marketing

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days


139,95 €


Subjective Well-Being and Security

Security, or the perceived lack thereof, impacts on quality of life at many levels. An important consideration is how security should be best understood. Although definitions of how to understand human security have been proposed, it is not clear how security should be measured. Security can be analysed from different perspectives i.e., personal security, economic security, health security, political security, cyber security etc. In this volume, all facets of research pertaining to security and subjective well-being (SWB) are discussed, including among others: Objective and subjective measures of security; Multiple security dimensions; The relationship between security and SWB and possible mediators and moderators; Cultural and religious influences on security and SWB; Present and future security; Perceptions of crime in cities and regions and development of relevant indicators; Security in a globalized era and its relationship to SWB; Security, major events and SWB Features

In an era of greater globalization and development and employment of new technologies, many important security issues are being debated. Of significant concern is how security, or the perceived lack thereof, impacts on quality of life at multiple levels. These include questions raised concerning individual safety and security, organizational security, national security and so forth. In this context, an [...] 

Contents


Fields of interest

Quality of Life Research

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. VIII, 328 p. 20 illus. (Social Indicators Research Series, Vol. 46) Hardcover

139,95 €

ISBN 978-94-007-2277-4
Trying to Measure Globalization
Experiences, critical issues and perspectives

The aim of this book is to conduct a critical survey of the main tools devised for the synthetic measurement of globalization processes. To this end, the first part of the book discusses the meaning of the concept considered, highlighting the different and often contradictory interpretations put forward in its regard in the literature. Subsequently analysed are the passages and issues that must be addressed when constructing an instrument intended to measure a social phenomenon of such complexity as globalization. Stressed in particular is that the researcher’s subjectivity is repeatedly involved in these passages, so that no instrument can have objective validity. Given these premises, the book presents the principal tools employed in attempts to measure globalization, starting with those whose unit of analysis is the state. In this regard, particular space is devoted to indexes which take a multidimensional approach to the concept of globalization. There follows a comparison among the results.[…]

Contents

Fields of interest
Political Theory; Political Science, general

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. IX, 139 p. (SpringerBriefs in Political Science, Vol. 4) Softcover
49,95 €
ISBN 978-94-007-2806-6

Young People's Quality of Life and Construction of Citizenship

The study of quality of life refers to the material environment (social welfare) and psychosocial environment (wellbeing). It has been defined as a concept that implies the objective and subjective dimension that Cummins (1997) first studied in seven domains. The use of domains in the quality of life study allows a more precise measurement than the one that could have been reached through simple questions, since psychometric scales are used and if the addition of domains is equivalent to the totality of life satisfaction, then the group of domains is a valid measure of quality of life. In the case of young people, it has been observed that even if they live in negative physical, social and contextual conditions, they can nevertheless experience a relatively positive experience in relation to their quality of life, depending on the strategies and capabilities that they generate in relation to the context. Similarly, young people that live in favorable socioeconomic conditions and with a trouble free[…]

Features
This briefs is dedicated to analyze the relations between quality of life and construction of citizenship of young people in Argentina, considering two specific social scenarios: the community and the university. In the case of community it is important to note that it not imply uniformity, as community means the inclusion of diversity and the achievement of sharing within it, and in the case of university it[…]

Contents

Fields of interest
Quality of Life Research; Political Science, general; Community & Environmental Psychology; Methodology of the Social Sciences; Higher Education; Educational Policy and Politics

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. IX, 58 p. (SpringerBriefs in Well-Being and Quality of Life Research) Softcover
49,95 €
ISBN 978-94-007-2995-7

The Muslim World in the 21st Century
Space, Power, and Human Development

Islam is not only a religion, but also a culture, tradition, and civilization. There are currently 1.5 billion people in the world who identify themselves as Muslim. Two thirds of the worldwide Muslim population, i.e. approximately a billion people, live in forty-eight Muslim majority countries (MMC) in the world – all of which except one are in Africa and Asia. Of these MMCs in Africa and Asia, only twelve (inhabited by about 165 million people) have ever achieved a high score on the Human Development Index (HDI), the index that measures life expectancy at birth, education and standard of living and ranks how ‘developed’ a country is. This means that the majority of the world’s Muslim population lives in poverty with low or medium level of human development. The contributions to this innovative volume attempt to determine why this is. They explore the influence of environment, space, and power on human development. The result is a complex, interdisciplinary study of all MMCs in Africa and Asia. It[…]

Features
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Contents
Section A: The Themes, Premises, and Principles.- Chapter one. The Muslim World and Human Development; Samiul Hasan.- Chapter two. Islamic Jurisprudence: Sources and Traditions Creating Diversity in Human Relationship; Samiul Hasan.- Chapter three. Human Development: Perspectives, Gaps and Issues for the MMCs; Samiul Hasan.- Section B. MMCs: Geography, Resources, and People in the MMCs.- Chapter four. The Muslim World: A Geographical Analysis; George Odhiambo.- Chapter five. Biophysical Resources and the Built Environment: Features, Foci, and Issues in the Muslim Majority Countries; Saif[…]

Fields of interest
Sociology, general; Religious Studies; Political Science, general

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 363 p. 15 illus. Hardcover
139,95 €
ISBN 978-94-007-2632-1
Advances and Challenges in Space-time Modelling of Natural Events

This book arises as the natural continuation of the International Spring School “Advances and Challenges in Space-Time modelling of Natural Events,” which took place in Toledo (Spain) in March 2010. This Spring School above all focused on young researchers (Master students, PhD students and post-doctoral researchers) in academics, extra-university research and the industry who are interested in learning about recent developments, new methods and applications in spatial statistics and related areas, and in exchanging ideas and findings with colleagues.

Features

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Asymptotics for Associated Random Variables

The book concerns the notion of association in probability and statistics. Association and some other positive dependence notions were introduced in 1966 and 1967 but received little attention from the probabilistic and statistics community. The interest in these dependence notions increased in the last 15 to 20 years, and many asymptotic results were proved and improved. Despite this increased interest, characterizations and results remained essentially scattered in the literature published in different journals. The goal of this book is to bring together the bulk of these results, presenting the theory in a unified way, explaining relations and implications of the results. It will present basic definitions and characterizations, followed by a collection of relevant inequalities. These are then applied to characterize almost sure and weak convergence of sequences of associated variables. It will also cover applications of positive dependence to the characterization of asymptotic results in[...]

Excel 2010 for Educational and Psychological Statistics

A Guide to Solving Practical Problems

Excel has become an important and nearly ubiquitous classroom and office resource for students and practitioners who are faced with solving statistical problems on an everyday basis. Despite this, there has yet to emerge a truly practical, “how-do-I-do-it” manual that teaches the various applications and processes/formulas for Excel in educational and psychological Statistics. Quirk’s Excel 2010 for Educational and Psychological Statistics will fill this void, as it is designed to be a step-by-step, exercise-driven guide for education and psychology students who need to master Excel to create formulas and solve statistical problems. Each chapter first explains briefly the formulas that are included in the chapter, and then directs the student on how to use Excel commands and formulas to solve a specific business problem. Three practice problems are provided at the end of each chapter, along with their solutions in an Appendix. At the end of the Excel Guide, an additional Practice Exam allows[...]

Visualizing Time

Designing Graphical Representations for Statistical Data

Art, or Science? Which of these is the right way to think of the field of visualization? This is not an easy question to answer, even for those who have many years experience in making graphical depictions of data with a view to help people understand it and take action. In this book, Graham Wills bridges the gap between the art and the science of visually representing data. He does not simply give rules and advice, but bases these on general principles and provide a clear path between them. This book is concerned with the graphical representation of time data and is written to cover a range of different users. A visualization expert designing tools for displaying time will find it valuable, but so also should a financier assembling a report in a spreadsheet, or a medical researcher trying to display gene sequences using a commercial statistical package.

Contents


Fields of interest

- Statistical Theory and Methods

Target groups

- Research

Type of publication

- Monograph

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