Just Released New Books April 2011
All Titles, All Languages

"Sorted by author and title within the main subject"
Religion-State Encounters in Hindu Domains

From the Straits Settlements to Singapore

The historical and empirical project presented here is grounded in a desire to theorize 'religion-state' relations in the multi-ethnic, multi-religious, secular city-state of Singapore. The core research problematic of this project has emerged out of the confluence of two domains, 'religion, law and bureaucracy' and 'religion and colonial encounters.' This work has two core objectives: one, to articulate the actual points of engagement between institutions of religion and the state, and two, to identify the various processes, mechanisms and strategies through which relations across these spheres are sustained. The thematic foundations of this book rest on disentangling the complex interactions between religious communities, individuals and the various manifestations of the Singapore state, relationships that are framed within a culture of bureaucracy. This is accomplished through a scrutiny of Hindu domains on the island nation-state, from her identity as part of the Straits Settlements to the [...]"
The interplay between tumors and their immunologic microenvironment is complex, difficult to decipher, but its understanding is of seminal importance for the development of novel prognostic markers and therapeutic strategies. The present review discusses tumor-immune interactions in several human cancers that illustrate various aspects of this complexity and proposes an integrated scheme of the impact of local immune reactions on clinical outcome. Current active immunotherapy trials have shown durable tumor regressions in a fraction of patients. However, clinical efficacy of current vaccines is limited, possibly because tumors skew the immune system by means of myeloid-derived suppressor cells, inflammatory type 2 T cells and regulatory T cells (Tregs), all of which prevent the generation of effector cells. To improve the clinical efficacy of cancer vaccines in patients with metastatic disease, we need to design novel and improved strategies that can boost adaptive immunity to cancer, help overcome...
Epidemiological Research: Terms and Concepts

This book is by a single author – someone who, after medical school, has devoted half a century of full-time effort to ever better understand both clinical and community medicine and the research that is needed to produce the scientific knowledge base of these. The book is organized so as to address in separate sections first the preparatory topics of medicine (clinical and epidemiological), science in general, and statistics (mathematical) then topics of epidemiological research proper; and, finally, topics of ‘meta-epidemiological’ clinical research. In those two main sections, a further grouping is based on the distinction between objects and methods of study. In this framework, the particular topics are addressed both descriptively and quasi-prescriptively, commonly with a number of explicated annotations. This book is intended to serve and a handbook for whomever is, in whatever way, concerned with epidemiological or ‘meta-epidemiological’ clinical research. But besides, it is intended to [...]

Features

This book is by a single author – someone who, after medical school, has devoted half a century of full-time effort to ever better understand both clinical and community medicine and the research that is needed to produce the scientific knowledge base of these. The book is organized so as to address in separate sections first the preparatory topics of medicine (clinical and epidemiological), science [...]

Contents


Fields of interest

Biomedicine (general); Epidemiology; Public Health; Medicine (general); Biometrics; Biostatistics

Target groups

Lower undergraduate

Type of publication

Graduate/advanced undergraduate textbook

Available

2011. XVI, 175 p. Hardcover
39,95 €
ISBN 978-94-007-1176-9

Epigenetic Aspects of Chronic Diseases

Epigenetic Aspects of Chronic Diseases assemble in comprehensive form what is known about the role of epigenetics in chronic disease development. This book provides new insights into treatment, including modulation of epigenetic regulation. Each chapter gives an outline of a respective disease, explains why epigenetics may be involved in the disease process and then presents the evidence of how changes in epigenetic status contribute to initiation and progression of the disease. The final chapters look towards future therapeutic treatment, based on manipulation of epigenetic aspects. Written by widely published experts, Epigenetic Aspects of Chronic Diseases is a valuable reference tool for clinicians and researchers who investigate and treat chronic diseases, as well as health care personnel, post-doctoral fellows and medical or dental students.

Features

Epigenetic Aspects of Chronic Diseases assemble in comprehensive form what is known about the role of epigenetics in chronic disease development. This book provides new insights into treatment, including modulation of epigenetic regulation. Each chapter gives an outline of a respective disease, explains why epigenetics may be involved in the disease process and then presents the evidence of how changes in [...]

Contents


Fields of interest

Human Genetics; Medical Biochemistry; Internal Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available

2011. XVI, 336 p. 54 illus., 47 in color. Hardcover
119,95 €
ISBN 978-1-84882-643-4

Grundwissen Immunologie

Dieses bereits in 3. Auflage erfolgreiche Kurzlehrbuch der Immunologie erläutert die Vielfalt molekularer und zellbiologischer Mechanismen von Immunreaktionen im menschlichen und tierischen Organismus. Dass diese Immunreaktionen einerseits die Infekt- und Tumorabwehr oder die Schwangerschaft essentiell sind, andererseits aber auch pathologische Relevanz bei vielen Krankheitszuständen erlangen können, wird deutlich herausgearbeitet. Auch Interventionsmöglichkeiten werden erörtert, so sie zum Verständnis relevant sind. Die Darstellung immunologischer Arbeitsmethoden erleichtert das Verständnis der Zusammenhänge. Bei Studierenden aller biologischen, biochemischen, pharmazeutischen, medizinischen, veterinärmedizinischen Fachrichtungen, aber auch bei Ärzten, Apothekern oder Lehrern in der Fortbildung sowie interessierten Laien soll das Buch das Interesse für die Immunologie wecken und das Verstehen der Zusammenhänge erleichtern. Fragen führen durch das Buch und der Leser wird animiert, sein Wissen [...]

Features

Dieses bereits in 3. Auflage erfolgreiche Kurzlehrbuch der Immunologie erläutert die Vielfalt molekularer und zellbiologischer Mechanismen von Immunreaktionen im menschlichen und tierischen Organismus. Dass diese Immunreaktionen einerseits für die Infekt- und Tumorabwehr oder die Schwangerschaft essentiell sind, andererseits aber auch pathologische Relevanz bei vielen Krankheitszuständen erlangen können, [...]

Contents


Fields of interest

Immunology; Infectious Diseases; Laboratory Medicine

Target groups

Upper undergraduate

Type of publication

German textbook

Available

2011. XVI, 269 S. 110 Abb. in Farbe. Softcover
27,99 €
ISBN 978-3-8274-2646-8
Handbook of Schizophrenia Spectrum Disorders, Volume I
Conceptual Issues and Neurobiological Advances

A few disorders have some of the same symptoms as schizophrenia including schizoaffective disorders, schizoaffective disorder, schizotypal and schizoid personality disorders, delusional disorder, and autism (schizophrenia spectrum disorders). Since the 2000 there has been significant progress in our understanding of the early presentations, assessment, suspected neuropathology, and treatment of these disorders. Recent technological breakthroughs in basic sciences hold promise for advancing our understanding of the pathophysiology of schizophrenia spectrum disorders. This collective monograph reviews recent researches regarding the origins, onset, course, and outcome of schizophrenia spectrum disorders. In particular, this book will illustrate new developments in terms of conceptual models, and research methodology, genetics and genomics, brain imaging and neurochemical studies, neurophysiology and information processing in schizophrenia spectrum disorders patients. Also will be highlighted new.[...]

Features
A few disorders have some of the same symptoms as schizophrenia including schizoaffective disorders, schizoaffective disorder, schizotypal and schizoid personality disorders, delusional disorder, and autism (schizophrenia spectrum disorders). Since the 2000 there has been significant progress in our understanding of the early presentations, assessment, suspected neuropathology, and treatment of these [...]

Contents

Fields of interest
Neurosciences; Neurobiology; Neurology; Neuropsychology

Target groups
Research

Type of publication
Contributed volume

Available
2011. XXVI, 494 p. 76 illus., 52 in color. Hardcover
139,95 €

Handbook of Schizophrenia Spectrum Disorders, Volume III
Therapeutic Approaches, Comorbidity, and Outcomes

A few disorders have some of the same symptoms as schizophrenia including schizoaffective disorders, schizoaffective disorder, schizotypal and schizoid personality disorders, delusional disorder, and autism (schizophrenia spectrum disorders). Since the 2000 there has been significant progress in our understanding of the early presentations, assessment, suspected neuropathology, and treatment of these disorders. Recent technological breakthroughs in basic sciences hold promise for advancing our understanding of the pathophysiology of schizophrenia spectrum disorders. This collective monograph reviews recent researches regarding the origins, onset, course, and outcome of schizophrenia spectrum disorders. In particular, this book will illustrate new developments in terms of conceptual models, and research methodology, genetics and genomics, brain imaging and neurochemical studies, neurophysiology and information processing in schizophrenia spectrum disorders patients. Also will be highlighted new.[...]

Features
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Contents

Fields of interest
Neurosciences; Neurobiology; Neurology; Neuropsychology

Target groups
Research

Type of publication
Contributed volume

Available
2011. XVI, 462 p. 11 illus., 5 in color. Hardcover
139,95 €
ISBN 978-94-007-0833-4

Handbook of Schizophrenia Spectrum Disorders, Volume II
Phenotypic and Endophenotypic Presentations

A few disorders have some of the same symptoms as schizophrenia including schizoaffective disorders, schizoaffective disorder, schizotypal and schizoid personality disorders, delusional disorder, and autism (schizophrenia spectrum disorders). Since the 2000 there has been significant progress in our understanding of the early presentations, assessment, suspected neuropathology, and treatment of these disorders. Recent technological breakthroughs in basic sciences hold promise for advancing our understanding of the pathophysiology of schizophrenia spectrum disorders. This collective monograph reviews recent researches regarding the origins, onset, course, and outcome of schizophrenia spectrum disorders. In particular, this book will illustrate new developments in terms of conceptual models, and research methodology, genetics and genomics, brain imaging and neurochemical studies, neurophysiology and information processing in schizophrenia spectrum disorders patients. Also will be highlighted new.[...]

Features
A few disorders have some of the same symptoms as schizophrenia including schizoaffective disorders, schizoaffective disorder, schizotypal and schizoid personality disorders, delusional disorder, and autism (schizophrenia spectrum disorders). Since the 2000 there has been significant progress in our understanding of the early presentations, assessment, suspected neuropathology, and treatment of these [...]

Contents

Fields of interest
Neurosciences; Neurobiology; Neurology; Neuropsychology

Target groups
Research

Type of publication
Contributed volume

Available
2011. X, 190 p. 21 illus., 11 in color. Hardcover
139,95 €
ISBN 978-94-007-0830-3
Molecular Basis of Health and Disease

The book describes how the balance between pro- and anti-inflammatory molecules is related to health and disease. It is suggested that many diseases are initiated and their progress is influenced by inflammatory molecules and a decrease in the production and/or action of anti-inflammatory molecules and this imbalance between pro- and anti-inflammatory molecules seems to have been initiated in the perinatal period. An alteration in the metabolism of essential fatty acids and their anti-inflammatory molecules such as lipoxins, resolvins, protectins, maresins and nitrolipids seems to play a major role in the pathobiology of several adult diseases. Based on these concepts, novel therapeutic approaches in the management of insulin resistance, obesity, type 2 diabetes mellitus, metabolic syndrome, cancer, lupus, rheumatoid arthritis and other autoimmune diseases are presented. Based on all these...[4]

Contents


Fields of interest

Biomedicine (general); Human Physiology; Molecular Medicine; Internal Medicine; Diabetes; Endocrinology

Target groups

Professional/practitioner

Type of publication

Monograph

Available

2011, XX, 583 p. Hardcover

169,95 €

ISBN 978-94-007-0494-7

Molecular and Functional Models in Neuropsychiatry

The development of more effective treatments for neuropsychiatric disorders requires scientific progress on a broad front. Animal models have a vital role to play in advancing the field. When deployed in conjunction with detailed study of these diseases in man they bring the power to make controlled experimental interventions which allow the functional consequences of genetic variations and polymorphisms to be understood in terms of their cellular, systems and behavioural effects. Further, they provide a means by which complex cognitive and behavioural phenomena may be dissected and understood. Finally, they provide a bridge to understanding the effects of drugs on the functioning of the central nervous system, thereby improving our understanding of the actions of those drugs in man.

Features

Common neuropsychiatric diseases are associated with significant human and economic cost. The development of more effective treatments requires scientific progress on a broad front and animal models have a vital role to play in these advances, enabling exploration of the functional consequences of molecular changes at the cellular, systems and behavioural levels. This volume discusses some of the latest and...[6]

Contents


Fields of interest

Neurosciences; Molecular Medicine; Psychopharmacology; Psychiatry; Neurology; Behavioural Sciences

Target groups

Research

Type of publication

Contributed volume

Available

2011, VIII, 151 p. Illus. in color. (Current Topics in Microbiology and Immunology, Vol. 350) Hardcover

99,95 €

ISBN 978-3-642-19544-0

Negative Co-Receptors and Ligands

Adaptive immune responses serve as a key defense mechanism for the control of infections in vertebrates. Immune responses must be of sufficient strength to contain invading pathogens, antigen specific responses require regulatory mechanisms to ensure termination or downmodulation to avoid excessive damage to the host tissue. For both branches of the adaptive immune system, regulatory molecules i.e. co-receptors and ligands have been identified that control the signaling cascades initiated by engagement of the T cell and B cell antigen receptors. This book describes biological functions as well as molecular mechanisms of these molecules.

Features

Adaptive immune responses serve as a key defense mechanism for the control of infections in vertebrates. Immune responses must be of sufficient strength to contain invading pathogens, antigen specific responses require regulatory mechanisms to ensure termination or downmodulation to avoid excessive damage to the host tissue. For both branches of the adaptive immune system, regulatory molecules i.e. [...]
Oxygen Transport to Tissue XXXII

This book covers all aspects of oxygen delivery to tissue, including blood flow and its regulation as well as oxygen metabolism. Special attention will be paid to methods of oxygen measurement in living tissue and application of these technologies to understanding physiological and biochemical basis for pathology related to tissue oxygenation. This book is multidisciplinary and designed to bring together experts and students from a range of research fields including biochemical engineering, physiology, microcirculation, and hematology.

Contents
Near Infrared Spectroscopy: The Western Reserve, Edward Morley and Oxygen. Analysis of the Changes in the Oxidation of Brain Tissue Cytochrome c Oxidase in Traumatic Brain Injury Patients during Hypocapnia: A Broadband NIRS Study. Effects of Assuming Constant Optical Scattering on Haemoglobin Concentration Measurements using NIRS during aValsalva Maneouvre. Speech Therapy Changes Blood Circulation and Oxygenation in the Brain and Muscle. A Near-Infrared Spectrophotometry Study. - Oxygen Sensors and Measurement. Evaluation of Lithium Naphthalocyanine (LiNc) Microcrystals for Biological EPR... Features Based on the 2009 proceedings of the 37th annual ISOTT conference, this volume covers all aspects of oxygen delivery to tissue, everything from near infrared spectroscopy, tumor biology, angiogenesis and mitochondrial metabolism to systems modeling, gas transport, hypoxic adaptation and exercise physiology. Special emphasis is placed on methods of oxygen measurement in living tissue and application of these...
**Tumors of the Central Nervous System, Volume 2**

Gliomas: Glioblastoma (Part 2)

Advantages and limitations of biomarkers in gliomagenesis are described. Molecular subtypes of gliomas are detailed. The role played by TP53 gene mutation in the deadliest brain tumor, glioblastoma multiforme, is pointed out. The role of mutations of IDH1 and IDH2, and isocitrate dehydrogenases in malignant gliomas are presented. Metabolic differences in different regions of the glioma tumor are clarified. Various types of imaging modalities, including PET and SPECT, to diagnose gliomas in general and glioblastoma in particular in patients are explained in detail. Both low-grade and high-grade gliomas are discussed. Conventional as well as fluorescence-guided resection techniques for high-grade, recurrent malignant gliomas are detailed. Impact of resection extent on outcomes in patients with high-grade gliomas is clarified. The advantage of the use of intraoperative low-field MRI in glioma surgery is explained.

**Fields of interest**

Neurosurgery; Cancer Research

**Target groups**

Professional/practitioner

**Type of publication**

Contributed volume

**Available**

2011. XII, 458 p. Hardcover

149,95 €

ISBN 978-94-007-0617-0

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**Die Softwareindustrie**

**Ökonomische Prinzipien, Strategien, Perspektiven**


**Fields of interest**

Management/Business for Professionals; Business Information Systems; Technology Management; e-commerce / e-business; Software Engineering

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2011. XI, 325 S. Hardcover

42,01 €

ISBN 978-3-642-13360-2

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**Two Faces of Evil: Cancer and Neurodegeneration**

Homeostasis involves a delicate interplay between generative and degenerative processes to maintain a stable internal environment. In biological systems, equilibrium is established and controlled through a series of negative feedback mechanisms driven by a range of signal transduction processes. Failures in these complex communication pathways result in instability leading to disease. Cancer represents a state of imbalance caused by an excess of cell proliferation. In contrast, neurodegeneration is a consequence of excessive cell loss in the nervous system. Both of these disorders exhibit profound tolls on humanity and they have been subject to a great deal of research designed to ameliorate this suffering. For the most part, the topics have been viewed as distinct and rarely do opportunities arise for transdisciplinary discussions among experts in both fields. However, cancer and neurodegeneration represent yin-yang counterpoints in the regulation of cell growth, and it is reasonable to hypothesize...[\textellipsis]

**Features**

The two greatest medical fears of the aging population are cancer and Alzheimer’s disease. Despite dramatic advances in understanding the molecular etiology of these disorders, therapeutic options for many patients with advanced disease have changed little and outcomes remain dismal. Paradoxically, recent findings suggest that some of the same molecules and biochemical processes underlying cancer may also...[\textellipsis]

**Fields of interest**

Neurosciences; Cancer Research

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**

2011. XIII, 163 p. 29 illus., 27 in color. (Research and Perspectives in Alzheimer’s Disease) Hardcover

139,95 €

ISBN 978-3-642-16601-3
Evolving Transportation Networks

Over the last two centuries, the development of modern transportation has significantly transformed human life. The main theme of this book is to understand the complexity of transportation development and model the process of network growth including its determining factors, which may be topological, morphological, temporal, technological, economic, managerial, social or political. Using multidimensional concepts and methods, the authors develop a holistic framework to represent network growth as an open and complex process with models that demonstrate in a scientific way how numerous independent decisions made by entities such as travelers, property owners, developers, and public jurisdictions could result in a coherent network of facilities on the ground. Models are proposed from innovative perspectives including self-organization, degeneration, and sequential connection to interpret the evolutionary growth of transportation networks in explicit consideration of independent economic and [...] features. Over the last two centuries, the development of modern transportation has significantly transformed human life. The main theme of this book is to understand the complexity of transportation development and model the process of network growth including its determining factors, which may be topological, morphological, temporal, technological, economic, managerial, social or political. Using multidimensional [...] fields of interest: Economic Policy.

Type of publication: Monograph

Available

2011. XII, 276 p. 68 ilus., 50 in color. (Transportation Research, Economics and Policy, Tentative volume 1) Hardcover

99,95 €

Macroeconomics from the Bottom-up

This book arose from our conviction that the NNS-DSGE approach to the analysis of aggregate market outcomes is fundamentally flawed. The practice of overcoming the SMD result by recurring to a fictitious RA leads to insurmountable methodological problems and lies at the root of DSGE models' failure to satisfactorily explain real world features, like exchange rate and banking crises, bubbles and herding in financial markets, swings in the sentiment of consumers and entrepreneurs, asymmetries and persistence in aggregate variables, and so on. At odds with this view, our critique rests on the premise that any modern macroeconomy should be modeled instead as a complex system of heterogeneous interacting individuals, acting adaptively and autonomously according to simple and empirically validated rules of thumb. We call our proposed approach Bottom-up Adaptive Macroeconomics (BAM). The reason why we claim that the contents of this book can be inscribed in the realm of macroeconomics is threefold: i) We [...] features. The recent economic events driven by the big financial crisis of 2007-08 has cogently put to the fore the limits and drawbacks of the ruling research paradigm in macroeconomics. This volume goes to the root of the problem by offering a workable alternative to the renowned issue of the microeconomic foundations of macroeconomic theory. Bringing together techniques from agent-based computational economics and [...] fields of interest: Macroeconomics / Monetary Economics; Economic Growth; Statistics for Business, Economics, Mathematical Finance, Insurance; Industrial Organization; Microeconomics.

Target groups: Graduate

Type of publication: Monograph

Available

2011. XII, 124 p. 20 ilus. (New Economic Windows) Hardcover

89,95 €

Mass Customization

Mass Customization excites both Researchers and Practitioners because of the possibility to produce customized products with mass production efficiency. Mass Customization - An Exploration of European Characteristics gives an overview on the need for personalisation from a customer perspective, analyses Mass Customization theories and assesses relevant best practices of European and International [...] fields of interest: Marketing; e-commerce / e-business; Business & Management Science; Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law; Production / Logistics.

Target groups: Research

Type of publication: Monograph

Available

2011. X, 100 p. 20 ilus. (SpringerBriefs in Business, 0) Softcover

49,95 €
ISBN 978-3-642-18389-8
Organizational Systems clarifies the application of cybernetic ideas, particularly those of Beer’s Viable System Model, to organizational diagnosis and design. Readers learn to appreciate the relevance of seeing the systemic coherence of the world. The book argues that many of the problems we experience today are routed in our practice of fragmenting that needs to be connected as a whole. It offers a method to study and design organizations and a methodology to deal with implementation problems. It is the outcome of many years of working experience with government offices as well as with all kinds of public and private enterprises. At a more detailed level this book offers an in depth discussion of variety engineering that is not available either in the primary or secondary literature.

Features
This book clarifies the application of cybernetic ideas, particularly those of Beer’s Viable System Model, to organizational diagnosis and design. Readers learn to appreciate the relevance of seeing the systemic coherence of the world. The book argues that many of the problems we experience today are routed in our practice of fragmenting that needs to be connected as a whole. It offers a method to...

Contents
Part I Concepts and the Viable System Model. - Part II Viplan Method. - Part III Methodology and Systemic Thinking.

Fields of interest
Organization / Planning; Business & Economics (general); Social Sciences (general)

Target groups
Graduate

Type of publication
Monograph

Available
2011. XII, 264 p. 130 illus., 76 in color. Hardcover

99,95 €
ISBN 978-3-642-19108-4

Overview of the PMBOK® Guide
Short Cuts for PMP® Certification

This book is for everyone who wants a readable introduction to best practice Project Management, as described by the PMBOK® Guide 4th Edition of the Project Management Institute (PMI), “the world’s leading association for the project management profession.” It is particularly useful for applicants for the PMI’s PMP® (Project Management Professional) and CAPM® (Certified Associate of Project Management) examinations, which are based mostly on the PMBOK® Guide. This book can also be studied alone by anyone as a general introduction to Project Management. The style and language of this book have also been selected to make them particularly suitable for readers who use English as a foreign language.

Features
This book is for everyone who wants a readable introduction to best practice Project Management, as described by the PMBOK® Guide 4th Edition of the Project Management Institute (PMI), “the world’s leading association for the project management profession.” It is particularly useful for applicants for the PMI’s PMP® (Project Management Professional) and CAPM® (Certified Associate of Project...
The Schuman report 2011 on European union is both a reference and a tool: A reference book: gathering contributions from best experts, it helps the readers to build their own point of view on key issues: European politics, State of the economies in the current crisis, Europe in the world and challenges on international security. A tool book: with around 30 original maps, it gathers a full set of key information: Synthesis of political life in Europe, Key figures on Europe, with comments and analysis.

**Fields of interest**
- Economic Policy; European Integration; Financial Economics; Law and Economics

**Features**
The Schuman 2011 Report on the State of the Union is both a reference and a tool. A reference: bringing together contributions from leading specialists, including an interview with Herman Van Rompuy, President of the European Council. This Report proposes a novel analytical framework, so that everyone can form his/her opinion on a series of key questions: The European Union in the [...]
The Ethics of Banking

Conclusions from the Financial Crisis

The Ethics of Banking analyzes the systemic and the ethical mistakes that led to the crisis. It keeps the middle ground between excusing all failures by the argument of a systemic crisis not to be taken responsibility for by the financial managers and the moralistic reproach that only moral failure is at the origin of the crisis. It investigates the role of speculation in the formation of the crisis and distinguishes between productive speculation for hedging and for securing market liquidity on the one hand, and unproductive and even detrimental hyper-speculation going far beyond of the degree of speculation that is necessary in a developed economy for the liquidity of financial markets, on the other hand. Hyper-speculation has increased the risks of the financial system and is still doing so.

Features
This book analyzes the systemic and the ethical mistakes that have led to the financial crisis of 2008. It explores the middle ground between the argument that financial managers cannot be expected to take responsibility for a systemic crisis and the argument that moral failure is the one and only origin of the crisis. The book investigates the role of speculation in the formation of the crisis. It [...]
The global economy is still experiencing the effects of the worst economic crisis since the Great Depression of the 1930s. Over the last three years economies worldwide have slowed and international trade has declined. Most importantly, the crisis has negatively affected the lives of ordinary people, creating a sense of uncertainty about the future and thus posing a direct threat to social cohesion, thus posing new challenges to political leadership. Climate change is also forcing the developed world to formulate a common strategy that will balance growth and environmental protection. The aim of the book is to examine these international trends and comprehend the transformations that take place internationally. The multi-authored work presents several accounts on the course of vital aspects of politics and economy. As a result, the contents of the book focuses on four main subjects: 1) global economic crisis and its consequences, 2) economic governance, 3) political leadership, and 4) climate change.

Features
In all probability 2011 is going to be one of the most critical years in recent decades. The problems created by the global economic crisis continue to affect the lives of ordinary people and could become a source of social instability. At the same time, developments at international level are creating a sense of uncertainty since long-established balances are facing profound challenges. With [...]
Umweltökonomik
Eine anwendungsorientierte Einführung


Features
Umweltökonomik bedeutet, nach Mitteln zur möglichst effizienten Bereitstellung von Umwelgütern wie etwa sauberes Wasser und Klimaschutz zu suchen. Dieses Buch führt in die Grundlagen der Umweltökonomik ein, stellt aber auch aktuelle Forschungsfragen vor. Die Theorie externer Effekte sowie die Besonderheiten von Umwelgütern werden ausführlich erläutert, ebenso umweltpolitische Instrumente – Steuern, […]

Contents
Vorwort.- 1 Die ökonomische Sicht der Dinge.- 2 Marktversagen durch externe Effekte.- 3 Das Coase-Theorem.- 4 Die Charakteristika von Umwelgütern.- 5 Instrumente der Umweltpolitik.- 6 Der Klimawandel als globales Umweltproblem.- 7 Umweltgütern werden ausführlich erläutert, ebenso umweltpolitische Instrumente – Steuern, […]

Fields of interest
Environmental Economics; Environmental Law / Policy / Ecotoxicity

Target groups
Lower undergraduate

Type of publication
German textbook

Available

23,32 €
ISBN 978-3-7908-2642-5

Ways Out of the Working Capital Trap
Empowering Self-Financing Growth Through Modern Supply Management

Especially in times of an economic boom following a crisis, companies have to deal with the phenomenon of the ‘working capital trap,’ which signifies a company’s increasing need for financial liquidity in times of hindered access to debt capital, caused by the increasingly restrictive credit approval processes of financial institutions. As a consequence of cost savings, this situation is often reinforced by a low level of inventory. This book takes up the problem and shows ways of escaping the ‘trap’ by identifying and strengthening in-house financing potential. First, different operating ratios will be introduced. These refer to the amount of capital committed to the flow of goods and to the amount of in-house financing possible. Subsequently, methods for consolidating in-house financing that are affected by procurement processes will be presented from the company’s and the supply chain’s perspective. From a company’s perspective, the methods for consolidating the amount of in-house financing over […]

Features
Especially in times of an economic boom following a crisis, companies have to deal with the phenomenon of the ‘working capital trap,’ which signifies a company’s increasing need for financial liquidity in times of hindered access to debt capital, caused by the increasingly restrictive credit approval processes of financial institutions. As a consequence of cost savings, this situation is often reinforced by […]

Contents

Fields of interest
Production / Logistics; Organization / Planning

Target groups
Professional/practitioner

Type of publication
Monograph

Available

34,95 €
ISBN 978-3-642-17270-0

Ökonometrie
Eine Einführung


Features
Dieses Lehrbuch bietet eine praxisorientierte Einführung in die Methoden der Ökonometrie. Angesicht der zunehmenden Bedeutung der empirischen Analyse in Wissenschaft und Praxis will das Buch die Ökonometrie aus ihrer formal-mathematischen Ecke herausholen und einem breiteren Interessentenkreis zugänglich machen. In der Konzeption des Lehrbuches erhielt deshalb didaktisches Profil grundsätzlich Vorrang vor […]

Contents

Fields of interest
Econometrics; Game Theory / Mathematical Methods; Game Theory, Economics, Social and Behavioral Sciences

Target groups
Research

Type of publication
German textbook

Available
2011. XXIV, 620 S. (Springer-Lehrbuch) Softcover

32,66 €
ISBN 978-3-642-19994-3
Advances in Food Protection
Focus on Food Safety and Defense

The global food-supply chain is vulnerable to threats from a variety of directions. Hence food security and safety remains a hot topic worldwide in academic research arenas and food industry practices. This book describes efforts from academia, government, and industry to counter food terrorism and to protect the food supply against any threat. In addition, it evaluates the global food supply, production capabilities, and food availability during and after disasters. Articles in the book assess food safety emergencies, and the prevention of, and response to deliberate contamination by microbial or chemical substances.

Minimization of health and economic risks following a terrorist act or unintentional contamination is likewise discussed. The book also examines novel preservation techniques, methods to produce safe food products, and other concerns for ensuring a stable and safe food supply.

Features
The global food-supply chain is vulnerable to threats from a variety of directions. Hence food security and safety remains a hot topic worldwide in academic research arenas and food industry practices. This book describes efforts from academia, government, and industry to counter food terrorism and to protect the food supply against any threat. In addition, it evaluates the global food supply, production [...]

Contents

Fields of interest
Chemistry (general); Applied Microbiology; Food Science; Safety in Chemistry / Dangerous Goods

Target groups
Graduate

Type of publication
Proceedings

Available

139,95 €
ISBN 978-94-007-1099-3

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Biodegradable Poly (Lactic Acid)

Synthesis, Modification, Processing and Applications

"Biodegradable Poly (Lactic Acid): Synthesis, Modification, Processing and Applications" describes the preparation, modification, processing, and the research and applications of biodegradable poly (lactic acid), which belong to the biomedical and environment-friendly materials. Highly illustrated, the book introduces systematically the synthesis, physical and chemical modifications, and the latest developments of research and applications of poly (lactic acid) in biomedical materials. The book is intended for researchers and graduate students in the fields of materials science and engineering, polymer science and engineering, biomedicine, chemistry, environmental sciences, textile science and engineering, package materials, and so on. Dr. Jie Ren is a professor at the Institute of Nano and Polymeric Materials, School of Material Science and Engineering, Tongji University, Shanghai, China.

Features
"Biodegradable Poly (Lactic Acid): Synthesis, Modification, Processing and Applications" describes the preparation, modification, processing, and the research and applications of biodegradable poly (lactic acid), which belong to the biomedical and environment-friendly materials. Highly illustrated, the book introduces systematically the synthesis, physical and chemical modifications, and the latest developments of research and applications of poly (lactic acid) [...]

Contents
Introduction.- Raw materials.- Synthesis and manufacture of poly (lactic acid).- Modification of poly (lactic acid).- Processing of poly (lactic acid).- Application in the field of commodity and industry product.- Application in the field of biomedical materials.- Standard and Test Methods.

Fields of interest
Polymer Sciences; Biochemical Engineering; Waste Management / Waste Technology; Biomedical Engineering

Target groups
Research

Type of publication
Monograph

Available
2011. 240 p. 120 Illus. Hardcover

119,95 £
ISBN 978-3-642-17595-4
Cellulose Fibers: Bio- and Nano-Polymer Composites
Green Chemistry and Technology

Because we are living in an era of Green Science and Technology, developments in the field of bio- and nano-polymer composite materials for advanced structural and medical applications is a rapidly emerging area and the subject of scientific attention. In light of the continuously deteriorating environmental conditions, researchers all over the world have focused an enormous amount of scientific research towards bio-based materials because of their cost effectiveness, eco-friendliness and renewability. This handbook deals with cellulose fibers and nano-fibers and covers the latest advances in bio- and nano-polymer composite materials. This rapidly expanding field is generating many exciting new materials with novel properties and promises to yield advanced applications in diverse fields. This book reviews vital issues and topics and will be of interest to academicians, research scholars, polymer engineers and researchers in industries working in the subject area. It will also be a valuable resource for working professionals.

Contents
Part I Cellulose Fibers and Nanofibers 1.

Fields of interest
Polymer Sciences; Environmental Chemistry; Biotechnology; Industrial Chemistry / Chemical Engineering

Target groups
Research

Type of publication
Monograph

Available
2011. XIX, 750 p. Hardcover
239,00 €
ISBN 978-3-642-17369-1

Design, Synthesis and Characterization of new Supramolecular Architectures

This thesis focuses on the bottom-up design, construction and operation of supramolecular systems capable of behaving as devices and machines on the molecular scale, which is a topic of great interest in nanoscience and a fascinating challenge in nanotechnology. In particular, the systems investigated here include: polyviologen dendrimers capable of behaving as hosts and chargestoring devices; molecular machines based on pseudorotaxanes/rotaxanes and operated by photoinduced proton transfer, or photoisomerization reactions; and a simple unimolecular multiplexer/demultiplexer. The systems have been characterized using a variety of techniques including absorption and emission spectra, laser flash photolysis, NMR spectroscopy, electrochemical experiments, stopped flow measurements. This research addresses a large number of open problems in the nanosciences, dealing with a wide range of the most advanced applications of supramolecular systems.

Features
This thesis focuses on the bottom-up design, construction and operation of supramolecular systems capable of behaving as devices and machines on the molecular scale, which is a topic of great interest in nanoscience and a fascinating challenge in nanotechnology. In particular, the systems investigated here include: polyviologen dendrimers capable of behaving as hosts and chargestoring devices; molecular...[ ]

Contents
Introduction.- Supramolecular Architectures.- Materials and Methods.- Dendrimers.- Molecular Machines.- Molecular Logic.

Fields of interest
Physical Chemistry; Nanotechnology; Nanochemistry

Target groups
Research

Type of publication
Monograph

Available
2011. XIII, 90 p. 60 illus., 16 in color. (Springer Theses) Hardcover
79,95 €
ISBN 978-3-642-19284-5

Interfacial Phenomena in Electro catalysis

This volume analyzes and summarizes recent developments and breakthroughs in several key interfacial electrochemical systems in fuel cell electrocatalysis. The chapters are written by internationally recognized experts or rising stars in electrocatalysis addressing both the fundamental and practical aspects of several emerging key electrochemical technologies.

Features
Topics in Number 51 include:- Surface thermodynamics of metal/solution interface. - Temperature effects on platinum single-crystal and aqueous solution interphases. - Surface thermodynamics of the metal and solution interface. - XAS investigations of PEM fuel cells. - Palladium-Based electrocatalysts for alcohol oxidation in direct alcohol fuel cells. - Structure and Reactivity of...[ ]

Contents
Interfacial electrocatalysis on well characterized surfaces.- Temperature effects on platinum single-crystal and aqueous solution interphases.- Surface thermodynamics of the metal/solution interface.- XAS investigations of PEM fuel cells.- Palladium-Based electrocatalysts for alcohol oxidation in direct alcohol fuel cells.- Enhancement of the performance of PEM fuel cells.- Palladium-Based electrocatalysts for alcohol oxidation in...

**Contents**

1. Grundzüge des stofflichen Aufbaus von Lebensmitteln
2. Grundzüge des stofflichen Aufbaus von Lebensmitteln
3. Kohlenhydrate: Struktur, Vorkommen und physiologische Bedeutung
4. Proteine
5. Fette, und physiologische Bedeutung
6. Vitamine: Struktur und physiologische Bedeutung
7. Phenolische Verbindungen als Bestandteile von Lebensmitteln
8. Natürlich vorkommende Farbstoffe in Lebensmitteln
9. Gewürze - Aromastoffe in Lebensmitteln
10. Gewürze - Aromastoffe in Lebensmitteln
11. Tierische Lebensmittel
12. Pflanzenlebensmittel

**Features**

- Ergänzte Kapitel zu funktionellen (Pro- und Frühpflanzen) sowie angereicherten Lebensmitteln
- Überarbeitete Darstellung des Einsatzes der Gentechnologie bei Lebensmitteln sowie Nanotechnologie in der Lebensmittelverarbeitung
- Praktische Werkzeuge und Wissensbasen für eine erfolgreiche Berufswahl und berufliche Entwicklung

**Fields of interest**

- Food Science
- Nutrition
- Organic Chemistry
- Agri-culture

**Target groups**

- Upper undergraduate

**Type of publication**

- German textbook

**Available**

2011. XXX. 806 S. 362 Abb. Hardcover

59,05 € ISBN 978-3-7091-0210-7
A comprehensive treatment of the characterisation techniques used in investigating inorganic and organic molecules that interact with biomolecules is presented to the reader in a clear fashion. The work consists of two parts: (i) synthetic aspects of metallointercalators along with targeting and improving transport and (ii) the various techniques that are used for probing their interactions, such as: DNA-NMR, PGSE-NMR, DNA ESI-MS, Linear and Circular Dichroism, Fluorescence Spectroscopy, Confocal Microscopy, Viscosity, TGA and dialysis, Microarrays, biological analysis. Chapters are devoted to the synthesis and the techniques used to study the interactions of inorganic complexes with biomolecules. Considerably detailed examples are used to help illustrate the application of these techniques. This book is a useful resource for an array of inorganic and organic advanced undergraduate and graduate courses and for researchers in drug discovery.

Features
A comprehensive treatment of the characterisation techniques used in investigating inorganic and organic molecules that interact with biomolecules is presented to the reader in a clear fashion. The work consists of two parts: (i) synthetic aspects of metallointercalators along with targeting and improving transport and (ii) the various techniques that are used for probing their interactions, such as; [...]
Advances in Cryptology -- EUROCRYPT 2011

This book constitutes the refereed proceedings of the 30th Annual International Conference on the Theory and Applications of Cryptographic Techniques, EUROCRYPT 2011, held in Tallinn, Estonia, in May 2011. The 31 papers, presented together with 2 invited talks, were carefully reviewed and selected from 167 submissions. The papers are organized in topical sections on lattice-based cryptography, implementation and side channels, homomorphic cryptography, signature schemes, information-theoretic cryptography, symmetric key cryptography, attacks and algorithms, secure computation, composability, key dependent message security, and public key encryption.

Features
This book constitutes the refereed proceedings of the 30th Annual International Conference on the Theory and Applications of Cryptographic Techniques, EUROCRYPT 2011, held in Tallinn, Estonia, in May 2011. The 31 papers, presented together with 2 invited talks, were carefully reviewed and selected from 167 submissions. The papers are organized in topical sections on lattice-based cryptography, implementation and side channels, homomorphic cryptography, signature schemes, information-theoretic cryptography, symmetric key cryptography, attacks and algorithms, secure computation, composability, key dependent message security, and public key encryption.

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

Target groups
Research

Type of publication
Proceedings

Available
79,00 €
ISBN 978-3-642-20464-7

Advances in Information Retrieval
33rd European Conference on IR Research, ECIR 2011, Dublin, Ireland, April 18-21, 2011, Proceedings

This book constitutes the refereed proceedings of the 33rd annual European Conference on Information Retrieval, ECIR 2011, held in Dublin, Ireland, in April 2010. The 45 revised full papers presented with 24 poster papers, 17 short and 6 tool demonstrations were carefully reviewed and selected from 223 full paper submissions and 64 poster/demo submissions. The papers are organized topical sections on text egorization, recommender systems, Web IR, IR evaluation, IR for

Features
This book constitutes the refereed proceedings of the 33rd annual European Conference on Information Retrieval Research, ECIR 2011, held in Dublin, Ireland, in April 2010. The 45 revised full papers presented together with 24 poster papers, 17 short papers, and 6 tool demonstrations were carefully reviewed and selected from 223 full research paper submissions and 64 poster/demo submissions. The papers are [...]

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

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
56,00 €
ISBN 978-3-642-20498-2

Advances in Power Electronics and Instrumentation Engineering

This book constitutes the refereed proceedings of the Second International Conference on Advances in Power Electronics and Instrumentation Engineering, PEIE 2011, held at Nagpur, India, in April 2011. The 9 revised full papers presented together with 4 short papers and 7 poster papers were carefully reviewed and selected from numerous submissions. The papers address current issues in the field of power electronics, communication engineering, instrumentation engineering, digital electronics, electrical power engineering, electrical machines, information technology, control systems, and the like.

Features
This book constitutes the refereed proceedings of the Second International Conference on Advances in Power Electronics and Instrumentation Engineering, PEIE 2011, held at Nagpur, India, in April 2011. The 9 revised full papers presented together with 4 short papers and 7 poster papers were carefully reviewed and selected from numerous submissions. The papers address current issues in the field of [...]

Fields of interest
Special Purpose and Application-Based Systems; Software Engineering; Processor Architectures; Logic Design; Computer Hardware; Control Structures and Microprogramming

Target groups
Research

Type of publication
Proceedings

Available
87,00 €
ISBN 978-3-642-20160-8
Applications of Declarative Programming and Knowledge Management

18th International Conference, INAP 2009, Évora, Portugal, November 3-5, 2009, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 18th International Conference on Applications of Declarative Programming and Knowledge Management, INAP 2009, held in Évora, Portugal, in November 2009. The 12 revised full papers presented together with 2 invited talks were carefully reviewed and selected during two rounds of reviewing and improvement. The conference comprehensively covers the impact of programmable logic solvers in the internet society, its underlying technologies, and leading edge applications in industry, commerce, government, and societal services. The topics of the selected papers concentrate on three currently important fields: foundations and extensions of logic programming, databases and query languages, declarative programming with logic languages, and applications thereof.

Features

This book constitutes the thoroughly refereed post-conference proceedings of the 18th International Conference on Applications of Declarative Programming and Knowledge Management, INAP 2009, held in Évora, Portugal, in November 2009. The 12 revised full papers presented together with 2 invited talks were carefully reviewed and selected during two rounds of reviewing and improvement. The conference comprehensively covers the impact of programmable logic solvers in the internet society, its underlying technologies, and leading edge applications in industry, commerce, government, and societal services. The topics of the selected papers concentrate on three currently important fields: foundations and extensions of logic programming, databases and query languages, declarative programming with logic languages, and applications thereof.

Fields of interest

Artificial Intelligence (incl. Robotics), Programming Techniques

Target groups

Research

Type of publication

Proceedings

Available


46,00 €
ISBN 978-3-642-20588-0

Applications of Evolutionary Computation

EvoApplications 2011: EvoCOMNET, EvoFIN, EvoHOT, EvoMUSART, EvoSTIM, and EvoTRANSLOC, Torino, Italy, April 27-29, 2011, Proceedings, Part II

This book constitutes the refereed proceedings of the International Conference on the Applications of Evolutionary Computation, EvoApplications 2011, held in Torino, Italy, in April 2011 colocated with the Evo* 2011 events. Thanks to the large number of submissions received, the proceedings for EvoApplications 2011 are divided across two volumes (LNCS 6624 and 6625). The present volume contains contributions for EvoCOMNET, EvoFIN, EvoHOT, EvoMUSART, EvoSTIM, and EvoTRANSLOC. The 51 revised full papers presented were carefully reviewed and selected from numerous submissions. This volume presents an overview about the latest research in EC. Areas where evolutionary computation techniques have been applied range from telecommunication networks to complex systems, finance and economics, games, image analysis, evolutionary music and art, parameter optimization, scheduling, and logistics. These papers may provide guidelines to help new researchers tackling their own problem using EC.

Features

This book constitutes the refereed proceedings of the International Conference on the Applications of Evolutionary Computation, EvoApplications 2011, held in Torino, Italy, in April 2011 colocated with the Evo* 2011 events. Thanks to the large number of submissions received, the proceedings for EvoApplications 2011 are divided across two volumes (LNCS 6624 and 6625). The present volume contains contributions for EvoCOMPLEX, EvoGAMES, EvoIASP, EvoINTELLIGENCE, EvoNUM, and EvoSTOC. The 36 revised full papers presented were carefully reviewed and selected from numerous submissions. This volume presents an overview about the latest research in EC. Areas where evolutionary computation techniques have been applied range from telecommunication networks to complex systems, finance and economics, games, image analysis, evolutionary music and art, parameter optimization, scheduling, and logistics. These papers may provide guidelines to help new researchers tackling their own problem using EC.

Fields of interest

Computation by Abstract Devices; Programming Techniques; Computer Communication Networks; Mathematical Applications in Computer Science; Image Processing and Computer Vision; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Proceedings

Available


70,00 €
ISBN 978-3-642-20519-4
Aufwandsschätzungen in der Software- und Systementwicklung kompakt

Endlich ein Buch, das die zahlreichen Fallstricke bei Aufwandsschätzungen für die Entwicklung von Softwaresystemen aufzeigt und konkrete Strategien für deren Vermeidung anbietet. Es stellt die Möglichkeiten und Grenzen gängiger Schätzverfahren dar und illustriert sie mit Hilfe von Beispielen so prägnant, dass einer direkten praktischen Anwendung nichts mehr im Wege steht. Eine Sammlung der wichtigsten Tabellen und Formeln rundet dieses Buch ab und macht es sowohl für die industrielle Praxis und Weiterbildung als auch für die akademische Ausbildung zum handlichen Nachschlagewerk.

Features
Endlich ein Buch, das die zahlreichen Fallstricke bei Aufwandsschätzungen für die Entwicklung von Softwaresystemen aufzeigt und konkrete Strategien für deren Vermeidung anbietet. Es stellt die Möglichkeiten und Grenzen gängiger Schätzverfahren dar und illustriert sie mit Hilfe von Beispielen so prägnant, dass einer direkten praktischen Anwendung nichts mehr im Wege steht. Eine Sammlung der […]

Contents

Fields of interest
Software Engineering

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2011, VIII, 128 S. 16 Abb. (IT kompakt) Softcover
12,10 €
ISBN 978-3-8274-2751-9

Beyond Deep Blue
Chess in the Stratosphere

More than a decade has passed since IBM’s Deep Blue computer stunned the world by defeating Garry Kasparov, the world chess champion at that time. Beyond Deep Blue tells the continuing story of the chess engine and its steady improvement. The book provides analysis of the games alongside a detailed examination of the remarkable technological progress made by the engines – asking which one is best, how good is it, and how much better can it get. Features: presents a total of 118 games, played by 17 different chess engines, collected together for the first time in a single reference; details the processor speeds, memory sizes, and the number of processors used by each chess engine; includes games from 10 World Computer Chess Championships, and three computer chess tournaments of the Internet Chess Club; covers the man-machine matches between Fritz and Kramnik, and Kasparov and Deep Junior; describes three historical matches between leading engines – Hydra vs. Shredder, Junior vs. Fritz, and Zappa vs. Rybka.

Features
More than a decade has passed since IBM’s Deep Blue computer stunned the world by defeating Garry Kasparov, the world chess champion at that time. Following Deep Blue’s retirement, there has been a succession of better and better chess playing computer, or chess engines, and today there is little question that the world’s best engines are stronger at the game than the world’s best human […]

Contents

Fields of interest
History of Computing; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Proceedings

Available
2011, XII, 287 p. Hardcover
34,95 €
ISBN 978-3-642-20403-6

Computational Color Imaging


This book constitutes the refereed proceedings of the Third Computational Color Imaging Workshop, CCIIW 2010, held in Milan, Italy, in April 2010. The 16 revised full papers, presented together with three invited papers, were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on computational photogaphy, color and perception, color imaging, and computational imaging.

Features
This book constitutes the refereed proceedings of the Third Computational Color Imaging Workshop, CCIIW 2010, held in Milan, Italy, in April 2010. The 16 revised full papers, presented together with three invited papers, were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on computational photogaphy, color and perception, color imaging, and computational […]

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

Target groups
Research

Available
46,00 €
ISBN 978-3-642-20403-6
Core Concepts in Data Analysis: Summarization, Correlation and Visualization

Core Concepts in Data Analysis: Summarization, Correlation and Visualization provides in-depth descriptions of those data analysis approaches that either summarize data (principal component analysis and clustering, including hierarchical and network clustering) or correlate different aspects of data (decision trees, linear rules, neuron networks, and Bayes rule). Boris Mirkin takes an unconventional approach and introduces the concept of multivariate data summarization as a counterpart to conventional machine learning prediction schemes, utilizing techniques from statistics, data analysis, data mining, machine learning, computational intelligence, and information retrieval. Innovations following from his in-depth analysis of the models underlying summarization techniques are introduced, and applied to challenging issues such as the number of clusters, mixed scale data standardization, interpretation of the solutions, as well as relations between seemingly unrelated concepts: goodness-of-fit functions...[

Features
Core Concepts in Data Analysis: Summarization, Correlation and Visualization provides in-depth descriptions of those data analysis approaches that either summarize data (principal component analysis and clustering, including hierarchical and network clustering) or correlate different aspects of data (decision trees, linear rules, neuron networks, and Bayes rule). Boris Mirkin...[

Contents

Fields of interest
Discrete Mathematics in Computer Science; Probability and Statistics in Computer Science; Mathematical Applications in Computer Science; Artificial Intelligence (incl. Robotics); Pattern Recognition

Target groups
Upper undergraduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2011. XIX, 390 p. (Undergraduate Topics in Computer Science) Softcover
34,95 €

Current Challenges in Patent Information Retrieval

Patents form an important knowledge resource – much technical information represented in patents is not represented in scientific literature – and at the same time they are important, and economically highly relevant, legal documents. Between 1998 and 2008, the number of patent applications filed yearly worldwide grew by more than 50 percent. Yet still we see a huge gap between, on the one hand, the...[

Contents

Fields of interest
Information Storage and Retrieval; Document Preparation and Text Processing; Computer Appl. in Administrative Data Processing; Commercial Law

Target groups
Research

Type of publication
Monograph

Available
99,95 €
ISBN 978-3-642-19230-2

Database Systems for Advanced Applications

This book constitutes the workshop proceedings of the 16th International Conference on Database Systems for Advanced Applications, DASFAA 2011, held in Hong Kong, China, in April 2011. The volume contains six workshops, each focusing on specific research issues that contribute to the main themes of the DASFAA conference: The First International Workshop on Graph-structured Data Bases (GDB 2011); the First International Workshop on Spatial Information Modeling, Management and Mining (SIM3 2011); the International Workshop on Flash-based Database Systems (FlashDB 2011); the Second International Workshop on Social Networks and Social Media Mining on the Web (SNSSMW 2011); the First International Workshop on Data Management for Emerging Network Infrastructures (DaMEN 2011); and the Fourth International Workshop on Data Quality in Integration Systems (DQIS 2011).

Features
This book constitutes the workshop proceedings of the 16th International Conference on Database Systems for Advanced Applications, DASFAA 2011, held in Hong Kong, China, in April 2011. The volume contains six workshops, each focusing on specific research issues that contribute to the main themes of the DASFAA conference: The First International Workshop on Graph-structured Data Bases (GDB 2011); the First International Workshop on Spatial Information Modeling, Management and Mining (SIM3 2011); the International Workshop on Flash-based Database Systems (FlashDB 2011); the Second International Workshop on Social Networks and Social Media Mining on the Web (SNSSMW 2011); the First International Workshop on Data Management for Emerging Network Infrastructures (DaMEN 2011); and the Fourth International Workshop on Data Quality in Integration Systems (DQIS 2011).

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

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
70,00 €
ISBN 978-3-642-20243-8
Digital Privacy

PRIME - Privacy and Identity Management for Europe

This book documents the R&D outcome of the PRIME Project, an R&D project partially funded by the European Union’s Sixth Framework Programme and the Swiss Federal Office for Education and Science. PRIME has focused on privacy-enhancing identity management techniques and systems to support users’ sovereignty over their personal privacy and enterprises’ privacy-compliant data processing. During the course of four years, the project has involved over a hundred researchers and professionals from 22 major European academic and industrial organizations conducting R&D work in areas relevant to digital privacy. The book presents 28 detailed chapters organized in five parts: Introductory summary, legal, social, and economic aspects, realization of privacy-enhancing user-centric identity management, exploitation of PRIME results for applications, conclusions drawn and an outlook on future work. As the first coherent presentation of the topic, this book will serve as a valuable source of reference and [...] Features

This book documents the R&D outcome of the PRIME Project, an R&D project partially funded by the European Union’s Sixth Framework Programme and the Swiss Federal Office for Education and Science. PRIME has focused on privacy-enhancing identity management techniques and systems to support users’ sovereignty over their personal privacy and enterprises’ privacy-compliant data processing. During the [...] Contents


Computers and Society; Management of Computing and Information Systems; Information Systems Applications (incl.Internet); Models and Principles; Computer Appl. in Administrative Data Processing; Data Encryption

Target groups

Research

Type of publication

Contributed volume

Available

87,00 €

E-Librarian Service

User-Friendly Semantic Search in Digital Libraries

This book introduces a new approach to designing E-Librarian Services. With the help of this system, users will be able to retrieve multimedia resources from digital libraries more efficiently than they would by browsing through an index or by using a simple keyword search. E-Librarian Services combine recent advances in multimedia information retrieval with aspects of human-machine interfaces, such as the ability to ask questions in natural language; they simulate a human librarian by finding and delivering the most relevant documents that offer users potential answers to their queries. The premise is that more pertinent results can be retrieved if the search engine understands the meaning of the query; the returned results are therefore logical consequences of an inference rather than of keyword matches. Moreover, E-Librarian Services always provide users with a solution, even in situations where they are unable to offer a comprehensive answer.

Features

This book introduces a new approach to designing E-Librarian Services. With the help of this system, users will be able to retrieve multimedia resources from digital libraries more efficiently than they would by browsing through an index or by using a simple keyword search. E-Librarian Services combine recent advances in multimedia information retrieval with aspects of human-machine interfaces, such as the [...] Contents


Information Storage and Retrieval; Multimedia Information Systems; User Interfaces and Human Computer Interaction; Information Systems and Communication Service; Language Translation and Linguistics; Computer Communication Networks

Target groups

Professional/practitioner

Type of publication

Professional book

Available

2011. XV, 212 p. 67 illus., 10 in color. (X.media.publishing) Hard-cover
49,95 €
ISBN 978-3-642-17742-2
Engineering of Software

The Continuing Contributions of Leon J. Osterweil

Features
Software engineering research can trace its roots to a few highly influential individuals. Among that select group is Leon J. Osterweil, who has been a major force in driving software engineering from its infancy to its modern reality. For more than three decades, Prof. Osterweil’s work has fundamentally defined or significantly impacted major directions in software analysis, development tools and [...] 

Contents

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

Target groups
Research

Type of publication
Commemorative publication

Available
2011. VIII, 400 p. Hardcover
99.95 €
ISBN 978-3-642-19822-9

Evolutionary Computation in Combinatorial Optimization


This book constitutes the refereed proceedings of the 11th European Conference on Evolutionary Computation in Combinatorial Optimization, EvoCOP 2011, held in Torino, Italy, in April 2011. The 22 revised full papers presented were carefully reviewed and selected from 42 submissions. The papers present the latest research and discuss current developments and applications in metaheuristics - a paradigm to effectively solve difficult combinatorial optimization problems appearing in various industrial, economical, and scientific domains. Prominent examples of metaheuristics are evolutionary algorithms, simulated annealing, taboo search, scatter search, memetic algorithms, variable neighborhood search, iterated local search, greedy randomized adaptive search procedures, estimation of distribution algorithms, and ant colony optimization.

Features
This book constitutes the refereed proceedings of the 11th European Conference on Evolutionary Computation in Combinatorial Optimization, EvoCOP 2011, held in Torino, Italy, in April 2011. The 22 revised full papers presented were carefully reviewed and selected from 42 submissions. The papers present the latest research and discuss current developments and applications in metaheuristics - a paradigm to [...] 

Fields of interest
Algorithm Analysis and Problem Complexity; Computation by Abstract Devices; Pattern Recognition; Discrete Mathematics in Computer Science; Probability and Statistics in Computer Science

Target groups
Research

Type of publication
Proceedings

Available
46.00 €
ISBN 978-3-642-20361-3

Evolutionary Computation, Machine Learning and Data Mining in Bioinformatics


This book constitutes the refereed proceedings of the 9th European Conference on Evolutionary Computation, Machine Learning and Data Mining in Bioinformatics, EvoBIO 2011, held in Torino, Italy, in April 2011 co-located with the Evo* 2011 events. The 12 revised full papers presented together with 7 poster papers were carefully reviewed and selected from numerous submissions. All papers included topics of interest such as biomarker discovery, cell simulation and modeling, ecological modeling, fluxomics, gene networks, biotechnology, metabolomics, microarray analysis, phylogenetics, protein interactions, proteomics, sequence analysis and alignment, and systems biology.

Features
This book constitutes the refereed proceedings of the 9th European Conference on Evolutionary Computation, Machine Learning and Data Mining in Bioinformatics, EvoBIO 2011, held in Torino, Italy, in April 2011 co-located with the Evo* 2011 events. The 12 revised full papers presented together with 7 poster papers were carefully reviewed and selected from numerous submissions. All papers included topics of [...] 

Fields of interest
Computational Biology / Bioinformatics; Algorithm Analysis and Problem Complexity; Database Management; Artificial Intelligence (incl. Robotics); Computation by Abstract Devices; Data Structures

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
46.00 €
ISBN 978-3-642-20388-6
Evolutionary Optimization: the µGP toolkit

This book describes an award-winning evolutionary algorithm that outperformed experts and conventional heuristics in solving several industrial problems. It presents a discussion of the theoretical and practical aspects that enabled µGP (MicroGP) to autonomously find the optimal solution of hard problems, handling highly structured data, such as full-dledged assembly programs, with functions and interrupt handlers. For a practitioner, µGP is simply a versatile optimizer to tackle most problems with limited setup effort. The book is valuable for all who require heuristic problem-solving methodologies, such as engineers dealing with verification and test of electronic circuits; or researchers working in robotics and mobile communication. Examples are provided to guide the reader through the process, from problem definition to gathering results. For an evolutionary computation researcher, µGP may be regarded as a platform where new operators and strategies can be easily tested. MicroGP (the toolkit) is a(n)[…]

Features
This book describes an award-winning evolutionary algorithm that outperformed experts and conventional heuristics in solving several industrial problems. It presents a discussion of the theoretical and practical aspects that enabled µGP (MicroGP) to autonomously find the optimal solution of hard problems, handling highly structured data, such as full-dagged assembly programs, with functions and interrupt […]

Contents
Evolutionary computation.- Why yet another one evolutionary optimizer?- The µGP architecture.- Advanced features.- Performing an evolutionary run.- Command line syntax.- Syntax of the settings file.- Syntax of the population parameters file.- Syntax of the external constraints file.- Writing a compliant evaluator.- Implementation details.- Examples and applications.- Argument and option synopsis.- External constraints synopsis.- Index.- References

Fields of interest
Artificial Intelligence (incl. Robotics); Computer Applications; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Research

Type of publication
Monograph

Available
2011. XIII, 178 p. Hardcover

79,95 €
ISBN 978-0-387-09425-0

Experimental Algorithms

This volume constitutes the refereed proceedings of the 10th International Symposium on Experimental Algorithms, SEA 2011, held in Kolimbari, Chania, Crete, Greece, in May 2011. The 36 revised full papers presented together with 2 invited papers were carefully reviewed and selected from 83 submissions and present current research in the area of design, analysis, and experimental evaluation and engineering of algorithms, as well as in various aspects of computational optimization and its applications.

Features
This volume constitutes the refereed proceedings of the 10th International Symposium on Experimental Algorithms, SEA 2011, held in Kolimbari, Chania, Crete, Greece, in May 2011. The 36 revised full papers presented together with 2 invited papers were carefully reviewed and selected from 83 submissions and present current research in the area of design, analysis, and experimental evaluation and engineering of […]

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

Target groups
Research

Type of publication
Proceedings

Available

62,00 €
ISBN 978-3-642-20661-0

Formal Concept Analysis

This book constitutes the refereed proceedings of the 9th International Conference on Formal Concept Analysis, ICFCA 2011, held in Nicosia, Cyprus, in May 2011. The 16 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 49 submissions. The central theme was the mathematical formalization of concept and conceptual hierarchy. The field has developed into a constantly growing research area in its own right with a thriving theoretical community and an increasing number of applications in data and knowledge processing including disciplines such as data visualization, information retrieval, machine learning, software engineering, data analysis, data mining, social networks analysis, etc.

Features
This book constitutes the refereed proceedings of the 9th International Conference on Formal Concept Analysis, ICFCA 2011, held in Nicosia, Cyprus, in May 2011. The 16 revised full papers presented together with 3 invited talks were carefully reviewed and selected from 49 submissions. The central theme was the mathematical formalization of concept and conceptual hierarchy. The field has developed into a […]

Fields of interest
Artificial Intelligence (incl. Robotics); Software Engineering; Data Mining and Knowledge Discovery; Mathematical Logic and Formal Languages; Discrete Mathematics in Computer Science; Order, Lattices, Ordered Algebraic Structures

Target groups
Professional/practitioner

Type of publication
Proceedings

Available
2011. XII, 266 p. (Lecture Notes in Artificial Intelligence, Vol. 6628) Softcover

46,00 €
ISBN 978-3-642-20513-2
**Formal Grammar**

14th International Conference, FG 2009, Bordeaux, France, July 25-26, 2009, Revised Selected Papers

This book constitutes the refereed proceedings of the 14th International Conference on Formal Grammar 2009, held in Bordeaux, France, in July 2009. The 13 revised full papers presented, including two invited talks, were carefully reviewed and selected from 26 submissions. These articles in this book give an overview of new and original research on formal grammar, mathematical linguistics and the application of formal and mathematical methods to the study of natural language.

**Features**

- The 13 revised full papers presented, including two invited talks, were carefully reviewed and selected from 26 submissions. These articles in this book give an overview of new and original research on formal grammar, mathematical linguistics and the study of natural language.

**Fields of interest**

- Artificial Intelligence (incl. Robotics); Mathematical Logic and Formal Languages; Computation by Abstract Devices; Symbolic and Algebraic Manipulation; Computational Linguistics; Grammar

**Target groups**

- Professional/practitioner

**Type of publication**

- Proceedings

**Available**


46.00 €

ISBN 978-3-642-20168-4

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**Genetic Programming**


This book constitutes the refereed proceedings of the 14th European Conference on Genetic Programming, EuroGP 2011, held in Torino, Italy, in April 2011 co-located with Evo* 2011 events. This 20 revised full papers presented together with 9 poster papers were carefully reviewed and selected from 59 submissions. The wide range of topics in this volume reflect the current state of research in the field, including representations, theory, novel operators and techniques, self organization, and applications.

**Features**

- This book constitutes the refereed proceedings of the 14th European Conference on Genetic Programming, EuroGP 2011, held in Torino, Italy, in April 2011 co-located with the Evo* 2011 events. This 20 revised full papers presented together with 9 poster papers were carefully reviewed and selected from 59 submissions. The wide range of topics in this volume reflect the current state of research in the field, including representations, theory, novel operators and techniques, self organization, and applications.

**Fields of interest**

- Programming Techniques; Computation by Abstract Devices; Algorithm Analysis and Problem Complexity; Pattern Recognition; Artificial Intelligence (incl. Robotics); Computational Biology / Bioinformatics

**Target groups**

- Research

**Type of publication**

- Proceedings

**Available**


54.00 €

ISBN 978-3-642-20406-7

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**Guide to Biometrics for Large-Scale Systems**

Technological, Operational, and User-Related Factors

This book considers biometric technology in a broad light, integrating the concept seamlessly into mainstream IT, while discussing the cultural attitudes and the societal impact of identity management. Features: summarizes the material covered at the beginning of every chapter, and provides chapter-ending review questions and discussion points; reviews identity verification in nature, and early historical interest in anatomical measurement; provides an overview of biometric technology; presents a focus on biometric systems and true systems integration, examines the concept of identity management, and predicts future trends; investigates performance issues in biometric systems, the management and security of biometric data, and the impact of mobile devices on biometrics technology; explains the equivalence of performance across operational nodes, introducing the APEX system; considers the legal, political and societal factors of biometric technology, in addition to user psychology and other human factors.

**Features**

- Although there have been significant developments in the field of biometrics in recent years, much of the research in this area has focused upon the front-end technology; This unique Guide to Biometrics for Large-Scale Systems considers biometric technology in a broader light, integrating the concept more seamlessly into mainstream Information Technology, while discussing the cultural attitudes and the societal impact of identity management.

**Contents**


**Fields of interest**

- Biometrics

**Target groups**

- Professional/practitioner

**Type of publication**

- Professional book

**Available**

2011. XIV, 209 p. 22 illus. Hardcover

54.95 €

ISBN 978-0-85729-466-1
Guide to Teaching Computer Science

An Activity-Based Approach

This guide presents both a conceptual framework and detailed implementation guidelines for general computer science (CS) teaching. The content is clearly written and structured to be applicable to all levels of CS education and for any teaching organization, without limiting its focus to instruction for any specific curriculum, programming language or paradigm. Features: presents an overview of research in CS education; examines strategies for teaching problem-solving, evaluating pupils, and for dealing with pupils’ misunderstandings; provides learning activities throughout the book; proposes active-learning-based classroom teaching methods, as well as methods specifically for lab-based teaching; discusses various types of questions that a CS instructor, tutor, or trainer can use for a range of different teaching situations; investigates thoroughly issues of lesson planning and course design; describes frameworks by which prospective CS teachers gain their first teaching experience.

Features
The dynamic evolution of the field of computer science (CS) also poses educational and pedagogical challenges, such as issues of CS teacher recruitment, pre-service teacher preparation, support for teachers’ ongoing professional development, and the design of teaching and learning material. This unique Guide to Teaching Computer Science presents both a conceptual framework and detailed [...]

Contents

Fields of interest
Computers and Education; Teaching and Teacher Education; Science Education

Target groups
Upper undergraduate

Type of publication
Graduate/advanced undergraduate textbook

Available
2011. XXV, 260 p. 25 illus., 1 in color. Hardcover

69.95 €
Information and Automation

International Symposium, ISIA 2010, Guangzhou, China, November 10-11, 2010. Revised Selected Papers

This book constitutes the refereed proceedings of the International Symposium on Information and Automation, ISIA 2010, held in Guangzhou, China, in November 2010. The 110 revised full papers presented were carefully reviewed and selected from numerous submissions. The symposium provides a forum for researchers, educators, engineers, and government officials to present and discuss their latest research results and exchange views on the future research directions in the general areas of Information and Automation.

Features
This book constitutes the refereed proceedings of the International Symposium on Information and Automation, ISIA 2010, held in Guangzhou, China, in November 2010. The 110 revised full papers presented were carefully reviewed and selected from numerous submissions. The symposium provides a forum for researchers, educators, engineers, and government officials to present and discuss their latest research results.

Fields of interest
Computer Communication Networks; Computer Imaging, Vision, Pattern Recognition and Graphics; Data Encryption; Data Mining and Knowledge Discovery; Multimedia Information Systems; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Proceedings

Available
2011. XIX, 758 p. (Communications in Computer and Information Science, Vol. 86) Softcover

70.00 €
ISBN 978-3-642-19852-6

Intelligent Information and Database Systems


The two-volume set LNAI 6591 and LNCS 6592 constitutes the refereed proceedings of the Third International Conference on Intelligent Information and Database Systems, ACIIDS 2011, held in Daegu, Korea, in April 2011. The 110 revised papers presented together with 2 keynote speeches were carefully reviewed and selected from 310 submissions. The papers are thematically divided into two volumes; they cover the following topics: intelligent database systems, data warehouses and data mining, natural language processing and computational linguistics, semantic Web, social networks and recommendation systems, technologies for intelligent information systems, collaborative systems and applications, e-business and e-commerce systems, e-learning systems, information modeling and requirements engineering, information retrieval systems, intelligent agents and multi-agent systems, intelligent information systems, intelligent internet systems, intelligent optimization techniques, object-relational DBMS, [...]

Features
The two-volume set LNAI 6591 and LNCS 6592 constitutes the refereed proceedings of the Third International Conference on Intelligent Information and Database Systems, ACIIDS 2011, held in Daegu, Korea, in April 2011. The 110 revised papers presented together with 2 keynote speeches were carefully reviewed and selected from 310 submissions. The papers are thematically divided into two volumes; they [...]

Fields of interest
Artificial Intelligence (incl. Robotics); Data Mining and Knowledge Discovery; Information Systems Applications (incl.Internet); Database Management; User Interfaces and Human Computer Interaction; Algorithm Analysis and Problem Complexity

Target groups
Research

Type of publication
Proceedings

Available
2011. XXVII, 580 p. (Lecture Notes in Artificial Intelligence, Vol. 6592) Softcover

79.00 €
ISBN 978-3-642-20041-0
Interdisciplinary Approaches to Adaptive Learning: A Look at the Neighbours


This book constitutes the refereed proceedings of the First International Conference on Interdisciplinary Research on Technology, Education and Communication, ITERC 2010, held in Kortrijk, Belgium, in May 2010. The 11 revised full papers presented were carefully reviewed and selected from 38 submissions. The papers address all current issues within the fields of computer sciences, applied linguistics, methodology, and educational technology with special emphasis on topics such as distributed decision support, agent based systems, heuristic optimization, heuristics for data mining, distributed search, pervasive learning, mobile learning electronic language learning environments, language testing, CorpusCALL, authoring systems statistical modelling, item response theory, data mining, electronic assessment adaptive and adaptable learning environments, instructional design, game-based learning, learner characteristics, mobile learning.

Features
This book constitutes the refereed proceedings of the First International Conference on Interdisciplinary Research on Technology, Education and Communication, ITERC 2010, held in Kortrijk, Belgium, in May 2010. The 11 revised full papers presented were carefully reviewed and selected from 38 submissions. The papers address all current issues within the fields of computer sciences, applied [...]

Fields of interest
Computers and Education; Multimedia Information Systems; User Interfaces and Human Computer Interaction; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet); Computer Communication Networks

Target groups
Research

Type of publication
Proceedings

Available
2011, X, 147 p. (Communications in Computer and Information Science, Vol. 126) Softcover

56.00 €
ISBN 978-3-642-20073-1

NASA Formal Methods

Third International Symposium, NFM 2011, Pasadena, CA, USA, April 18-20, 2011, Proceedings

This book constitutes the refereed proceedings of the Third International Symposium on NASA Formal Methods, NFM 2011, held in Pasadena, CA, USA, in April 2011. The 26 revised full papers presented together with 12 tool papers, 3 invited talks, and 2 invited tutorials were carefully reviewed and selected from 141 submissions. The topics covered by NFM 2011 included but were not limited to: theorem proving, logic model checking, automated testing and simulation, model-based engineering, real-time and stochastic systems, SAT and SMT solvers, symbolic execution, abstraction and abstraction refinement, compositional verification techniques; static and dynamic analysis techniques, fault protection, cyber security, specification formalisms, requirements analysis, and applications of formal techniques.

Features
This book constitutes the refereed proceedings of the Third International Symposium on NASA Formal Methods, NFM 2011, held in Pasadena, CA, USA, in April 2011. The 26 revised full papers presented together with 12 tool papers, 3 invited talks, and 2 invited tutorials were carefully reviewed and selected from 141 submissions. The topics covered by NFM 2011 included but were not limited to: theorem proving, [...] Fields of interest
Software Engineering; Programming Languages, Compilers, Interpreters; Operating Systems; Logics and Meanings of Programs; Software Engineering / Programming and Operating Systems; Programming Techniques

Target groups
Professional/practitioner

Type of publication
Proceedings

Available

70.00 €
ISBN 978-3-642-20197-8

NETWORKING 2011


The two-volume set LNCS 6640 and 6641 constitutes the refereed proceedings of the 10th International IFIP TC 6 Networking Conference held in Valencia, Spain, in May 2011. The 64 revised full papers presented were carefully reviewed and selected from a total of 294 submissions. The papers feature innovative research in the areas of applications and services, next generation Internet, wireless and sensor networks, and network science. The first volume includes 36 papers and is organized in topical sections on anomaly detection, content management, DTN and sensor networks, energy efficiency, mobility modeling, network science, network topology configuration, next generation Internet, and path diversity.

Features
The two-volume set LNCS 6640 and 6641 constitutes the refereed proceedings of the 10th International IFIP TC 6 Networking Conference held in Valencia, Spain, in May 2011. The 64 revised full papers presented were carefully reviewed and selected from a total of 294 submissions. The papers feature innovative research in the areas of applications and services, next generation Internet, wireless and sensor [...]

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

Target groups
Research

Type of publication
Proceedings

Available

81.00 €
ISBN 978-3-642-20756-3
The two-volume set LNCS 6640 and 6641 constitutes the refereed proceedings of the 10th International IFIP TC 6 Networking Conference held in Valencia, Spain, in May 2011. The 64 revised full papers presented were carefully reviewed and selected from a total of 294 submissions. The papers feature innovative research in the areas of applications and services, next generation Internet, wireless and sensor networks, and network science. The second volume includes 28 papers organized in topical sections on peer-to-peer, pricing, resource allocation, resource allocation radio, resource allocation wireless, social networks, and TCP.

Features
The two-volume set LNCS 6640 and 6641 constitutes the refereed proceedings of the 10th International IFIP TC 6 Networking Conference held in Valencia, Spain, in May 2011. The 64 revised full papers presented were carefully reviewed and selected from a total of 294 submissions. The papers feature innovative research in the areas of applications and services, next generation Internet, wireless and sensor networks, and network science. The second volume includes 28 papers organized in topical sections on peer-to-peer, pricing, resource allocation, resource allocation radio, resource allocation wireless, social networks, and TCP.

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

Target groups
Research

Type of publication
Proceedings

Available
71,00 €
ISBN 978-3-642-20797-6
Ranking Queries on Uncertain Data

Uncertain data is inherent in many important applications, such as environmental surveillance, market analysis, and quantitative economics research. Due to the importance of those applications and rapidly increasing amounts of uncertain data collected and accumulated, analyzing large collections of uncertain data has become an important task. Ranking queries (also known as top-k queries) are often natural and useful in analyzing uncertain data. Ranking Queries on Uncertain Data discusses the motivations/applications, challenging problems, the fundamental principles, and the evaluation algorithms of ranking queries on uncertain data. Theoretical and algorithmic results of ranking queries on uncertain data are presented in the last section of this book. Ranking Queries on Uncertain Data is the first book to systematically discuss the problem of ranking queries on uncertain data.

Features
Uncertain data is inherent in many important applications, such as environmental surveillance, market analysis, and quantitative economics research. Due to the importance of those applications and rapidly increasing amounts of uncertain data collected and accumulated, analyzing large collections of uncertain data has become an important task. Ranking queries (also known as top-k queries) are often natural and useful in analyzing uncertain data. Ranking Queries on Uncertain Data discusses the motivations/applications, challenging problems, the fundamental principles, and the evaluation algorithms of ranking queries on uncertain data. Theoretical and algorithmic results of ranking queries on uncertain data are presented in the last section of this book. Ranking Queries on Uncertain Data is the first book to systematically discuss the problem of ranking queries on uncertain data.

Contents
Introduction. - Probabilistic Ranking Queries on Uncertain Data. - Related Work. - Top-k Typicality Queries on Uncertain Data. - Probabilistic Ranking Queries on Uncertain Data. - Continuous Ranking Queries on Uncertain Streams. - Ranking Queries on Probabilistic Linkages. - Probabilistic Path Queries on Road Networks. - Conclusions. - References

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

Target groups
Research

Type of publication
Monograph

Available
79.95 €

Real-Time Systems

Design Principles for Distributed Embedded Applications

"This book is a comprehensive text for the design of safety critical, hard real-time embedded systems. It offers a splendid example for the balanced, integrated treatment of systems and software engineering, helping readers tackle the hardest problems of advanced real-time system design, such as determinism, compositionality, timing and fault management. This book is an essential reading for advanced undergraduate and graduate students in a wide range of disciplines impacted by embedded computing and software. Its conceptual clarity, the style of explanations and the examples make the abstract concepts accessible for a wide audience." Janos Ssrtipanovits, Director, Bronson Ingram Distinguished Professor of Engineering, Institute for Software Integrated Systems, Vanderbilt University

Real-Time Systems focuses on hard real-time systems, which are computing systems that must meet their temporal specification in all anticipated load and fault scenarios. The book stresses the system aspects of distributed. [...] Features
"This book is a comprehensive text for the design of safety critical, hard real-time embedded systems. It offers a splendid example for the balanced, integrated treatment of systems and software engineering, helping readers tackle the hardest problems of advanced real-time system design, such as determinism, compositionality, timing and fault management. This book is an essential reading for advanced [...]" Features
"This book is a comprehensive text for the design of safety critical, hard real-time embedded systems. It offers a splendid example for the balanced, integrated treatment of systems and software engineering, helping readers tackle the hardest problems of advanced real-time system design, such as determinism, compositionality, timing and fault management. This book is an essential reading for advanced [...]"

Contents

Fields of interest
Special Purpose and Application-Based Systems; Circuits and Systems; System Performance and Evaluation; Computer Communication Networks; Processor Architectures

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Available
69.95 €
ISBN 978-1-4419-8236-0

RoboCup 2010: Robot Soccer World Cup XIV

This book includes the thoroughly refereed post-conference proceedings of the 14th RoboCup International Symposium, held in Singapore, in June, 2010 - representing the scientific tracks structured in four sessions entitled simulation and rescue robots; robot perception and localization; robot motion and humanoid robots; and human robot interaction and semantic scene analysis. The 20 revised full papers and 16 revised short papers presented are carefully reviewed and selected from 78 submissions. Documenting the research advances of the RoboCup community since the predecessor symposium, this book constitutes a valuable source of reference and inspiration for R&D professionals interested in RoboCup or in robotics and distributed AI more generally.

Features
This book includes the thoroughly refereed post-conference proceedings of the 14th RoboCup International Symposium, held in Singapore, in June, 2010 - representing the scientific tracks structured in four sessions entitled simulation and rescue robots; robot perception and localization; robot motion and humanoid robots; and human robot interaction and semantic scene analysis. The 20 revised full papers and 16 [...] Features
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Contents

Fields of interest
Artificial Intelligence (incl. Robotics); Computer Communication Networks; User Interfaces and Human Computer Interaction; Robotics and Automation; Image Processing and Computer Vision

Target groups
Research

Type of publication
Contributed volume

Available
62.00 €
ISBN 978-3-642-20216-2
Semantic Web Services

A paradigm shift is taking place in computer science: one generation ago, we learned to abstract from hardware to software, now we are abstracting from software to serviceware implemented through service-oriented computing. Yet ensuring interoperability in open, heterogeneous, and dynamically changing environments, such as the Internet, remains a major challenge for actual machine-to-machine integration. Usually significant problems in aligning data, processes, and protocols appear as soon as a specific piece of functionality is used within a different application context. The Semantic Web Services (SWS) approach is about describing services with metadata on the basis of domain ontologies as a means to enable their automatic location, execution, combination, and use. Fensel and his coauthors provide a comprehensive overview of SWS in line with actual industrial practice. They introduce the main sociotechnological components that ground the SWS vision (like Web Science, Service Science, and...]

Features

A paradigm shift is taking place in computer science: one generation ago, we learned to abstract from hardware to software, now we are abstracting from software to serviceware implemented through service-oriented computing. Yet ensuring interoperability in open, heterogeneous, and dynamically changing environments, such as the Internet, remains a major challenge for actual machine-to-machine integration. [...]

Contents


Fields of interest

Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics); Business Information Systems; Software Engineering

Target groups

Professional/practitioner

Type of publication

Graduate/advanced undergraduate textbook

Service Design and Delivery

Service Design and Delivery provides a comprehensive overview of the increasingly important role played by the service industry. Focusing on the development of different processes employed by service organizations, the book emphasizes management of service in relation to products. It not only explores the complexity of this relationship, but also introduces strategies used in the design and delivery. This book also illustrate how and why companies can transform themselves into service organizations. While the book is primarily intended as a text for advanced-level courses in service design and delivery, it also contains theoretical and practical knowledge beneficial to both practitioners in the service sector and those in manufacturing contemplating moving towards service delivery.

Features

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Contents


Fields of interest

Management of Computing and Information Systems; Management/Business for Professionals; Operation Research / Decision Theory; Business Information Systems

Target groups

Professional/practitioner

Type of publication

Contributed volume

Service-Oriented Perspectives in Design Science Research

This book constitutes the refereed proceedings of the 6th International Conference on Service-Oriented Perspectives in Design Science Research, DERIST 2011, held in Milwaukee, WI, USA, in May 2011. The 29 revised full papers presented together with 5 revised short papers were carefully reviewed and selected from 50 submissions. The papers are organized in topical sections on design theory, design science research strategies, design methods and techniques, design evaluation, design guidelines, service-oriented perspectives in design science, process design, neuroscience in design research, and design for social media.

Features

This book constitutes the refereed proceedings of the 6th International Conference on Service-Oriented Perspectives in Design Science Research, DERIST 2011, held in Milwaukee, WI, USA, in May 2011. The 29 revised full papers presented together with 5 revised short papers were carefully reviewed and selected from 50 submissions. The papers are organized in topical sections on design theory, design science research strategies, design methods and techniques, design evaluation, design guidelines, service-oriented perspectives in design science, process design, neuroscience in design research, and design for social media.

Fields of interest

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

Target groups

Professional/practitioner

Type of publication

Proceedings

Available


62,00 €
ISBN 978-3-642-20632-0

2011. XII, 169 p. 100 illus. (Service Science: Research and Innovations in the Service Economy) Hardcover

79,95 €
ISBN 978-1-4419-8320-6
Software and Data Technologies


This book constitutes the refereed proceedings of the 4th International Conference on Software and Data Technologies, ICSOFT 2009, held in Sofia, Bulgaria, in July 2009. The 19 revised full papers presented together with two invited papers were carefully reviewed and selected as best papers from 212 submissions. The papers are organized in topical sections on enterprise software technology; software engineering; distributed systems; data management; knowledge-based systems.

Features
This book constitutes the refereed proceedings of the 4th International Conference on Software and Data Technologies, ICSOFT 2009, held in Sofia, Bulgaria, in July 2009. The 19 revised full papers presented together with two invited papers were carefully reviewed and selected as best papers from 212 submissions. The papers are organized in topical sections on enterprise software technology; software engineering; distributed systems; data management; knowledge-based systems.

Fields of interest
Software Engineering / Programming and Operating Systems; Programming Languages, Compilers, Interpreters; Data Structures; Database Management; Data Mining and Knowledge Discovery; Information Systems Applications (incl. Internet).

Target groups
Research

Type of publication
Proceedings

Available
2011. XIII, 291 p. (Communications in Computer and Information Science, Vol. 50) Softcover
64,00 €
ISBN 978-3-642-01999-5

M. Guyomar, Ensasr Isra, Lannion, France

Structures de données et méthodes formelles

Ce livre porte sur l'étude des structures de données, à savoir des constituants logiciels dont la qualité conditionne le bon fonctionnement et l'efficacité des applications informatiques. L'originalité de cet ouvrage réside essentiellement dans le lien qu'il établit avec la discipline des méthodes formelles pour le génie logiciel. Il montre comment il est possible de calculer les opérations qui accompagnent une structure de données à partir d'une spécification rigoureuse. L'auteur adopte à la fois une perspective historique et une démarche fonctionnelle. La première partie de l'ouvrage présente les bases de la discipline : la théorie des ensembles, l'étude de structures intermédiaires (listes, arbres, sacs), et l'analyse des algorithmes. La seconde partie se focalise sur l'étude approfondie de cinq structures de données typiques : les ensembles simples, les ensembles composés, les files simples, les files de priorité, et les tableaux flexibles. Des exercises accompagnent chaque chapitre.

Features
Ce livre a pour thème principal l'étude des structures de données. Il s'agit de constituants logiciels dont la qualité conditionne le bon fonctionnement et l'efficacité de la plupart des applications informatiques. L'originalité de l'ouvrage réside dans le lien qu'il établit avec la discipline des méthodes formelles pour le génie logiciel. En montrant comment il est possible de calculer les opérations qui [...]
Temporal Information Processing Technology and Its Applications

"Temporal Information Processing Technology and Its Applications" systematically studies temporal information processing technology and its applications. The book covers following subjects: 1) time model, calculus and logic; 2) temporal data models, semantics of temporal variable 'now' temporal database concepts; 3) temporal query language, a typical temporal database management system: Temp-pDB; 4) temporal extension on XML, workflow and knowledge base; and, 5) implementation patterns of temporal applications, a typical example of temporal application. The book is intended for researchers, practitioners and graduate students of databases, data/knowledge management and temporal information processing. Dr. Yong Tang is a professor at the Computer School, South China Normal University, China.

Features
"Temporal Information Processing Technology and Its Applications" systematically studies temporal information processing technology and its applications. The book covers following subjects: 1) time model, calculus and logic; 2) temporal data models, semantics of temporal variable 'now' temporal database concepts; 3) temporal query language, a typical temporal database management system: Temp-pDB; 4) temporal [...]
Earth Sciences

R. Tappert, University of Alberta, Edmonton, Canada; M.C. Tappert, University of Alberta, Edmonton, Canada

Diamonds in Nature
A Guide to Rough Diamonds

Diamonds in Nature: A Guide to Rough Diamonds illustrates the range of crystal shapes, colours, surface textures, and mineral inclusions of rough, uncut, naturally forming diamonds. Each chapter contains photographs that show the unique physical characteristics of the diamonds, and the accompanying text describes the processes that led to their formation. This book is an invaluable reference manual for professional geoscientists—including gemmologists and exploration geologists.

Features
Voice over IP (VoIP) and Internet Multimedia Subsystem technologies (IMS) are rapidly being adopted by consumers, enterprises, governments and militaries. These technologies offer higher flexibility and more features than traditional telephony (PSTN) infrastructures, as well as the potential for lower cost through equipment consolidation and, for the consumer market, new business models. However, VoIP systems also represent a higher complexity in terms of architecture, protocols and implementation, with a corresponding increase in the potential for misuse. In this book, the authors examine the current state of affairs on VoIP security through a survey of 221 known/disclosed security vulnerabilities in bug-tracking databases. We complement this with a comprehensive survey of the state of the art in VoIP security research that covers 245 papers. Juxtaposing our findings, we identify current areas of risk and deficiencies in research focus. This book should serve as a starting point for understanding.[…]

Contents

Fields of interest
Systems and Data Security; Data Encryption; Data Structures, Cryptology and Information Theory; Computer Communication Networks

Target groups
Professional/practitioner

Type of publication
Brief

Available

2011. IX, 221 illus. in color. Hardcover
69.95 €
ISBN 978-3-642-12571-3

Global Change and Baltic Coastal Zones

Climate change and ongoing transformation processes in economy and agriculture will have strong and multiple impacts in the Baltic region. In particular, coastal zones face increasing hazards, e.g. due to sea level rise or changes in riverine nutrient loads and eutrophication. These changes also offer a wide range of new opportunities in the Baltic Region. Adaptation measures are needed but require a thorough and spatially differentiated understanding of underlying ecological, economic and social processes. Sixteen contributions by authors from eight countries give a comprehensive overview of these changes, their consequences and practical challenges with focus on coastal zones. Besides risks, the chances and opportunities of changes for the region are addressed and adaptation examples and strategies are given. The practitioners’ perspective and their demands are integrated in the various contributions.

Features
Climate change and ongoing transformation processes in economy and agriculture will have strong and multiple impacts in the Baltic region. In particular, coastal zones face increasing hazards, e.g. due to sea level rise or changes in riverine nutrient loads and eutrophication. These changes also offer a wide range of new opportunities in the Baltic Region. Adaptation measures are needed but require a […]

Contents
Preface. - Regionalisation of climate scenarios for the western Baltic Sea Climate Change impacts on the Baltic Sea. - The CO2 system of the Baltic Sea - its relationship to biogeochemistry and future change. - Climate Change impacts on the German Baltic coast - ecosystem and human interactions. - Global climate change impacts on agricultural land use in the Baltic Coastal Zones of Germany. - Climate Change and the need for Integrated Coastal Risk Management. - Climate Change and Coastal Protection: Adaptation Strategies for Sandy Coasts at the German Baltic Sea Coast. - Coastal area protection […]

Fields of interest
Coastal Sciences; Climate Change; Environmental Management; Marine & Freshwater Sciences

Target groups
Research

Type of publication
Monograph

Available

2011. XIII, 296 p. 160 illus., 60 in color. (Coastal Research Library, Vol. 1) Hardcover
99.95 €

Features
Die Finanzkrise seit 2008 brachte Irland in die Schlagzeilen der internationalen Presse. Was ist das für ein Land, das nach langer Armut und einer stetigen Abwanderung durch plötzliches Wirtschaftswachstum erst zum „keltischen Tiger“ und nun zum Problemfall Europas wurde? Und was hat es mit der „grünen Insel“ auf sich? Viele Touristen nehmen einen weiten Weg mit Auto, Schiff oder Flugzeug auf sich, um am ...[]

Contents

Fields of interest
Earth Sciences (general); Geography (general); Human Geography; Popular Science

Target groups
Popular/general

Type of publication
Popular science

Available
2011. VI, 185 S. 132 Abb. in Farbe. Softcover
18,64 € ISBN 978-3-8274-2789-2

Mallorca
Auf Tour


Features

Contents

Fields of interest
Earth Sciences (general); Geography (general); Physical Geography; Environment (general); Human Geography; Popular Science

Target groups
Popular/general

Type of publication
Popular science

Available
2011. VI, 185 S. 104 Abb. in Farbe. Softcover
18,64 € ISBN 978-3-8274-2791-5
Education

O. Zuber-Skerritt, Griffith University, Brisbane, Australia

Action Leadership
Towards a Participatory Paradigm

Action leadership is a creative, innovative, collaborative and self-developed way to lead. It eschews the hierarchical structure usually associated with leadership and is based instead on the democratic values of freedom, equality, inclusion and self-realization. It takes responsibility for, not control over, people through networking and orchestrating human energy towards a holistic outcome that benefits the common interest. Action leaders are passionate people who abide by the motto that “Learning does not mean to fill a barrel but rather to ignite a flame” in others. And in this time of rapid economic, political, technological, social and ecological changes, action leadership and action leaders are precisely what’s needed to improve how people and organizations engage constructively to address the myriad complex issues challenging society at all levels. Action Leadership: Towards a Participatory Paradigm explains and illustrates how action leadership can be developed through participatory action.[...]

Features
Action leadership is a creative, innovative, collaborative and self-developed way to lead. It eschews the hierarchical structure usually associated with leadership and is based instead on the democratic values of freedom, equality, inclusion and self-realization. It takes responsibility for, not control over, people through networking and orchestrating human energy towards a holistic outcome that benefits [...]

Contents
Reviewers’ CommentsForewordMorwenna Griffiths About the AuthorAcknowledgements List of TablesList of FiguresList of AppendicesList of Acronyms Introduction Chapter 1 From Action Learning and Action Research to Action Leadership Part I Conceptual Framework for Participatory Action Learning and Action Research (PALAR) Chapter 2 PALAR Concepts, Models and Values Chapter 3 PALAR: Dialectic of Theory and Practice Chapter 4 PALAR: Paradigm and Methodology Part 2 Action Leadership Development and Applications Chapter 5 Action Leadership Development in Higher Education Chapter 6 Management Education[...]

Fields of interest
Professional and Vocational Education; Lifelong Learning / Adult Education

Target groups
Research

Type of publication
Monograph

Available
2011. XXIX, 210 p. Hardcover
99,95 €

Building Learning Experiences in a Changing World

Advances in Business Education & Training is a Book Series to foster advancement in the field of Business Education and Training. It serves as an international forum for scholarly and state-of-the-art research and development into all aspects of Business Education and Training. This new volume deals with several aspects of the challenge to design learning in and for a changing world. The first part concerns program development. How to build curricula that are future-proof? Principles to innovate our curricula are identified. It answers the question how we can incorporate the need for change in our thinking about curriculum-development and identify the necessary elements to incorporate in our curricula. The second part focuses on the increasing diversity of students and employees within our schools and organizations, in terms of culture, language, and perception of ability, gifts, and talents. This offers a range of opportunities, but at the same time can possibly jeopardize some processes that are[...]

Features
Advances in Business Education & Training is a Book Series to foster advancement in the field of Business Education and Training. It serves as an international forum for scholarly and state-of-the-art research and development into all aspects of Business Education and Training. This new volume deals with several aspects of the challenge to design learning in and for a changing world. The [...]...
**Children, Development and Education**

Cultural, Historical, Anthropological Perspectives

Historical anthropology is a revision of the German philosophical anthropology under the influences of the French historical school of Annales and the Anglo-Saxon cultural anthropology. Cultural historical psychology is a school of thought which emerged in the context of the Soviet revolution and deeply affected the disciplines of psychology and education in the 20th century. This book draws on these two schools to advance current scholarship in child and youth development and education. It also enters in dialogue with other relational approaches and suggests alternatives to mainstream western developmental theories and educational practices. This book emphasizes communication and semiotic processes as well as the use of artifacts, pictures and technologies in education and childhood development, placing a special focus on active subjectivity, historicity and performativity. Within this theoretical framework, contributors from Europe and the U.S. highlight the dynamic and creative aspects of school...[-]

**Features**

Historical anthropology is a revision of the German philosophical anthropology under the influences of the French historical school of Annales and the Anglo-Saxon cultural anthropology. Cultural historical psychology is a school of thought which emerged in the context of the Soviet revolution and deeply affected the disciplines of psychology and education in the 20th century. This...[-]

**Contents**


**Fields of interest**

Childhood Education, Educational Psychology; Developmental Psychology; Anthropology

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**


99,95 €
ISBN 978-3-8348-5991-1

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**Constructing Knowledge for Teaching Secondary Mathematics**

Tasks to enhance prospective and practicing teacher learning

Teacher education seeks to transform prospective and/or practicing teachers from neophyte possibly uncritical perspectives on teaching and learning to more knowledgeable, adaptable, analytic, insightful, observant, resourceful, reflective and confident professionals ready to address whatever challenges teaching secondary mathematics presents. This transformation occurs optimally through constructive engagement in tasks that foster knowledge for teaching secondary mathematics. Ideally such tasks provide a bridge between theory and practice and challenge, surprise, disturb, confront, extend, or provoke examination of alternatives, drawn from the context of teaching. We define tasks as the problems or activities that, having been developed, evaluated and refined over time, are posed to teacher education participants. Such participants are expected to engage in these tasks collaboratively, energetically, and intellectually with an open mind and an orientation to future practice. The tasks might be...

**Features**

Teacher education seeks to transform prospective and/or practicing teachers from neophyte possibly uncritical perspectives on teaching and learning to more knowledgeable, adaptable, analytic, insightful, observant, resourceful, reflective and confident professionals ready to address whatever challenges teaching secondary mathematics presents. This transformation occurs optimally through constructive engagement in tasks that foster knowledge for teaching secondary mathematics. Ideally such tasks provide a bridge between theory and practice and challenge, surprise, disturb, confront, extend, or provoke examination of alternatives, drawn from the context of teaching. We define tasks as the problems or activities that, having been developed, evaluated and refined over time, are posed to teacher education participants. Such participants are expected to engage in these tasks collaboratively, energetically, and intellectually with an open mind and an orientation to future practice. The tasks might be...

**Contents**

Introduction - Varying, Adapting and Considering Alternatives - Classification and Noticing Similarities and Differences - Conflict, Dilemmas and Their Resolution - Designing and Solving Problems - Learning from the Study of Practice - Selecting and Using Appropriate Tools for Teaching - Identifying and Overcoming Barriers to Student Learning and Becoming Sensitive to Students’ Thinking and Inventive Ideas - Sharing and Revealing Self, Peer, and Student Dispositions - Summary.

**Fields of interest**

Mathematics Education; Teaching and Teacher Education

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**


89,95 €

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**English for Writing Research Papers**

Publishing your research in an international journal is key to your success in academia. This guide is based on a study of referees’ reports and letters from journal editors on reasons why papers written by non-native researchers are rejected due to problems with English usage. It draws on English-related errors from around 5000 papers written by non-native authors, 500 abstracts by PhD students, and over 1000 hours of teaching researchers how to write and present research papers. With easy-to-follow rules and tips, and with examples taken from published and unpublished papers, you will learn how to prepare and structure a manuscript increase readability and reduce the number of mistakes you make in English by writing concisely, with no redundancy and no ambiguity plan and organize your paper, and structure each paragraph and each sentence so that the reader can easily follow the logical build-up towards various conclusions write a title and an abstract that will attract attention and be readecedely...

**Features**

Publishing your research in an international journal is key to your success in academia. This guide is based on a study of referees’ reports and letters from journal editors on reasons why papers written by non-native researchers are rejected due to problems with English usage. It draws on English-related errors from around 5000 papers written by non-native authors, 500 abstracts by PhD students, and over...

**Contents**


**Fields of interest**

Language Education; Science; Biomedicine (general); Chemistry (general); Medicine (general)

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2011. XXI, 325 p. Softcover

24,95 €
ISBN 978-1-4419-7921-6
Learning in Information-Rich Environments

The amount and range of information available to today’s students—and indeed to all learners—is unprecedented. Phrases like “the information revolution”, “the information (or knowledge) society”, and “the knowledge economy” underscore the truism that our society has been transformed by virtually instantaneous access to virtually unlimited information. Thomas Friedman tells us that “The World Is Flat” and that we must devise new political and economic understandings based on the ceaseless communication of information from all corners of the world. The Bush administration tells us that information relating to the “war on terrorism” is so critical that we must allow new kinds of surveillance to keep society safe. Teenage subscribers to social-computing networks not only access information but enter text and video images and publish them widely—becoming the first adolescents in history to be creators as well as consumers of vast quantities of information. If the characteristics of “the information age” are bombarded with information at all times—not just electronically, but through our senses and experiences, affecting how we seek, process, and create information. From this limitless complexity comes an important question: [..]

Features
Learning in Information-Rich Environments: I-LEARN and the Construction of Knowledge in the 21st Century

Perspectives on Educational Quality

The quality of education is a term that is frequently used in public debates. Understood in the sense of education being “generally okay”, or rather, most frequently, as “not okay”. Perhaps there is an over-ruling nostalgic view that formerly education was better than today. In scholarly discourse there are those who maintain that the quality of education is an illusive term, with varying interpretations in different settings and by different stakeholders. In this book the complexity of the concept of education quality is recognized, but a conceptual framework is presented that makes quality, despite its complexity, amenable to rational and empirical analysis. Productivity, equity, effectiveness, efficiency and responsiveness of education systems are seen as key facets of quality. A concrete set of indicators is presented that makes for the measurement of these quality facets. In the second part of the book the quality framework is applied to an analysis of the quality of education in the[..]

Features
Perspectives on Educational Quality

Illustrative Outcomes on Primary and Secondary Schooling in the Netherlands

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Promoting Social Justice for Young Children

This book explores important current social justice issues that confront young children in America. A broad range of topics related to the fair treatment of young children and their families are approached with a fresh and hopeful energy. The central argument of this volume is that a fair and just society must protect the basic needs of all children so they are able to reach their full potential to learn, grow, and ultimately become productive democratic citizens. The book includes contributions from an impressive group of authors who have been consistent voices for the fair and equitable treatment of children in school and society. Each chapter examines a critical issue in child social justice with a focus on the current problem, historical importance of the issue, potential solutions, and a vision for the future. The book has been developed to reach a wide audience of professionals whose work involves children and who have grown concerned about social forces that cause child suffering and threat.[…]

Contents

Features
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Rethinking Educational Practice Through Reflexive Inquiry

Susan Groundwater-Smith is one of the most influential voices in the world of educational practitioner inquiry. The convenor in Australia of the Coalition of Knowledge Building Schools, she is a staunch advocate of innovative methods of practitioner inquiry and teacher professional learning is dedicated to her. Rethinking Education Practice Through Reflexive Inquiry is a compilation of essays that explore contemporary issues in practitioner inquiry and action research from the perspective of both university-based and school-based authors. The essays discuss the practical, political and theoretical dimensions of practitioner inquiry, advancing the argument that the adoption of an inquiring approach to practice is both an integral dimension of teachers’ work in the modern school as well as[…]

Features
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Contents
Foreword, Jennifer Nias. - Nicole Mockler, University of Newcastle, Australia; J. Sachs, Macquarie University, Australia (Ed.)

Theories of Learning and Studies of Instructional Practice

This is a book about an attempt to change the way math was taught in a particular classroom. Its title plays on our everyday usage of the terms theory and practice. In education, these terms are conventionally treated oppositionally—we have theories about what we should do and we have what teachers actually do do. In this way, theory stands prior, logically and chronologically, to practice; practice inevitably becoming theory’s imperfect realization. We seek in this volume, however, to develop a different stance with regard to the relationship between the two. Taking the details of instructional practice as our principle object of study, we explore what role theories of learning might play in illuminating such practices. The book is about actual practices by which teaching is done and how contemporary theories of learning might help us understand these practices. It seeks to provide a foundation for future practice-based inquiry in education, by addressing the methodological question: How do we go[…]

Features
Theories of Learning and Studies of Instructional Practice Timothy Koschmann, editor Though there have been numerous calls for educational researchers to attend more closely to the details of how teaching is actually done, instructional practice remains an inadequately studied topic. Theories of Learning and Studies of Instructional Practice seeks to remedy this by helping construct a foundation for a […]

Contents

Fields of interest
Learning and Instruction

Target groups
Research

Type of publication
Contributed volume

Available

129,95 €
Engineering

J. Lee, Hubei University of Education, Wuhan, P.R.China (Ed.)

Advanced Electrical and Electronics Engineering

Volume 2

2010 First International Conference on Electrical and Electronics Engineering was held in Wuhan, China December 4-5. Advanced Electrical and Electronics Engineering book contains 72 revised and extended research articles written by prominent researchers participating in the conference. Topics covered include, Power Engineering, Telecommunication, Control engineering, Signal processing, Integrated circuit, Electronic amplifier, Nano-technologies, Circuits and networks, Microelectronics, Analog circuits, Digital circuits, Nonlinear circuits, Mixed-mode circuits, Circuits design, Sensors, CAD tools, DNA computing, Superconductivity circuits. Electrical and Electronics Engineering will offer the state of art of tremendous advances in Electrical and Electronics Engineering and also serve as an excellent reference work for researchers and graduate students working on Electrical and Electronics Engineering.

Features

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Contents

Link Building on Demand in Multi-robots.- Energy conservation renovation on 600MW units condense pump.- FPGA-Based PCI Data Acquisition Synchronization Card of Railway Clearance Detection System.- Short-circuit Characteristics of Asynchronous Generators and Double-fed Induction Generators Inter-connected Grid.- Optimization Design of Lifetime Distribution in Power Diode with Fast and Soft Recovery.- Research on Double-Base Regions High-Power Fast Recovery Diode.- Analysis and Design on Drive Circuit of Integrated Gate Commutated Thyristor.- Multi-fuel combustion measurement in utility[...]

Fields of interest
Computational Intelligence; Electrical Engineering

Target groups
Research

Type of publication
Proceedings

Available

2011. XVI, 724 p. 424 illus., 7 in color. (Lecture Notes in Electrical Engineering, Vol. 87) Hardcover

299,00 €
ISBN 978-3-642-19711-6

Advances in Transport Phenomena
2010

The term transport phenomena is used to describe processes in which mass, momentum, energy and entropy move about in matter. Advances in Transport Phenomena provide state-of-the-art expositions of major advances by theoretical, numerical and experimental studies from a molecular, microscopic, mesoscopic, macroscopic or megascopic point of view across the spectrum of transport phenomena, from scientific enquiries to practical applications. The annual review series intends to fill the information gap between regularly published journals and university-level textbooks by providing in-depth review articles over a broader scope than in journals. The authoritative articles, contributed by internationally-leading scientists and practitioners, establish the state of the art, disseminate the latest research discoveries, serve as a central source of reference for fundamentals and applications of transport phenomena, and provide potential textbooks to senior undergraduate and graduate students. This review[...]

Features

The term transport phenomena is used to describe processes in which mass, momentum, energy and entropy move about in matter. Advances in Transport Phenomena provide state-of-the-art expositions of major advances by theoretical, numerical and experimental studies from a molecular, microscopic, mesoscopic, macroscopic or megascopic point of view across the spectrum of transport phenomena.[...]

Contents


Fields of interest
Engineering Thermodynamics, Heat and Mass Transfer; Thermodynamics; Industrial Chemistry / Chemical Engineering; Mathematical Modeling and Industrial Mathematics; Engineering Fluid Dynamics; Classical Continuum Physics

Target groups
Research

Type of publication
Reviews

Available


129,95 €
ISBN 978-3-642-19465-8

Architecting the Internet of Things

Many of the initial developments towards the Internet of Things have focused on the combination of Auto-ID and networked infrastructures in business-to-business logistics and product lifecycle applications. However, the Internet of Things is more than a business tool for managing business processes more efficiently and more effectively – it will also enable a more convenient way of life. Since the term Internet of Things first came to attention when the Auto-ID Center launched their initial vision for the EPC network for automatically identifying and tracing the flow of goods within supply-chains, increasing numbers of researchers and practitioners have further developed this vision. The authors in this book provide a research perspective on current and future developments in the Internet of Things. The different chapters cover a broad range of topics from system design aspects and core architectural approaches to end-user participation, business perspectives and applications.

Features

Many of the initial developments towards the Internet of Things have focused on the combination of Auto-ID and networked infrastructures in business-to-business logistics and product lifecycle applications. However, the Internet of Things is more than a business tool for managing business processes more efficiently and more effectively – it will also enable a more convenient way of life. Since the term [...]
Asset Management für Infrastrukturanlagen - Energie und Wasser


Features

Contents
Einleitung - Aufgaben des Anlagenmanage- ment - Steuerungsfunktionen - Einbindung in die Unternehmensorganisation - Systemlandschaft im Asset Management.

Fields of interest
Power Electronics, Electrical Machines and Networks; Facility Management

Target groups
Professional/practitioner

Type of publication
Professional book

Computational Intelligence
Revised and Selected Papers of the International Joint Conference IJCCI 2009, held in Funchal-Madeira, Portugal, October 2009

The present book includes a set of selected extended papers from the first International Joint Conference on Computational Intelligence (IJCCI 2009), held in Madeira, Portugal, from 5 to 7 October 2009. The conference was composed by three co-located conferences: The International Conference on Fuzzy Computation (ICFC), the International Conference on Evolutionary Computation (ICEC), and the International Conference on Neural Computation (ICNC). Recent progresses in scientific developments and applications in these three areas are reported in this book. IJCCI received 231 submissions, from 35 countries, in all continents. After a double blind paper review performed by the Program Committee, only 21 submissions were accepted as full papers and thus selected for oral presentation, leading to a full paper acceptance rate of 9%. Additional papers were accepted as short papers and posters. A further selection was made after the Conference, based also on the assessment of presentation quality and [...] Features
The present book includes a set of selected extended papers from the first International Joint Conference on Computational Intelligence (IJCCI 2009), held in Madeira, Portugal, from 5 to 7 October 2009. The conference was composed by three co-located conferences: The International Conference on Fuzzy Computation (ICFC), the International Conference on Evolutionary Computation (ICEC), and the International [...] Contents

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

Target groups
Research

Type of publication
Proceedings

Available
2011, XIV, 290 p. 108 illus., 59 in color. (Studies in Computational Intelligence, Vol. 343) Hardcover
99,95 €
ISBN 978-3-642-20205-6

Computer Recognition Systems 4

The computer recognition systems are nowadays one of the most promising directions in artificial intelligence. This book is the most comprehensive study of this field. It contains a collection of 78 carefully selected articles contributed by experts of pattern recognition. It reports on current research with respect to both methodology and applications. In particular, it includes the following sections: Biometrics, Features, learning and classifiers, Image processing and computer vision, Knowledge acquisition based on reasoning methods, Medical applications, Miscellaneous applications. This book is a great reference tool for scientists who deal with the problems of designing computer pattern recognition systems. Its target readers can be as well researchers as students of computer science, artificial intelligence or robotics.

Features
The computer recognition systems are nowadays one of the most promising directions in artificial intelligence. This book is the most comprehensive study of this field. It contains a collection of 78 carefully selected articles contributed by experts of pattern recognition. It reports on current research with respect to both methodology and applications. In particular, it includes the following [...] Contents
From the content: - Modified Ranked Order Adaptive Median Filter for Impulse Noise Removal - Conceptual Design with the Use of Graph-Based Structures - Instantaneous measurement of SNR in electrocardiograms based on quasi-continuous time-scale noise modeling - Data Queuing for Non-uniform Telemedical Reporting - Variable Complexity Reduction in Image Grade Decomposition - Artefactual Reasoning in a Hypergraph-Based CAD System - Analysis of Inter-Rater Agreement among Human Observers who Judge Image Similarity - Estimation of Tolerance Relation on the Basis of Pairwise Comparisons.

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

Target groups
Research

Type of publication
Proceedings

Available
2011, 782 p. 329 illus., 5 in color. (Advances in Intelligent and Soft Computing, Vol. 95) Softcover
299,00 €
ISBN 978-3-642-20319-0
Domain-Level Reasoning for Spoken Dialogue Systems

Reasoning for Information: Seeking and Planning Dialogues provides a logic-based reasoning component for spoken language dialogue systems. This component, called Problem Assistant, is responsible for processing constraints on a possible solution obtained from various sources, namely user and the system’s domain-specific information. The authors present findings on the implementation of a dialogue management interface to the Problem Assistant. The dialogue system supports simple mixed-initiative planning interactions in the TRAINS domain, which is a relatively complex domain involving a number of logical constraints and relations forming the basis for the collaborative problem-solving behavior that drives the dialogue.

Features

Domain-Level Reasoning for Spoken Dialogue Systems provides a logic-based reasoning component for spoken language dialogue systems. This component, called Problem Assistant, is responsible for processing constraints on a possible solution obtained from various sources, namely user and the system’s domain-specific information. The authors present findings on the implementation of a dialogue management interface to the Problem Assistant. The dialogue system supports simple mixed-initiative planning interactions in the TRAINS domain, which is relatively complex and involves a number of logical constraints and relations forming the basis for the collaborative problem-solving behavior that drives the dialogue.

Contents


Fields of interest

Computational Intelligence; Signal, Image and Speech Processing; User Interfaces and Human Computer Interaction; Language Translation and Linguistics

Target groups

Research

Type of publication

Monograph

Available

2011. XII, 185 p. 60 illus. Hardcover

Einführung in das Management von Geschäftsprozessen

Six Sigma, Kaizen und TQM


Features


Contents


Fields of interest

Engineering Economics, Organization, Logistics, Marketing, Production / Logistics; Quality Control, Reliability, Safety and Risk; Organization / Planning

Target groups

Professional/practitioner

Type of publication

Professional book

Available

2011. VIII, 261 S. Softcover
46,68 € ISBN 978-3-642-01120-7

Dynamics and Control of Electrical Drives

Dynamics is a science concerned with movement and changes. In the most general approach it relates to life processes as well as behavior in nature in rest. It governs small particles, technical objects, conversion of matter and materials but also concerns people, groups of people in their individual and, in particular, social dimension. In dynamics we always have to do with causes or stimuli for motion, the rules of reaction or behavior and its result in the form of trajectory of changes. This book is devoted to dynamics of a wide class of specific but very important objects such as electromechanical systems. This is a very rigorous discipline and has a long tradition, as its theoretical bases were formulated in the first half of the XIX century by d’Alembert, Lagrange, Hamilton, Maxwell and other prominent scientists, but their crucial results were based on previous pioneering research of others such as Copernicus, Galileo, Newton… This book in its theoretical foundations is based on the principle […]

Features

Dynamics is a science concerned with movement and changes. In the most general approach it relates to life processes as well as behavior in nature in rest. It governs small particles, technical objects, conversion of matter and materials but also concerns people, groups of people in their individual and, in particular, social dimension. In dynamics we always have to do with causes or stimuli for […]

Contents


Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics); Mechatronics; Energy Efficiency (incl. Buildings)

Target groups

Research

Type of publication

Monograph

Available

2011. XX, 456 p. 316 illus. Hardcover
129,95 € ISBN 978-3-642-20221-6

P. Wach, Politechnika Opolska, Opole, Poland

S. Koch, Fachhochschule Frankfurt, Frankfurt am Main
Mechanics of Materials is the second volume of a three-volume textbook on Engineering Mechanics. It was written with the intention of presenting to engineering students the basic concepts and principles of mechanics in as simple a form as the subject allows. A second objective of this book is to guide the students in their efforts to solve problems in mechanics in a systematic manner. The simple approach to the theory of mechanics allows for the different educational backgrounds of the students. Another aim of this book is to provide engineering students as well as practicing engineers with a basis to help them bridge the gaps between undergraduate studies, advanced courses on mechanics and practical engineering problems. The book contains numerous examples and their solutions. Emphasis is placed upon student participation in solving the problems. The contents of the book correspond to the topics normally covered in courses on basic engineering mechanics at universities and colleges. Volume I [...] Features

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Dynamics is the third volume of a three-volume textbook on Engineering Mechanics. It was written with the intention of presenting to engineering students the basic concepts and principles of mechanics in as simple a form as the subject allows. A second objective of this book is to guide the students in their efforts to solve problems in mechanics in a systematic manner. The simple approach to the theory of mechanics allows for the different educational backgrounds of the students. Another aim of this book is to provide engineering students as well as practicing engineers with a basis to help them bridge the gaps between undergraduate studies, advanced courses on mechanics and practical engineering problems. The book contains numerous examples and their solutions. Emphasis is placed upon student participation in solving the problems. The contents of the book correspond to the topics normally covered in courses on basic engineering mechanics at universities and colleges. Volume I deals with Statics; [...] Features

This book deals with expert evaluation models in the form of semantic spaces with completeness and orthogonality properties (complete orthogonal semantic spaces). Theoretical and practical studies of some researchers have shown that these spaces describe expert evaluations most adequately, and as a result they were often included in more sophisticated models of intellectual systems for decision making and data analysis. Methods for constructing expert evaluation models of characteristics, comparative analysis of these models, studies of structural composition of their sets and constructing of generalized models are described. Models to obtain rating points for objects and groups of objects with qualitative and quantitative characteristics are presented. A number of regression models combining elements of classical and fuzzy regressions are presented. All methods and models developed by the authors and described in the book are illustrated with examples from various fields of human activities. This [...] Features

Chapter 1. The basic concepts of the fuzzy sets theory. - Methods of expert information formalization based on complete orthogonal semantic spaces. - Methods of comparative and fuzzy cluster analysis of formalized information. - Model-building methods of the generalized characteristic expert evaluation models. - Ratings of objects. - Complete orthogonal semantic spaces in problems of the fuzzy regression analysis. Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics) Target groups

Research Type of publication

Monograph Available


99,95 € ISBN 978-3-642-20124-0
Fault-Diagnosis Applications

Model-Based Condition Monitoring: Actuators, Drives, Machinery, Plants, Sensors, and Fault-tolerant Systems

Supervision, condition-monitoring, fault detection, fault diagnosis and fault management play an increasing role for technical processes and vehicles in order to improve reliability, availability, maintenance and lifetime. For safety-related processes fault-tolerant systems with redundancy are required in order to reach comprehensive system integrity. This book is a sequel of the book “Fault-Diagnosis Systems” published in 2006, where the basic methods were described. After a short introduction into fault-detection and fault-diagnosis methods the book shows how these methods can be applied for a selection of 20 real technical components and processes as examples, such as: Electrical drives (DC, AC); Electrical actuators; Fluidic actuators (hydraulic, pneumatic); Centrifugal and reciprocating pumps; Pipelines (leak detection); Industrial robots; Machine tools (main and feed drive, drilling, milling, grinding); Heat exchangers. Also realized fault-tolerant systems for electrical drives, actuators and sensors are [...]

Features
Supervision, condition-monitoring, fault detection, fault diagnosis and fault management play an increasing role for technical processes and vehicles in order to improve reliability, availability, maintenance and lifetime. For safety-related processes fault-tolerant systems with redundancy are required in order to reach comprehensive system integrity. This book is a sequel of the book [...]"
Fundamentals of Combustion Processes

Fundamentals of Combustion Processes is designed as a textbook for an upper-division undergraduate and graduate level combustion course in mechanical engineering. The authors focus on the fundamental theory of combustion and provide a simplified discussion of basic combustion parameters and processes such as thermodynamics, chemical kinetics, ignition, diffusion and pre-mixed flames. The text includes exploration of applications, example exercises, suggested homework problems and videos of laboratory demonstrations.

Contents


Fields of interest

Engineering Thermodynamics, Heat and Mass Transfer; Physical Chemistry; Classical Continuum Physics; Engineering Fluid Dynamics.

Target groups

Graduate.

Type of publication

Graduate/advanced undergraduate textbook.

Available


69,95 € ISBN 978-1-4419-7942-1

Future Intelligent Information Systems

Volume 1

2010 First International Conference on Electrical and Electronics Engineering was held in Wuhan, China, December 4-5. Future Intelligent Information Systems book contains eighty-five revised and extended research articles written by prominent researchers participating in the conference. Topics covered include Tools and Methods of AI, Knowledge Discovery, Information Management and knowledge sharing, intelligent e-Technology, Information systems governance, and Informatics in Control. Intelligent Information System will offer the state of art of tremendous advances in Intelligent Information System and also serve as an excellent reference work for researchers and graduate students working with/on Intelligent Information System.

Features

2010 First International Conference on Electrical and Electronics Engineering was held in Wuhan, China, December 4-5. Future Intelligent Information Systems book contains eighty-five revised and extended research articles written by prominent researchers participating in the conference. Topics covered include Tools and Methods of AI, Knowledge Discovery, Information Management and knowledge sharing, [...]
Hybrid Hydrogen Systems
Stationary and Transportation Applications

Renewable energy technologies have been used on a small scale for many years now. Issues of intermittency and cost have prevented their widespread use and acceptance. At present, discussion and research is aimed at moving the current global fossil fuels economy to one based on hydrogen as the universal energy carrier, with fuel cells as a means of converting this chemical energy to electrical energy. Hybrid Hydrogen Systems presents an original and comprehensive approach to hybrid energy system optimization, providing a much-needed systems approach to hydrogen energy applications. This book provides a comprehensive overview of the fundamentals of renewable power generation, conversion and storage, including wind, solar photovoltaic power, biomass, batteries, fuel cells, and hydrogen. As well as proposing a unique approach to minimize the cost and maximize the reliability of hybrid energy systems, Hybrid Hydrogen Systems introduces the benefits of hydrogen as an energy carrier in the context of [...]"
Kinematics of Machinery Through HyperWorks

The concept of moving machine members during a thermodynamic cycle and the variation of displacements, velocities and accelerations forms the subject of kinematics. The study of forces that make the motion is the subject of kinetics; combining these two subjects leads to dynamics of machinery. When we include the machinery aspects such as links, kinematic chains, and mechanisms to form a given machine we have the subject of Theory of Machines. Usually this subject is introduced as a two-semester course, where kinematics and kinetics are taught simultaneously with thermodynamics or heat engines before progressing to the design of machine members. This book provides the material for first semester of a Theory of Machines course. This book brings in the machine live onto the screen and explains the theory of machines concepts through animations and introduces how the problems are solved in industry to present a complete history in the shortest possible time rather than using graphical (or analytical) [...] Features

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1. Beginnings of Theory of Machines: 1.1 Beginnings of the Wheel; 1.2 Archimedes (287-212 BC); 1.3 Water Wheels; 1.4 Wind Mills; 1.5 Renaissance Engineers; 1.6 Industrial Revolution; 1.7 How is this book organized?: 2. Planar Mechanisms; 2.1 Basic Kinematic Concepts; 2.2 Elementary Mechanisms; 2.3 Grübler’s Criterion for Planar Mechanisms; 2.4 Four Link Chains; 2.5 Kinematic Inversion; 2.6 Additional Problems; 3. Kinematic Analysis of Mechanisms; 3.1 Velocities by Centro Method; 3.2 Relative Velocity Equation; 3.3 Relative Acceleration Equation; 3.4 Acceleration Analysis of Reciprocating [...] Fields of interest

Machine and Machine Elements; Theoretical and Applied Mechanics; Mechanics Target groups

Research Type of publication

Monograph Available


59,95 €
ISBN 978-3-642-19188-6

Konstruieren sicherheitsgerechter Produkte

Methoden und systematische Lösungssammlungen zur EG-Maschinenrichtlinie


Die Sicherheitstechnik im Allgemeinen und das konstruieren sicherheitsgerechter Maschinen im Besonderen ist im Wandel. Die Maschinenrichtlinie 2006/42/EU und zahlreiche Europäische Normen greifen zwar erheblich in den Konstruktionsprozess ein, z.B. durch die Voranstellung einer von den Konstrukteuren durchzuführenden Risikobeurteilung der von ihnen noch zu realisierenden Lösungen, öffnen aber die [...] Contents


Engineering Design; Quality Control, Reliability, Safety and Risk Target groups

Professional/practitioner Type of publication

Professional book Available

2011. XII, 586 S. 360 Abb. Hardcover

121,45 €
ISBN 978-3-642-19188-6

Lattice Boltzmann Method

Fundamentals and Engineering Applications with Computer Codes

Lattice Boltzmann Method introduces the lattice Boltzmann method (LBM) for solving transport phenomena – flow, heat and mass transfer – in a systematic way. Providing explanatory computer codes throughout the book, the author guides readers through many practical examples, such as: flow in isothermal and non-isothermal lid driven cavities; flow over obstacles; forced flow through a heated channel; conjugate forced convection; and natural convection. Diffusion and advection-diffusion equations are discussed with applications and examples, and complete computer codes accompany the coverage of single and multi- relaxation-time methods. Although the codes are written in FORTRAN, they can be easily translated to other languages, such as C++. The codes can also be extended with little effort to multi-phase and multi-physics, if the reader knows the physics of the problem. Readers with some experience of advanced mathematics and physics will find Lattice Boltzmann Method a useful and easy-to-follow text. It has [...] Features

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Engineering Thermodynamics, Heat and Mass Transfer; Classical Continuum Physics; Engineering Fluid Dynamics; Numerical and Computational Physics Target groups

Research Type of publication

Monograph Available

2011. LVIII, 499 S. 65 illus. Hardcover

99,95 €
Linear Time-Varying Systems
Algebraic-Analytic Approach

The aim of this book is to propose a new approach to analysis and control of linear time-varying systems. These systems are defined in an intrinsic way, i.e., not by a particular representation (e.g., a transfer matrix or a state-space form) but as they are actually.

The system equations, derived, e.g., from the laws of physics, are gathered to form an intrinsic mathematical object, namely a finitely presented module over a ring of operators. This is strongly connected with the engineering point of view, according to which a system is not a specific set of equations but an object of the material world which can be described by equivalent sets of equations. This viewpoint makes it possible to formulate and solve efficiently several key problems of the theory of control in the case of linear time-varying systems. The solutions are based on algebraic analysis. This book, written for engineers, is also useful for mathematicians since it shows how algebraic analysis can be applied to solve [...]>

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Contents

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

Type of publication
Monograph

Available
2011. XXV, 638 p. 32 illus. (Lecture Notes in Control and Information Sciences, Vol. 410) Softcover
149,95 €
ISBN 978-3-642-19726-0

Look-Ahead Based Sigma-Delta Modulation

The aim of this book is to expand and improve upon the existing knowledge on discrete-time 1-bit look-ahead sigma-delta modulation in general, and to come to a solution for the above mentioned specific issues arising from 1-bit sigma-delta modulation for SA-CD. In order to achieve this objective an analysis is made of the possibilities for improving the performance of digital noise-shaping look-ahead solutions. On the basis of the insights obtained from the analysis, several novel generic 1-bit look-ahead solutions that improve upon the state-of-the-art will be derived and their performance will be evaluated and compared. Finally, all the insights are combined with the knowledge of the SA-CD lossless data compression algorithm to come to a specifically for SA-CD optimized look-ahead design.

Features
High resolution analog-to-digital conversion and digital-to-analog conversion is often realized with the use of a Sigma-Delta Modulator (SDM). The sigma-delta modulation process, although very non-linear when a 1-bit quantizer is used, is nowadays well understood and can be made to deliver a very high signal conversion quality. An example system that pushes the traditional sigma-delta modulation algorithm to [...]>

Contents

Fields of interest
Circuits and Systems; Computer Systems Organization and Communication Networks

Target groups
Research

Type of publication
Monograph

Available
2011. VI, 187 p. (SpringerBriefs in Applied Sciences and Technology) Softcover
49,95 €

Low Voltage Power MOSFETs
Design, Performance and Applications

Low Voltage Power MOSFETs focuses on the design of low voltage power MOSFETs and the relation between the device structure and the performance of a power MOSFET used as a switch in power management applications. This SpringerBriefs close the gap between detailed engineering reference books and the numerous technical papers on the subject of power MOSFETs. The material presented covers low voltage applications extending from battery operated portable electronics, through point of load converters, internet infrastructure, automotive applications, to personal computers and server computers. The issues treated in this volume are explained qualitatively using schematic illustrations, making the discussion easy to follow for all prospective readers.

Features
Low Voltage Power MOSFETs focuses on the design of low voltage power MOSFETs and the relation between the device structure and the performance of a power MOSFET used as a switch in power management applications. This SpringerBriefs close the gap between detailed engineering reference books and the numerous technical papers on the subject of power MOSFETs. The material presented covers low voltage applications [...]>

Contents

Fields of interest
Power Electronics, Electrical Machines and Networks; Solid State Physics; Electronics and Microelectronics, Instrumentation

Target groups
Research

Type of publication
Brief

Available
2011. VIII, 65 p. 60 illus. (SpringerBriefs in Applied Sciences and Technology) Softcover
49,95 €

Low Voltage Power MOSFETs focuses on the design of low voltage power MOSFETs and the relation between the device structure and the performance of a power MOSFET used as a switch in power management applications. This SpringerBriefs close the gap between detailed engineering reference books and the numerous technical papers on the subject of power MOSFETs. The material presented covers low voltage applications [...]>

Contents

Fields of interest
Power Electronics, Electrical Machines and Networks; Solid State Physics; Electronics and Microelectronics, Instrumentation

Target groups
Research

Type of publication
Brief

Available
2011. VIII, 65 p. 60 illus. (SpringerBriefs in Applied Sciences and Technology) Softcover
49,95 €
Metodi di ottimizzazione non vincolata

Nel volume vengono descritti e analizzati gli algoritmi di ottimizzazione non vincolata maggiormente noti e quelli studiati pi di recente e proposti nella letteratura specialistica. Particolare attenzione viene data alle proprietà teoriche di convergenza degli algoritmi descritti e agli aspetti numerici e computazionali ad essi connessi. La stesura del testo è di rendere adatto sia a un lettore che intenda acquisire un'interpretazione di base delle metodologie di ottimizzazione non vincolata, sia a un lettore che abbia già competenze generali di ottimizzazione e che voglia approfondire specifici argomenti. I concetti matematici di base sono riportati nelle appendici con il fine di presentare una trattazione degli argomenti autocontenuta.

Features

Vengono descritti e analizzati gli algoritmi più significativi per la soluzione di problemi di ottimizzazione non vincolata e di sistemi di equazioni non lineari. Particolare attenzione è rivolta allo studio della convergenza globale e delle tecniche di globalizzazione che costituiscono uno dei maggiori contributi dell'ottimizzazione al calcolo numerico. Nel volume vengono considerati sia gli algoritmi autocontenuti.

Fields of interest

Appl. Mathematics / Computational Methods of Engineering; Engineering Economics, Organizations, Logistics, Marketing; Industrial and Production Engineering; Computational Mathematics and Numerical Analysis; Optimization

Target groups

Upper undergraduate

Type of publication

Undergraduate textbook

Available

2011. 700 pagg. 100 fogg. (La Matematica per il 3+2) Softcover

37,45 €


Micro Transport Phenomena During Boiling

“Micro Transport Phenomena During Boiling” reviews the new achievements and contributions in recent investigations at microscale. The content mainly includes (i) fundamentals for conducting investigations of micro boiling, (ii) microscale boiling and transport phenomena, (iii) boiling characteristics at microscale, (iv) some important applications of micro boiling transport phenomena. This book is intended for researchers and engineers in the field of micro energy systems, electronic cooling, and thermal management in various compact devices/systems at high heat removal and/or heat dissipation.

Dr. Xiaofeng Peng, who had passed away on Sep. 10, 2009, was a professor at the Department of Thermal Engineering, Tsinghua University, China.

Features

“Micro Transport Phenomena During Boiling” reviews the new achievements and contributions in recent investigations at microscale. The content mainly includes (i) fundamentals for conducting investigations of micro boiling, (ii) microscale boiling and transport phenomena, (iii) boiling characteristics at microscale, (iv) some important applications of micro boiling transport phenomena. This book is intended for researchers and engineers in the field of micro energy systems, electronic cooling, and thermal management in various compact devices/systems at high heat removal and/or heat dissipation.

Contents


Fields of interest

Engineering Thermodynamics, Heat and Mass Transfer; Engineering Fluid Dynamics; Transportation

Target groups

Research

Type of publication

Monograph

Available

2011. 400 p. Hardcover

199,95 €

ISBN 978-3-642-13453-1
Modelling, Simulation and Software Concepts for Scientific-Technological Problems

The book includes different contributions that cover interdisciplinary research in the areas of error controlled numerical methods, efficient algorithms and software development. Elastic and in elastic deformation processes. Models with multiscales and multi-physics “High Performance” adaptive numerical methods using finite elements (FEM) and boundary elements (BEM) are described as well as efficient solvers for linear systems and corresponding software components for non-linear, coupled field equations of various branches of mechanics, electromagnetics, and geosciences.

Features
The book includes different contributions that cover interdisciplinary research in the areas of error controlled numerical methods, efficient algorithms and software development. Elastic and in elastic deformation processes. Models with multiscales and multi-physics “High Performance” adaptive numerical methods using finite elements (FEM) and [...] 

Contents

Fields of interest
Continuum Mechanics and Mechanics of Materials; Simulation and Modeling, Appl. Mathematics / Computational Methods of Engineering 

Target groups
Research

Type of publication
Monograph

Available
99,95 €
ISBN 978-3-642-20489-0

Multimedia Analysis, Processing and Communications

This book has brought 24 groups of experts and active researchers around the world together in image processing and analysis, video processing and analysis, and communications related processing, to present their newest research results, exchange latest experiences and insights, and explore future directions in these important and rapidly evolving areas. It aims at increasing the synergy between academic and industry professionals working in the related field. It focuses on the state-of-the-art research in various essential areas related to emerging technologies, standards and applications on analysis, processing, computing, and communication of multimedia information. The target audience of this book is researchers and engineers as well as graduate students working in various disciplines linked to multimedia analysis, processing and communications, e.g., computer vision, pattern recognition, information technology, image processing, and artificial intelligence. The book is also meant to a broader [...] 

Features
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Contents
Part I: Image Processing and Analysis. - Part II: Video Processing and Analysis. - Communications Related Processing. - Part II: Video Processing and Analysis. - Communications Related Processing. 

Fields of interest
Appl. Mathematics / Computational Methods of Engineering; Artificial Intelligence (incl. Robotics); Communications Engineering, Networks; Information Systems and Communication Service 

Target groups
Research

Type of publication
Monograph

Available
2011. XII, 764 p. 315 illus., 183 in color. (Studies in Computational Intelligence; Vol. 346) Hardcover
199,95 €
ISBN 978-3-642-19550-1

Nanotechnology in Civil Infrastructure

A Paradigm Shift

Nanotechnology in Civil Infrastructure is a state-of-the-art reference source describing the latest developments in nano-engineering and nano-modification of construction materials to improve the bulk properties, development of sustainable, intelligent, and smart concrete materials through the integration of nanotechnology based self-sensing and self-powered materials and cyber infrastructure [...] 

Contents

Fields of interest
Civil Engineering; Nanotechnology; Sustainable Development; Renewable and Green Energy; Computational Intelligence; Landscape, Regional and Urban Planning 

Target groups
Research

Type of publication
Monograph

Available
2011. VIII, 276 p. 144 illus., 58 in color. Hardcover
99,95 €
ISBN 978-3-642-16656-3
Near-Field Characterization of Micro/Nano-Scaled Fluid Flows

The near-field region within an order of 100 nm from the solid interface is an exciting and crucial area where many important multiscale transport phenomena are physically characterized, such as flow mixing and drag, heat and mass transfer, near-wall behavior of nanoparticles, binding of bio-molecules, crystallization, surface deposition processes, just naming a few. This monograph presents a number of label-free experimental techniques developed and tested for near-field fluid flow characterization. Namely, these include Total Internal Reflection Microscopy (TIRM), Optical Serial Sectioning Microscopy (OSSM), Surface Plasmon Resonance Microscopy (SPRM), Interference Reflection Contrast Microscopy (IRCM), Thermal Near-Field Anemometry, Scanning Thermal Microscopy (STM), and Micro-Cantilever Near-Field Thermometry. Presentation on each of these is laid out for the working principle, how to implement the system, and its example applications, to promote the readers understanding and knowledge of the...

Networked and Distributed Predictive Control

Networked and Distributed Predictive Control presents rigorous, yet practical, methods for the design of networked and distributed predictive control systems – the first book to do so. The design of model predictive control systems using Lyapunov-based techniques accounting for the influence of asynchronous and delayed measurements is followed by a treatment of networked control architecture development. This shows how networked control can augment dedicated control systems in a natural way and takes advantage of additional, potentially asynchronous and delayed measurements to maintain closed loop stability and significantly improve closed-loop performance. The text then shifts focus to the design of distributed predictive control systems that cooperate efficiently in computing optimal manipulated input trajectories that achieve desired stability, performance and robustness specifications but spend a fraction of the time required by centralized control systems. Key features of this book include:...

Features
• Networked and Distributed Predictive Control presents rigorous, yet practical, methods for the design of networked and distributed predictive control systems using Lyapunov-based techniques accounting for the influence of asynchronous and delayed measurements that cooperate efficiently in computing optimal manipulated input trajectories that achieve desired stability, performance and robustness specifications but spend a fraction of the time required by centralized control systems.

Contents

Fields of interest
Control; Industrial Chemistry; Chemical Engineering; Renewable and Green Energy; Systems Theory; Control; Computer Communication Networks

Target groups
Research

Type of publication
Monograph

Available
2011. XXVII, 230 p. 86 illus., 65 in color. (Advances in Industrial Control) Hardcover
99.95 €

Next Generation Data Technologies for Collective Computational Intelligence

This book focuses on next generation data technologies in support of collective and computational intelligence. The book brings various next generation data technologies together to capture, integrate, analyze, mine, annotate and visualize distributed data – made available from various community users – in a meaningful and collaborative for the organization manner. A unique perspective on collective computational intelligence is offered by embracing both theory and strategies fundamentals such as data clustering, graph partitioning, collaborative decision making, self-adaptive ant colony, swarm and evolutionary agents. It also covers emerging and next generation technologies in support of collective computational intelligence such as Web 2.0 social networks, semantic web for data annotation, knowledge representation and inference, data privacy and security, and enabling distributed and collaborative paradigms such as P2P, Grid and Cloud Computing due to the geographically dispersed and distributed...

Features
• This book focuses on next generation data technologies in support of collective and computational intelligence.

Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Information Systems Applications (incl. Internet)

Target groups
Research

Type of publication
Monograph

Available
169.95 €
ISBN 978-3-642-20343-5
Nonlinear Model Predictive Control
Theory and Algorithms

Nonlinear Model Predictive Control is a thorough and rigorous introduction to nonlinear model predictive control (NMPC) for discrete-time and sampled-data systems. NMPC is interpreted as an approximation of infinite-horizon optimal control so that important properties like closed-loop stability, inverse optimality and suboptimality can be derived in a uniform manner. These results are complemented by discussions of feasibility and robustness. NMPC schemes with and without stabilizing terminal constraints are detailed and intuitive examples illustrate the performance of different NMPC variants. An introduction to nonlinear optimal control algorithms gives insight into how the nonlinear optimisation routine – the core of any NMPC controller – works. An appendix covering NMPC software and accompanying software in MATLAB® and C++ (downloadable from www.springer.com/ISBN) enables readers to perform computer experiments exploring the possibilities and limitations of NMPC.

Features
Nonlinear model predictive control (NMPC) is widely used in the process and chemical industries and increasingly for applications, such as those in the automotive industry, which use higher data sampling rates. Nonlinear Model Predictive Control is a thorough and rigorous introduction to NMPC for discrete-time and sampled-data systems. NMPC is interpreted as an approximation of infinite-horizon optimal control.

Contents

Fields of interest
Control; Systems Theory; Control; Industrial Chemistry / Chemical Engineering; Automotive Engineering

Target groups
Professional/practitioner

Type of publication
Monograph

Nonlinear Model Predictive Control
Theory and Algorithms

J. Huijsing, Delft University of Technology, Netherlands

Operational Amplifiers
Theory and Design

Operational Amplifiers – Theory and Design, Second Edition presents a systematic circuit design of operational amplifiers. Containing state-of-the-art material as well as the essentials, the book is written to appeal to both the circuit designer and the system designer. It is shown that the topology of all operational amplifiers can be divided into nine main overall configurations. These configurations range from one gain stage up to four or more stages. Many famous designs are evaluated in depth. Additional chapters included are on systematic design of offset operational amplifiers and precision instrumentation amplifiers by applying chopping, autozeroing, and dynamic element-matching techniques. Also, techniques for frequency compensation of amplifiers with high capacitive loads have been added. Operational Amplifiers – Theory and Design, Second Edition presents high frequency compensation techniques to HF-stabilize all nine configurations. Special emphasis is placed on low-power low-voltage amplifiers.

Features
Additive noise is ubiquitous in acoustics environments and can affect the intelligibility and quality of speech signals. Therefore, a so-called noise reduction algorithm is required to mitigate the effect of the noise that is picked up by the microphones. This work proposes a general framework in the time domain for the single and multiple microphone cases, from which it is very convenient to derive, study, and analyze all kind of optimal noise reduction filters. Not only that all known algorithms can be deduced from this approach, shedding more light on how they function, but new ones can be discovered as well.

Features
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Power Conversion of Renewable Energy Systems

Power Conversion of Renewable Energy Systems presents an introduction to conventional energy conversion components and systems, as well as those related to renewable energy. This volume introduces systems first, and then in subsequent chapters describes the components of energy systems in detail. Readers will find examples of renewable and conventional energy and power systems, including energy conversion, variable-speed drives and power electronics, in addition to magnetic devices such as transformers and rotating machines. Applications of PSpice, MATLAB, and Mathematica are also included, along with solutions to over 100 application examples. Power Conversion of Renewable Energy Systems aims to instruct readers how to actively apply the theories discussed within. It would be an ideal volume for researchers, students and engineers working with energy systems and renewable energy.

Features

Power Conversion of Renewable Energy Systems introduces conventional energy conversion components and systems, as well as those related to renewable energy which are important for a smart grid design. This volume covers systems first, and then in subsequent chapters describes the components of energy systems in detail. Readers will find examples of renewable and conventional energy and power [..]

Contents


Fields of interest

Renewable and Green Energy; Power Electronics, Electrical Machines and Networks; Energy Efficiency (incl. Buildings)

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Available

2011. XIII, 692 p. 120 illus. Hardcover

69,95 €
ISBN 978-1-4419-7978-0

Replacement Models with Minimal Repair

Replacement Models with Minimal Repair is a collection of works by several well-known specialists on the subject of minimal repair in replacement policies. It gives an exhaustive list of minimal repair models for the effective planning of minimal repair and maintenance actions. Written in an engaging style, Replacement Models with Minimal Repair balances complex mathematical models with practical applications. It is divided into six parts that cover mathematical modeling of minimal repair, preventive maintenance models and optimal scheduling of imperfect preventive maintenance activities, new warranty servicing strategy with imperfect repair, mathematical models combining burn-in procedures and general maintenance policies, methods for parameters estimation of minimal repair models, and product support. Replacement Models with Minimal Repair is for anyone with an interest in minimal repair and its impact on maintenance policies and strategies. It is a particularly useful resource for researchers, [..]

Features

Replacement Models with Minimal Repair is a collection of works by several well-known specialists on the subject of minimal repair in replacement policies. It gives an exhaustive list of minimal repair models for the effective planning of minimal repair and maintenance actions. Written in an engaging style, Replacement Models with Minimal Repair balances complex mathematical models with [..]

Contents


Fields of interest

Quality Control, Reliability, Safety and Risk; Mathematical Modeling and Industrial Mathematics; Industrial Organization

Target groups

Research

Type of publication

Contributed volume

Available

2011. XVIII, 270 p. 23 illus., 12 in color. (Springer Series in Reliability Engineering) Hardcover

99,95 €

Robotic Welding, Intelligence and Automation

This book shows some contributions presented in the 2010 International Conference on Robotic Welding, Intelligence and Automation (RWIA 2010), Oct. 14-16, 2010, Shanghai, China. Welding handcraft is one of the most primordial and traditional techniques, mainly by manpower and human experiences. Weld quality and efficiency are, therefore, strictly limited by the welder’s skill. In the modern manufacturing, automatic and robotic welding is becoming an inevitable trend. In recent years, the intelligentized techniques for robotic welding have a great development. The current teaching play-back welding robot is not with real-time functions for sensing and adaptive control of weld process. Generally, the key technologies on Intelligentized welding robot and robotic welding process include computer visual and other information sensing, monitoring and real-time feedback control of weld penetration and pool shape and welding quality. Seam tracking is another key technology for welding robot system. Some[..]

Features

This book shows some contributions presented in the 2010 International Conference on Robotic Welding, Intelligence and Automation (RWIA 2010), Oct. 14-16, 2010, Shanghai, China. Welding handcraft is one of the most primordial and traditional techniques, mainly by manpower and human experiences. Weld quality and efficiency are, therefore, strictly limited by the welder’s skill. In the modern[..]

Contents


Fields of interest

Electronics and Microelectronics, Instrumentation; Robotics and Automation; Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Proceedings

Available

2011. XII, 508 p. 369 illus., 203 in color. (Lecture Notes in Electrical Engineering, Vol. 88) Hardcover

169,95 €
ISBN 978-3-642-19958-5
Sensor Networks with IEEE 802.15.4 Systems
Distributed Processing, MAC, and Connectivity

This book presents a simple, yet complete, approach to the design and performance analysis of distributed processing algorithms and techniques suitable for IEEE 802.15.4 networks. In particular, the book focuses on the bottom two layers of the ISO/OSI stack (Physical and Medium Access Control), discussing also a few related to routing. The book is the synergistic combination of signal processing aspects on the one hand and MAC and connectivity issues on the other hand. The goal of the book is to clearly link physical layer aspects with medium access and topology aspects, in order to provide the reader with a clear understanding of how to approach the design of proper distributed signal processing and medium access algorithms in this context.

Features
This book presents a simple, yet complete, approach to the design and performance analysis of distributed processing algorithms and techniques suitable for IEEE 802.15.4 networks. In particular, the book focuses on the bottom two layers of the ISO/OSI stack (Physical and Medium Access Control), discussing also a few related to routing. The book is the synergistic combination of signal processing aspects on the one hand and MAC and connectivity issues on the other hand. The goal of the book is to clearly link physical layer aspects with medium access and topology aspects, in order to provide the reader with a clear understanding of how to approach the design of proper distributed signal processing and medium access algorithms in this context.

Contents

Fields of interest
Communications Engineering, Networks; Computer Communication Networks

Target groups
Research

Type of publication
Monograph

Available
189,95 €
ISBN 978-3-642-20504-0

Soft Computing in Industrial Applications

The 15th Online World Conference on Soft Computing in Industrial Applications, held on the Internet, constitutes a distinctive opportunity to present and discuss high-quality papers, making use of sophisticated Internet tools and without incurring in high cost and, thus, facilitating the participation of people from the entire world. The book contains a collection of papers covering outstanding research developments in the field of Soft Computing including, evolutionary computation, fuzzy control and neuro-fuzzy systems, bio-inspired systems, optimization techniques and application of Soft Computing techniques in modeling, control, optimization, data mining, pattern recognition and traffic and transportation systems.

Features
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Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); Communications Engineering, Networks; Image Processing and Computer Vision

Target groups
Research

Type of publication
Proceedings

Available
2011, XXVI, 139 illus. (Advances in Intelligent and Soft Computing, Vol. 96) Softcover
189,95 €
ISBN 978-3-642-20504-0

Solutions on Embedded Systems

Embedded systems have an increasing importance in our everyday lives. The growing complexity of embedded systems and the emerging trend to interconnections between them lead to new challenges. Intelligent solutions are necessary to overcome these challenges and to provide reliable and secure systems to the customer under a strict time and financial budget. Solutions on Embedded Systems documents results of several innovative approaches that provide intelligent solutions in embedded systems. The objective is to present mature approaches, to provide detailed information on the implementation and to discuss the results obtained.

Features
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Contents

Fields of interest
Electronics and Microelectronics, Instrumentation; Processor Architectures

Target groups
Research

Type of publication
Monograph

Available
2011, IX, 275 p. (Lecture Notes in Electrical Engineering, Vol. 81) Hardcover
99,95 €
ISBN 978-94-007-0637-8
Stability and Stabilization of Nonlinear Systems

Recently, the subject of nonlinear control systems analysis has grown rapidly and this book provides a simple and self-contained presentation of their stability and feedback stabilization which enables the reader to learn and understand major techniques used in mathematical control theory. In particular, the important techniques of proving global stability properties are presented closely linked with corresponding methods of nonlinear feedback stabilization; a general framework of methods for proving stability is given, thus allowing the study of a wide class of nonlinear systems, including finite-dimensional systems described by ordinary differential equations, discrete-time systems, systems with delays and sampled-data systems; approaches to the proof of classical global stability properties are extended to non-classical global stability properties such as non-uniform-in-time stability and input-to-output stability; and new tools for stability analysis and control design of a wide class of [...]}

Contents

Fields of interest
Control; Systems Theory; Control; Game Theory / Mathematical Methods; Nonlinear Dynamics

Target groups
Research

Type of publication
Monograph

Available
2011. XIX, 386 p. 7 illus., 5 in color. (Communications and Control Engineering) Hardcover

119,95 €

Sustainable Automotive Technologies 2011

These proceedings capture papers presented at the third International Conferences on Sustainable Automotive Technologies (ICSAT), held at the Clemson University International Center for Automotive Research (CU-ICAR), Greenville, South Carolina, USA, during 5-6 April 2011. ICSAT is the state-of-the-art conference in the field of new technologies for transportation. The book summarizes all important trends in sustainability of automotive development today with a special focus on materials, propulsion technologies as well as manufacturing issues. It provides a brief selection of papers and key-note speakers of the conference. Papers from the US, Australia, Europe and Asia are showing the lightweight house character of the conference, in a field which gains more and more importance as far as emissions and the lack of fossil fuels in the future are concerned. The book provides a very good overview of R&D activities at OEMs as well as in leading universities and laboratories; the special focus is on new ideas [...]}

Features
These proceedings capture papers presented at the third International Conferences on Sustainable Automotive Technologies (ICSAT), held at the Clemson University International Center for Automotive Research (CU-ICAR), Greenville, South Carolina, USA, during 5-6 April 2011. ICSAT is the state-of-the-art conference in the field of new technologies for transportation. The book summarizes all important trends in [...]}

Contents

Fields of interest
Automotive Engineering; Industrial and Production Engineering; Structural Materials; Sustainable Development

Target groups
Research

Type of publication
Proceedings

Available
2011. IX, 150 p. 80 illus. Hardcover

139,95 €
ISBN 978-3-642-19052-0

System Engineering and Automation

This book provides insight and enhanced appreciation of analysis, modeling and control of dynamic systems. The reader is assumed to be familiar with calculus, physics and some programming skills. It might develop the reader's ability to interpret physical significance of mathematical results in system analysis. The book also prepares the reader for more advanced treatment of subsequent knowledge in the automatic control field. Learning objectives are performance-oriented, using for this purpose interactive MATLAB and SIMULINK software tools. It presents realistic problems in order to analyze, design and develop automatic control systems. Learning with computing tools can aid theory and help students to think, analyze and reason in meaningful ways. The book is also complemented with classroom slides and MATLAB and SIMULINK exercise files to aid students to focus on fundamental concepts treated.

Features
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Contents

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

Target groups
Graduate

Type of publication
Monograph

Available
2011. XII, 256 p. 243 illus., 70 in color. Hardcover

99,95 €
ISBN 978-3-642-20229-2
Technische Informatik 3
Grundlagen der PC-Technologie


Features

Contents
- Vorwort
- 1. Aufbau und Funktion eines Personal Computers
- 2. Hauptspeicher und Prozessverwaltung
- 3. Massenspeichermedien
- 4. Monitore und Computersysteme
- 5. Peripheriegeräte
- 6. PC im Netzwerk
- 7. PC-Varianzen
- Literaturverzeichnis
- Index

Fields of interest
- Computational Intelligence
- Electronics and Microelectronics
- Instrumentation
- Computer Hardware

Target groups
- Upper undergraduate

Type of publication
- Undergraduate textbook

Available
- 2011. XIV, 488 S. (Springer-Lehrbuch) Softcover
- 37,34 €

ISBN 978-3-642-16811-6

The Future of Design Methodology

The Future of Design Methodology gives a holistic overview of perspectives for design methodology. It addresses trends for developing a powerful methodological support for design practice and provides a starting point for future design research. The chapters are written by leading scientists from around the world, who have great expertise in design methodology, as well as the farsightedness needed to develop new methodology further. The Future of Design Methodology is a detailed contribution to consolidating design methodology and design research. Instead of articulating the views of one scientist, it provides a comprehensive collection of perspectives and visions. The editor highlights the substantial deficiencies and problems of the current design methodology and summarizes the authors’ findings to draw future-oriented conclusions. The comprehensive overview of the status of design methodology given in The Future of Design Methodology will help enhance the individual scientific development of junior scientists.

Features
- The Future of Design Methodology gives a holistic overview of perspectives for design methodology. It addresses trends for developing a powerful methodological support for design practice and provides a starting point for future design research. The chapters are written by leading scientists from around the world, who have great expertise in design methodology, as well as the farsightedness needed to develop new methodology further. The Future of Design Methodology is a detailed contribution to consolidating design methodology and design research. Instead of articulating the views of one scientist, it provides a comprehensive collection of perspectives and visions. The editor highlights the substantial deficiencies and problems of the current design methodology and summarizes the authors’ findings to draw future-oriented conclusions. The comprehensive overview of the status of design methodology given in The Future of Design Methodology will help enhance the individual scientific development of junior scientists.

Contents
- 1. Introduction
- 2. Is Engineering Design Disappearing from Design Research?
- 3. Methodical Support for the Development of Modular Product Families
- 4. Risk-Driven Design Processes - Balancing Efficiency with Resilience in Product Design
- 6. A Reuse Decision Support System Based on Self-Organizing Maps
- 8. Design Theory and Methodology - Contributions to the...
Unified Signal Theory

Unified Signal Theory is an indispensable textbook dealing with the theory of deterministic signals; a topic of fundamental interest to graduates and senior undergraduates in areas of information engineering (telecommunications, control, systems theory and electronics), astronomy, oceanography, earth science, biology and medicine. The unified theory follows an innovative approach - that of combining all signal classes into just one. The fundamental signal operations (convolution, Fourier transform, linear systems, sampling and interpolation) are established simultaneously for all the signal classes. This unified approach avoids the repetition of similar concepts consequent on other approaches' separate treatment of definitions and properties for each signal class. Modern wavelet ideas are developed in harmony with the rest of the text. Unified Signal Theory provides: • exercises and examples, to give the student practice; • solutions which are available for download and save the tutor time; and [...]
Environment

M. Sathyajith, KCAET, Kerala, India; G.S. Philip, Kerala, India (Eds.)

Advances in Wind Energy Conversion Technology

With an annual growth rate of over 35%, wind is the fastest growing energy source in the world today. As a result of intensive research and development efforts, the technology of generating energy from wind has significantly changed during the past five years. The book brings together all the latest aspects of wind energy conversion technology - right from the wind resource analysis to grid integration of the wind generated electricity. The chapters are contributed by academic and industrial experts having vast experience in these areas. Each chapter begins with an introduction explaining the current status of the technology and proceeds further to the advanced lever to cater for the needs of readers from different subject backgrounds. Extensive bibliography/References appended to each chapter give further guidance to the interested readers.

Features
- The proposed book provides in-depth discussion on all the major aspects of wind energy conversion technology.
- Academic and industrial experts share their expertise and experiences in wind energy conversion systems through various chapters grouped in to eight sections.
- In contrast with other publications in this area, a detailed section on offshore wind farms is included in this volume.

Fields of interest
- Nature Conservation; Environmental Management
- Atmospheric Protection / Air Quality Control / Air Pollution
- Climate Change

Target groups
- Research

Type of publication
- Monograph

Available

Asbestos Disaster

Lessons from Japan’s Experience

Japan’s asbestos disasters, encompassing both occupational disease and environmental pollution, have been caused principally by the asbestos textile, asbestos cement water pipe, and construction industries. This book is unique in its interdisciplinary approach to those disasters as it incorporates medical science, economics, political science, law, architecture, environmental engineering, sociology, and journalism. Written by authorities in their fields, the chapters reflect the integration of these disciplines in topics that include a historical review of asbestos issues in Japan, asbestos-related diseases, international aspects of the asbestos industry, public policy, divisions of responsibility, relief activities in emergencies, and countermeasures enacted by local governments. The lessons of asbestos problems and policies in Japan are particularly important for developing countries to prevent the proliferation of asbestos disasters.

Features
- Japan’s asbestos disasters, encompassing both occupational disease and environmental pollution, have been caused principally by the asbestos textile, asbestos cement water pipe, and construction industries.
- This book is unique in its interdisciplinary approach to those disasters as it incorporates medical science, economics, political science, law, architecture, environmental engineering, sociology, and [...]
Brominated Flame Retardants

Brominated flame retardants are one of the last classes of halogenated compounds that are still being produced worldwide and used in large quantities in many applications. They are used in plastics, textiles, electronic circuitry, and other materials to prevent fires. This volume covers the state-of-the-art of the analysis, fate and behaviour of brominated flame retardants. Experts in the field provide an overview of the compounds' physico-chemical properties and uses, their occurrence in the environment and biota, advanced chemical analytical methods, degradation studies, toxicological effects and human exposure. This book is a valuable and comprehensive source of information for environmental scientists interested in brominated flame retardant issues, and for authorities and producers.

Features
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Contents

Fields of interest
Environmental Chemistry; Analytical Chemistry; Pollution; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Ecotoxicology; Geochemistry

Target groups
Research

Type of publication
Reviews

Available
229,00 €
ISBN 978-3-642-19268-5

Effect-Directed Analysis of Complex Environmental Contamination

Today more than 5 million chemicals are known and roughly 100,000 of them are frequently used, with both numbers rising. Many of these chemicals are ultimately released into the environment and may cause adverse effects to ecosystems and human health. Effect-directed analysis (EDA) is a promising tool for identifying predominant toxicants in complex, mostly environmental mixtures combining effect testing, fractionation and chemical analysis. In the present book leading experts in the field provide an overview of relevant approaches and tools used in EDA. This includes diagnostic biological tools, separation techniques and advanced analytical and computer tools for toxicant identification and structure elucidation. Examples of the successful application of EDA are discussed such as the identification of mutagens in airborne particles and sediments, of endocrine disruptors in aquatic ecosystems and of major toxicants in pulp and paper mill effluents. This book is a valuable, comprehensive and[...]

Features
Today more than 5 million chemicals are known and roughly 100,000 of them are frequently used, with both numbers rising. Many of these chemicals are ultimately released into the environment and may cause adverse effects to ecosystems and human health. Effect-directed analysis (EDA) is a promising tool for identifying predominant toxicants in complex, mostly environmental mixtures combining effect testing. [...]

Contents

Fields of interest
Environmental Chemistry; Geochemistry; Analytical Chemistry; Monitoring / Environmental Analysis; Ecotoxicology; Pollution

Target groups
Research

Type of publication
Reviews

Available
249,00 €
ISBN 978-3-642-18383-6

In The Wrong Place - Alien Marine Crustaceans: Distribution, Biology and Impacts

In The Wrong Place: Alien Marine Crustaceans - Distribution, Biology And Impacts provides a unique view into the remarkable story of how shrimps, crabs, and lobsters – and their many relatives – have been distributed around the world by human activity, and the profound implications of this global reorganization of biodiversity for marine conservation biology. Many crustaceans form the base of many food chains, and are often prominent predators and competitors acting as ecological engineers in marine ecosystems. Commencing in the 1800s, the global commerce began to move hundreds – perhaps thousands – of species of crustaceans across oceans and between continents, both intentionally and unintentionally. This book tells the story of these invasions from Arctic waters to tropical shores, highlighting not only the importance and impact of all prominent crustacean invasions in the world’s oceans, but also the commercial exploitation of invasive crabs and shrimps. Topics explored for the first time[...]

Features
In The Wrong Place: Alien Marine Crustaceans - Distribution, Biology And Impacts provides a unique view into the remarkable story of how shrimps, crabs, and lobsters – and their many relatives – have been distributed around the world by human activity, and the profound implications of this global reorganization of biodiversity for marine conservation biology. Many crustaceans form the base of[...]

Contents

Fields of interest
Marine & Freshwater Sciences; Ecology; Freshwater & Marine Ecology; Biodiversity

Target groups
Research

Type of publication
Contributed volume

Available
169,95 €
ISBN 978-94-007-0590-6
The International Conference on Environment: Survival and Sustainability, held at the Near East University, Nicosia, Northern Cyprus 19-24 February 2007, dealt with environmental threats and proposed solutions at all scales. The 21 themes addressed by the conference fell into four broad categories: Threats to Survival and Sustainability; Technological Advances towards Survival and Sustainability; Activities and Tools for Social Change; Defining Goals for Sustainable Societies. Activities and tools that move the society towards greater sustainability were emphasized at the conference. These included environmental law and ethics, environmental knowledge, technology and information systems, media, environmental awareness, education and lifelong learning, the use of literature for environmental awareness, the green factor in politics, international relations and environmental organizations. The breadth of the issues addressed at the conference made clear the need for greatly increased interdisciplinary [...]

Features
Developments in Services of General Interest

This is the third book in the series Legal Issues of Services of General Interest. The book focuses upon a set of research questions on the recent developments in the emergence of services of general interest (SGIs) as a distinct EU concept. This includes, inter alia, the emergence of universal service obligations and the way they are regulated in the EU in primary and secondary law, the range of soft law communications adopted by the Commission to create a distinctive EU concept of SGIs, the residual role of hard law in the Treaty on the Functioning of the European Union (TFEU), the special problems created by Social Services of General Economic Interest and the interaction of procurement and state aid law with SGIs. A new perspective is offered in this book: some of the issues faced by the EU in accommodating SGIs into a regulatory framework are found also in the policy of the WTO and in least developed countries (LDCs).

Features

No back cover text

Contents


Fields of interest

European Law / Public International Law; Development Economics

Type of publication

Contributed volume

Available

2011. XVIII, 266 p. (Legal Issues of Services of General Interest) Hardcover
79.95 € ISBN 978-90-6704-733-3

Ethik-Kommissionen - Grundlagen, Haftung und Standards


Features

Ist im Einzelfall eine komplexe Bewertung für die Gesetzeskonkretisierung erforderlich, insbesondere von außerrechtlichen Standards, so wird mit jener Bewertung grundsätzlich eine besonders fachqualifizierte Stelle betraut. Im Bereich der medizinisch-chen Forschung sind dies jene Kollegialorgane, die mit dem Begriff „Ethik-Kommissionen“ unscharf in Bezug genommen werden. Ihnen obliegt es, den vom Gesetzgeber nur [...]

Contents


Fields of interest

Medical Law; Administrative Law; Medicine (general); Theory of Medicine / Bioethics

Target groups

Research

Type of publication

Monograph

Available

2011. XXXIX, 600 S. (MedR Schriftenreihe Medizinrecht, 0) Softcover
112,10 € ISBN 978-3-642-17949-5

Fallsammlung zum Sachenrecht


Features

Das vorliegende Buch präsentiert in Neuauflage mit erweitertem Fallkompendium relevante Probleme des Sachenrechts. Es wird die Rechtsmaterie sowohl falldidaktisch als auch mit Einführungen und ergänzenden Erläuterungen dargestellt und vertieft. Literatur und Hinweise wurden aktualisiert. Ziel des Werks ist die Einführung in das Sachenrecht wie auch die Vertiefung und Wiederholung bereits erlernten Wissens in [...]

Contents


Fields of interest

Civil Law

Target groups

Lower undergraduate

Type of publication

German textbook

Available

2011. XIII, 332 S. (Juristische ExamensKlausuren) Softcover
18,64 € ISBN 978-3-642-13138-7

**Features**

Die chinesische Fusionskontrolle ist von hoher praktischer Bedeutung für alle Fusionen, die Auswirkungen auf den chinesischen Markt haben können. Das Handbuch orientiert sich an den für die Praxis maßgeblichen Gesichtspunkten und geht dabei vertieft auf die chinesische Fallpraxis und die Diskussion in der chinesischen Rechtsliteratur ein. Es würdigt auch die politischen und kulturellen Besonderheiten Chinas. [...] 

**Contents**


**Fields of interest**

Commercial Law; International & Foreign Law; Law and Economics; Chinese; Political Science; International Economics

**Target groups**

Professional/practitioner

**Type of publication**

Handbook

**Available**

2011. XXII, 424 S. 7 Abb. Hardcover

102,76 €

ISBN 978-3-642-16424-8

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The aim of the present volume is to explore the consequences of the impact of the EU rules for the internal market (including the proposed Directive on patients’ rights) and competition on national health care systems. It will also address how related areas, such as EU public procurement law and WTO law, influence national healthcare organisation and Member State autonomy.

**Features**

The EU has only limited competence to regulate national health-care systems but recent developments have shown that health care is not immune from the effects of EU law. As Member States have increasingly experimented with new forms of funding and the delivery of health-care and social welfare services, health-care issues have not escaped scrutiny from the EU internal market and from competition and [...] 

**Contents**


**Fields of interest**

European Law / Public International Law; Medicine (general); Economics

**Target groups**

Professional/practitioner

**Type of publication**

Contributed volume

**Available**

2011. XXI, 505 p. (Legal Issues of Services of General Interest) Hardcover

109,95 €


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Following the internationalisation of the indigenous rights movement, a growing number of African hunter-gatherers, pastoralists and other communities have adopted indigenousness in claiming special legal protection. Their legal claims as the indigenous peoples of Africa are backed by many international actors such as indigenous rights activists, donors and scholars. However, indigenous identification is resisted by many African governments, some community members and some anthropologists. F. Mukwiza Ndahinda explores the sources of indigenous identification in Africa and its legal and political implications. Noting the limitations of systematic and discursive, as opposed to activist, studies, it questions the appropriateness of this framework in efforts aimed at empowering claimant communities in inherently multilingual African countries and adopts an interdisciplinary approach in order to capture the indigenous rights phenomenon in Africa.

**Features**

Following the internationalisation of the indigenous rights movement, a growing number of African hunter-gatherers, pastoralists and other communities have adopted indigenousness in claiming special legal protection. Their legal claims as the indigenous peoples of Africa are backed by many international actors such as indigenous rights activists, donors and scholars. However, indigenous identification is [...] 

**Contents**


**Fields of interest**

Public Law

**Target groups**

Research

**Type of publication**

Monograph

**Available**

2011. XXI, 393 p. Hardcover

99,95 €

Innovating Government
Normative, Policy and Technological Dimensions of Modern Government

The aim of this book is to analyze four dimensions of innovating government and the use of new technologies: legal, ethical, policy and technological dimensions. By joining authors from a diversity of backgrounds (law, ethics, public administration, political science, sociology, communications science, information science, and computer science) in one book, readers (academics, policy makers, legislators and others) are confronted with a variety of disciplinary perspectives on persistent themes, like privacy, biometrics, surveillance, e-democracy, electronic government, and identity management, that are central to today’s evolution of new modes of modern government.

Features
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Contents

Fields of interest
Law (general); Computer Science (general)

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2011. XXI, 1512 S. Hardcover
109,95 €
ISBN 978-3-642-22624-9

Kommmentar zum Ehe- und Partnerschaftsrecht

Features

Contents

Fields of interest
Civil Law

Target groups
Research

Type of publication
Reference work

Available
2011. XXI, 1512 S. Hardcover
290,00 €
ISBN 978-3-211-99331-6

H. Grabler, Amt der Salzburger Landesregierung, Salzburg
H. Stolzlechner, Universität Salzburg
H. Wendt, Amt der Salzburger Landesregierung, Salzburg

Kommentar zur GewO

The dial zahlen und inhaltlich gravierenden Veränderungen der GewO seit der 2. Auflage (2003) haben eine Neuauflage dieses als “erfreuliche Bereicherung” (Bernd Wieser, ÖZW) und als “Standardkommentar zur GewO” (Christian Graben warter, Recht der Umwelt) bezeichneten Werks erforderlich gemacht. Umsetzung der Berufsanerkennungs-RL und der Dienstleistungs-RL durch Neufassung der §§ 37a ff über die Durchführung gewerblicher Tätigkeiten durch Gewerbetreibende aus anderen EU-Mitgliedstaaten und EWR-Ver tragsstaaten; Umsetzung der Versicherungsvermitt lungs-RL durch Neugestaltung der Bestimmungen über die Versicherungspflicht (§§ 137 ff); Einführung des neuen Gewerbes der „Hausbetreuung“ (§§ 159, 160); Änderungen der einschlägigen GewO-Bestimmungen über Unternehmensinsolv enzen (§ 13 Abs 3 und 4); neue Gastgartenregelungen in § 76a; Änderungen der Bestimmungen über vereinfachte Genehmigungsverfahren in § 359 b AbsZ 2; Änderungen der Bestimmungen betreffend IPPC-Betriebsanlagen in §§ 77a, 81a, 81b, etc.

Features

Contents

Fields of interest
Administrative Law

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2011. XXXI, 2196 S. Hardcover
426.36 €
Netherlands Yearbook of International Law Volume 41, 2010

Necessity Across International Law

The Netherlands Yearbook of International Law was first published in 1970. It has two main aims. It offers a forum for the publication of scholarly articles of a more general nature in the area of public international law including the law of the European Union. In addition, it aims to respond to the demand for information on state practice in the field of international law. Each Yearbook therefore includes an overview of state practice of the Netherlands.

Features
The Netherlands Yearbook of International (NYIL) Law has two main aims. It offers a forum for the publication of scholarly articles of a more general nature in the area of public international law, including the law of the European Union. In addition, each Yearbook provides an overview of the state practice of the Netherlands, including Dutch judicial decisions involving questions of public international law.

Contents

Fields of interest
Public Law; European Law / Public International Law; International & Foreign Law

Target groups
Research

Type of publication
Contributed volume

Available
2011. XIV, 543 p. (Netherlands Yearbook of International Law, Vol. 41) Hardcover
169,95 €


Occupational pensions have become a focal point of corporate social policy, also in compensating for reform-induced cutbacks to statutory old-age insurance. The task of implementing and administering corporate pension schemes gives rise at all levels to numerous questions of law, some of which also have an ethical component. The financial and economic crisis has moreover demonstrated the importance of control mechanisms for such company plans. A prime objective of this work is to analyse cooperation among the social partners, and to depict the scopes of action as well as the supervisory and decision-making competences conceded to the various actors.

Features
Nahezu alle europäischen Staaten haben für die Konsolidierung ihrer Alterssicherungssysteme Reformen durchgeführt. Die betriebliche Altersversorgung ist ein Schwerpunkt betrieblicher Sozialpolitik geworden und reformbedingte Leistungsminderungen der gesetzlichen Alterssicherung, wie manche Sicherungssysteme erfahren, können durch eine Verbesserung der betrieblichen Altersversorgung abgefangen werden. Die

Contents

Fields of interest
Labour Law / Social Law; Social Sciences (general); Business & Economics (general)

Target groups
Research

Type of publication
Contributed volume

Available
2011. XXIV, 408 S. Hardcover
74,72 €
ISBN 978-3-642-15730-1
ONORM B 2110
Praxiskommentar zum Bauwerkvertragsrecht. Ausgabe 2011

Am 1.3.2011 ist nach nur etwas mehr als zwei Jahren eine Neufassung der ONORM B 2110 erschienen. Die "B 2110" ist seit vielen Jahren Bestandteil nahezu jeden Bauvertrags und ihre Kenntnis gehört zum Kleinen 1 x 1 jedes Baupraktikers. Im Lauf der Zeit hat auch die Judikatur der ONORM B 2110 eine Bedeutung zugeschrieben, die über jene von „AGBs“ weit hinaus geht. Dennoch sind die genauen Wirkungen einzelner [...] Contents
Civil Law
Target groups
Professional/practitioner
Type of publication
Reference work
Available
2011. XII, 733 S. Hardcover
181,77 €
ISBN 978-3-7091-0492-7

Life Sciences
F.H. Schwinning, Institute for Forest, Snow and Landscape Research WSL, Birmensdorf, Switzerland; A. Börner, Max Planck Institute for Biogeochemistry, Jena, Germany; E. D. Schulze, Max Planck Institute for Biogeochemistry, Jena, Germany

Atlas of Stem Anatomy in Herbs, Shrubs and Trees
Volume 1

This work, published in two volumes, contains descriptions of the wood and bark anatomies of 3000 dicotyledonous plants of 120 families, highlighting the anatomical and phylogenetic diversity of dicotyledonous plants of the Northern Hemisphere. The first volume principally treats families of the Early Angiosperms, Eudicots, Core Eudicots and Rosids, while the second concentrates on the Asterids. Presented in Volume 1 are microsections of the xylem and phloem of herbs, shrubs and trees of 1200 species and 85 families of various life forms of the temperate zone along altitudinal gradients from the lowland at the Mediterranean coast to the alpine zone in Western Europe. The global perspective of the findings is underlined by the analysis of 500 species from the Caucasus, the Rocky Mountains and Andes, the subtropical zone on the Canary Islands, the arid zones in the Sahara, in Eurasia, Arabia and Southwest North America, and the boreal and arctic zones in Eurasia and Canada. The presence of annual [...] Features
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Fields of interest
Neurobiology; Neurosciences; Neurology
Target groups
Popular/general
Type of publication
Monograph
Available
2011. XIX, 300 p. 62 illus., 20 in color. Hardcover
149,95 €

Atoms of Mind
The "Ghost in the Machine" Materializes

This book describes the author’s view of how the mind “thinks” at various levels of operation. These levels include nonconscious mind (as in spinal/brainstem reflexes and neuroendocrine controls), subconscious mind, and conscious mind. In the attempt to explain conscious mind, there is considerable critique of arguments over whether or not free will is an illusion. Finally, the author summarizes current leading theories for consciousness (Bayesian probability, chaos, and quantum mechanics) and then presents his own theory based on patterns of nerve impulses in circuits that are interlaced coherently into larger networks.

Features
"There are books on the brain and books on the mind. However, only occasionally one finds a scholarly written thesis that explains how brain circuits give rise to perceptions, thoughts and consciousness. Bill Klemm’s book belongs to this exceptional category. Using lucidly explained examples, he takes the reader on a most enjoyable journey from the computational elements of circuits to large-scale interactions of [...] Contents

Fields of interest
Neurobiology; Neurosciences; Neurology
Target groups
Popular/general
Type of publication
Monograph
Available
2011. XIII, 300 p. 62 illus., 20 in color. Hardcover
149,95 €

W.R. Klemm, Texas A&M University, College Station, USA

Bill Klemm’s book belongs to this exceptional category. Using lucidly explained examples, he takes the reader on a most enjoyable journey from the computational elements of circuits to large-scale interactions of [...] Contents

Fields of interest
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**Bacteria in Agrobiology: Crop Ecosystems**

The future of agriculture strongly depends on our ability to maintain productivity without sacrificing long-term production potential. An ecologically and economically sustainable strategy is the application of microorganisms, such as the diverse bacterial species of plant growth promoting bacteria (PGPB). The use of these bio-resources for the enhancement of crop productivity is gaining worldwide importance. Bacteria in Agrobiology: Crop Ecosystems describes the beneficial role of plant growth promoting bacteria with special emphasis on oil yielding crops, cereals, fruits and vegetables. Chapters present studies on various aspects of bacteria-plant interactions, soil-borne and seed-borne diseases associated with food crops such as rice, sesame, peanuts, and horticultural crops. Further reviews describe technologies to produce inoculants, the biocontrol of post harvest pathogens as a suitable alternative to agrochemicals, and the restoration of degraded soils.

**Features**

The future of agriculture strongly depends on our ability to enhance productivity without sacrificing long-term production potential. An ecologically and economically sustainable strategy is the application of microorganisms, such as the diverse bacterial species of plant growth promoting bacteria (PGPB). The use of these bio-resources for the enhancement of crop productivity is gaining worldwide importance. The future of agriculture strongly depends on our ability to maintain productivity without sacrificing long-term production potential. An ecologically and economically sustainable strategy is the application of microorganisms, such as the diverse bacterial species of plant growth promoting bacteria (PGPB). The use of these bio-resources for the enhancement of crop productivity is gaining worldwide importance.

**Contents**

Maheshwari, DK: Sustainable Approaches for Biocontrol of Charcoal Rot and Fusarial wilt in sesame (Seusamum indicum L.).- Johri, BN: Bacilli as PGPR in Crop Ecosystem.- Sa, T: Endophytic Bacteria: Perspectives and Applications in Agricultural Crop Production.- Berg, G: PGPR interplay with rhizosphere communities and effect on plant health.- Roberts, DP: Impact of the complex nutritional environment in the spermosphere and rhizosphere on performance of Plant Growth-Promoting Rhizobacteria.- Karanaratz, A: Biocontrol mechanisms employed by PGPR and strategies of microbial antagonists in.[…]

**Fields of interest**

Bacteriology; Agriculture; Plant Breeding / Biotechnology; Applied Microbiology

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**

2011. XII, 434 p. Hardcover

149,95 €
ISBN 978-3-642-18356-0

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**Extracellular Matrix Degradation**

Regulated turnover of extracellular matrix (ECM) is an important component of tissue homeostasis. In recent years, the enzymes that participate in, and control ECM turnover have been the focus of research that touches on development, tissue remodeling, inflammation and disease. This volume in the Biology of Extracellular Matrix series provides a review of the known classes of proteases that degrade ECM both outside and inside the cell. The specific EMC proteases that are discussed include cathepsins, bacterial collagenases, matrix metalloproteinases, matrix metalloproteinases, matrix metalloproteinases, and elastases. The volume also discusses the domains responsible for specific biochemical characteristics of the proteases and the physical interactions that occur when the protease interacts with substrate. The topics covered in this volume provide an important context for understanding the role that matrix degrading proteases play in normal tissue remodeling and in diseases such as cancer and lung disease.

**Features**

Regulated turnover of extracellular matrix (ECM) is an important component of tissue homeostasis. In recent years, the enzymes that participate in, and control ECM turnover have been the focus of research that touches on development, tissue remodeling, inflammation and disease. This volume in the Biology of Extracellular Matrix series provides a review of the known classes of proteases that degrade ECM both outside and inside the cell. The specific EMC proteases that are discussed include cathepsins, bacterial collagenases, matrix metalloproteinases, matrix metalloproteinases, and elastases. The volume also discusses the domains responsible for specific biochemical characteristics of the proteases and the physical interactions that occur when the protease interacts with substrate. The topics covered in this volume provide an important context for understanding the role that matrix degrading proteases play in normal tissue remodeling and in diseases such as cancer and lung disease.

**Contents**

Matrix Metalloproteinases and Their Inhibitors in Turnover and Degradation of Extracellular Matrix.- Role of Cysteine Cathepsins in Extracellular Proteolysis.- Cooperation between proteolysis and endocytosis in collagen turnover.- Pericellular Proteolysis.- Triple Helicase Activity and the Structural Basis of Collagenolysis.- Structural Basis of Extracellular Matrix Interactions with Matrix Metalloproteinases.- The Role of Matrix Metalloproteinases in Cellular Invasion and Metastasis.- Degradation of bone and the role of osteoclasts, bone lining cells and osteocytes.- Consequences of[…]

**Fields of interest**

Cell Biology; Biochemistry; Protein Science; Molecular Medicine

**Target groups**

Research

**Type of publication**

Contributed volume

**Available**


139,95 €
ISBN 978-3-642-16860-4
Fish Karyotypes
A Check List

As the largest group of extant vertebrates, fish offer an almost limitless number of striking examples of evolutionary adaptation to environmental and biotic selection pressure. The most diverse of all vertebrate groups, the higher taxa of fish traditionally have been classified by morphology and paleontology, with a much smaller input of cytogenetic information. DNA sequence data are exerting an increasingly strong influence on modern fish systematics, challenging the classification of numerous higher taxa ranging from genera to orders. The most fruitful approach, however, involves synthetic analyses of morphology, molecular phylogenetics, comparative karyology, and genome size. Karyotypes of more than 3400 species/subspecies are arranged here by fish systematics and include a list of genome size, sex chromosomes, B chromosomes, polyploidy, and locality of material fish, among others. This volume enables both beginners and advanced researchers to survey the existing literature and facilitates the[...]

Contents
Preface.- Availability of fish karyotypes.- Fish vouchering and identification.- Classification of the extant fishes.- Historical transition of numbers of karyotyped species/subspecies.- Relationship between karyotype and genome size.- Database of karyotypes: How to use the database.- References.- Journal list.- Index.

Fields of interest
Animal Genetics and Genomics; Animal Systematics / Taxonomy / Biogeography; Evolutionary Biology; Fish & Wildlife Biology & Management; Molecular Ecology; Cell Biology

Type of publication
Monograph

Available
2011. VI, 342 p. Hardcover
149,95 €
ISBN 978-4-431-53876-9

Glycans in Diseases and Therapeutics

Initially believed to be inactive molecules, glycans are now considered essential for life, both under normal and pathological conditions. This volume of the series “Biology of Extracellular Matrix” reviews the most recent findings on the role of glycans in the development of diseases and the possible therapeutic use of this class of molecules. It shows how the interaction of glycans with growth factors, growth factor binding proteins, extracellular proteases, protease inhibitors, chemokines, morphogens, and adhesive proteins regulates inflammation, infection, cancer, atherosclerosis, thrombosis and embryonic stem cell biology. Furthermore, an extensive survey about the structure and pharmacological effects of unique marine glycosaminoglycans is discussed as well as the possibility of using these glycans as therapeutic agents.

Features
Initially believed to be inactive molecules, glycans are now considered essential for life, both under normal and pathological conditions. This volume of the series “Biology of Extracellular Matrix” reviews the most recent findings on the role of glycans in the development of diseases and the possible therapeutic use of this class of molecules. It shows how the interaction of glycans with growth factors, [...]

Contents

Fields of interest
Cell Biology; Animal Biochemistry; Molecular Medicine; Human Physiology

Type of publication
Contributed volume

Available
2011. XI, 188 p. (Biology of Extracellular Matrix) Hardcover
139,95 €
ISBN 978-3-642-16832-1

Late Cainozoic Floras of Iceland

15 Million Years of Vegetation and Climate History in the Northern North Atlantic

Being the only place in the northern North Atlantic yielding late Cainozoic terrestrial sediments rich in plant fossils, Iceland provides a unique archive for vegetation and climate development in this region. This book includes the complete plant fossil record from Iceland spanning the past 15 million years. Eleven sedimentary rock formations containing over 320 plant taxa are described. For each flora, palaeoecology and floristic affinities within the Northern Hemisphere are established. The exceptional fossil record allows a deeper understanding of the role of the “North Atlantic Land Bridge” for intercontinental plant migration and of the Gulf Stream-North Atlantic Current system for regional climatic evolution. Iceland sits as a “fossil trap” on one of the most interesting biogeographic exchange routes on the planet - the North Atlantic. The fossil floras of Iceland document both local vegetational response to global climate change, and more importantly, help to document the nature of biotic[...]

Features
Being the only place in the northern North Atlantic yielding late Cainozoic terrestrial sediments rich in plant fossils, Iceland provides a unique archive for vegetation and climate development in this region. This book includes the complete plant fossil record from Iceland spanning the past 15 million years. Eleven sedimentary rock formations containing over 320 plant taxa are described. For each flora, [...]

Contents

Fields of interest
Evolutionary Biology; Palaeontology; Geology; Climate Change; Geography (general); Arts

Type of publication
Monograph

Available
149,95 €
ISBN 978-94-007-0371-1
Mammalian Cell Viability
Methods and Protocols

Whether the question is one of basic cell survival, or whether it is being used to correlate cell number to some other factor such as matrix synthesis, an estimate of cell viability is universally required. In Mammalian Cell Viability: Methods and Protocols, experts in the field describe methods from the most basic which can be performed in any laboratory, to some which require specific pieces of equipment. Initially focusing on methods for monolayer and suspension cells, later chapters describe methods for determining viability within tissue sections and 3 dimensional culture systems. Finally, methods requiring highly specialized equipment are described in order to explain what is possible. 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 vital tips on troubleshooting and avoiding known [-]

Contents
Cell Viability Assays: Introduction.- Cell Viability Analysis Using Trypan Blue: Manual and Automated Methods.- Estimation of Cell Number Based on Metabolic Activity: The MTT Reduction Assay.- WST8 Analysis of Cell Viability During Osteogenesis of Human Mesenchymal Stem Cells.- Assessment of Cell Proliferation with Resazurin-Based Fluorescent Dye.- The XCELLigence System for Real-Time Monitoring of Cell Viability.- Analyses of Human Mesenchymal Stem Cells, industrial production and Scale-up; Maggy Lengke and Gordon Southam: Biosynthesis of Gold Nanoparticles: A Review; Christopher T. Lefèvre, Lengke and Gordon Southam: Biosynthesis of Gold Nanoparticles, this book presents how they can be biosynthesized using bacteria, fungi and yeast, as well as their potential applications in biomedicine. It is shown that the synthesis of nanoparticles using microbes is eco-friendly and results in reproducible metal nanoparticles of well-defined sizes, shapes and structures. This biotechnological approach based on the process of biominalization exploits the effectiveness and flexibility of biological systems. Chapters include practical protocols for microbial synthesis of nanoparticles and microbial screening methods for isolating a specific nanoparticle producer as well as reviews on process optimization, industrial scale production, biomolecule-nanoparticle interactions, magnetosomes, silver nanoparticles and their numerous applications in medicine, and the application of gold nanoparticles in developing sensitive biosensors.

Features
Following an introduction to biogenic metal nanoparticles, this book presents how they can be biosynthesized using bacteria, fungi and yeast, as well as their potential applications in biomedicine. It is shown that the synthesis of nanoparticles using microbes is eco-friendly and results in reproducible metal nanoparticles of well-defined sizes, shapes and structures. This biotechnological approach based on [-]

Contents
Mahendra Rai, Aniket Gade, Alka Yadav and Gordon Southam: Biogenic Nanoparticles: An introduction to what they are, how they are synthesized and their applications; Venkataraman Deepak, Kalimuthu Kalishwaralal, Sureshbabu Ram Kumar Pandian, Sangiliyandi Gurunathan: An insight into the bacterial biogenesis of silver nanoparticles, industrial production and Scale-up; Maggy Lengke and Gordon Southam: Biosynthesis of Gold Nanoparticles: A Review; Christopher T. Lefèvre, Fernanda Abreu, Ulysses Lins, and Dennis A. Barrylinski: A Bacterial Backbone: Magnetosomes in Magnetotactic Bacteria; Chris[-]

Fields of interest
Microbiology: Biotechnology: Applied Microbiology: Nanochemistry: Biochemistry: Pharmacology / Toxicology

Target groups
Research

Type of publication
Contributed volume

Available
2011. XI. 303 p. Hardcover
149.95 €
ISBN 978-3-642-18311-9

Metal Nanoparticles in Microbiology

STROMATOLITES: Interaction of Microbes with Sediments

STROMATOLITES: Interaction of Microbes with Sediments provides an overview and latest information about the formation of Stromatolites as a result of interaction of microbes with sediments. Eighty-three expert scientists from twenty-seven countries present the chapters in this volume which have been reviewed by thirty four referees. The volume deals with ancient to modern examples of stromatolites and microorganisms which are observed in various diverse environments, such as: marine, nonmarine, lacustrine and extreme geographical areas covering almost the whole earth. The reviews are original articles written by leading experienced experts, some chapters deal with latest instrumental techniques used for the study of microbes and Stromatolites. Other chapters have been contributed by young researchers who revealed updated data on Stromatolites. The astrobiological implications of early micro-biota, sulfur isotopic ratios, microorganisms in extreme conditions on earth has opened up new vistas in the[[-]

Features
This book provides an overview and latest information about the formation of Stromatolites as a result of interaction of microbes with sediments. Eighty-three expert scientists from twenty-seven countries present the chapters in this volume which have been reviewed by thirty four referees. The volume deals with ancient to modern examples of stromatolites and microorganisms which are observed in various [-]

Contents

Fields of interest
Microbiology: Paleontology: Sedimentology: Biogeo-Sciences: Geochemistry

Target groups
Graduate

Type of publication
Contributed volume

Available
149.95 €
Serum/Plasma Proteomics

Methods and Protocols

Blood science has become a cornerstone of multiple disciplines, including clinical chemistry, disease diagnosis, and therapeutic monitoring. Over the past decade, we have witnessed the advent of increasingly powerful proteomics technologies that allow greater fundamental insights into the blood proteome. These technological improvements have, in part, fuelled the quest for the discovery of novel blood-based biomarkers of disease. Serum/Plasma Proteomics: Methods and Protocols is a comprehensive resource of protocols for areas, pre-analytical through to analytical, of plasma and serum proteomics. Divided into five convenient sections, this detailed volume covers fractionation strategies for in-depth blood proteome analysis, defined procedures for blood collection, handling and storage, detailed protocols for performing both antibody-based and non-antibody based quantitative assays, proteome analysis of blood cell compartments, circulating nanomebraneous vesicles and blood-related fluids, and...[

Features

Blood science has become a cornerstone of multiple disciplines, including clinical chemistry, disease diagnosis, and therapeutic monitoring. Over the past decade, we have witnessed the advent of increasingly powerful proteomics technologies that allow greater fundamental insights into the blood proteome. These technological improvements have, in part, fuelled the quest for the discovery of novel...[

Contents

Fractionation Strategies for In-depth Blood Proteome Analysis. Plasma Biomarker Discovery using 3-D Protein Profiling Coupled with Label-free Quantitation. Intact Protein Separation by 1 and 2-dimension Liquid Chromatography for Comparative Proteomic Separation of Partitioned Serum or Plasma. In-depth Analysis of a Plasma or Serum Proteome using a 4-D Protein Profiling Method. Intact-protein Analysis System (IPAS) for Discovery of Serum-based Disease Biomarkers. Model-based Discovery of Circulating Biomarkers. Low-molecular Weight Plasma Proteome Analysis using Centrifugal...[

Fields of interest

Protein Science; Proteomics

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available


109,95 €

ISBN 978-1-61779-091-1

Studies on Experimental Models

There is a widespread consensus that use of antioxidants as a therapeutic approach may counteract free radical mediated pathologies. However, the role of antioxidants in normal physiology and redox signaling is still in its infancy. Since oxidative stress is related to various diseases and pathologies, scientists are eager to study the disease in humans, but it is not always ethical to study all the aspects of the disease in humans. Thus, it becomes mandatory to study the disease process and the mechanisms behind it through experimental models which generally involve animals, in vitro/cell culture studies, pri-mates and even humans to a certain extent. Studies on Experimental Models contains data on the experimental models or review of such models of oxidative stress in various diseases. It is structured into six sections, which are as follows: diabetes, cardiovascular, neurology, ocular diseases, toxicology/environmental and in vitro/tissue culture. Each section presents a sketch of models in...[

Features

There is a widespread consensus that use of antioxidants as a therapeutic approach may counteract free radical mediated pathologies. However, the role of antioxidants in normal physiology and redox signaling is still in its infancy. Since oxidative stress is related to various diseases and pathologies, scientists are eager to study the disease in humans, but it is not always ethical to study all the aspects of...[

Contents


Fields of interest

Oxidative Stress; Cell Biology; Animal Biochemistry; Veterinary Medicine; Zoology

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available

2011. X, 698 p. 111 illus., 52 in color. (Oxidative Stress in Applied Basic Research and Clinical Practice) Hardcover

169,95 €

ISBN 978-1-60761-955-0

Telomeres and Telomerase

Methods and Protocols

New and rapid advances in technology have equipped us with a variety of tools and platforms to ask fundamental questions of telomere regulation and have allowed investigators to carry out experiments using diverse model systems. For example, proteomic, genomic, and molecular approaches have afforded us unprecedented insight into the complex protein interaction networks at work on the telomere chromatin and the detailed information regarding telomere dynamics in response to stress or stimuli. Telomeres and Telomerase: Methods and Protocols, Second Edition builds upon the telomerase assays featured in the popular first edition to encompass many different assays that allow investigators to query the function of telomere proteins and the responses of the telomere DNA, including detailed examinations of biochemical, molecular, and proteomic approaches. Written in the highly successful Methods in Molecular Biology™ series format, chapters include introductions to their respective topics, lists of the...[

Features

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Contents


Fields of interest

Biochemistry

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available


94,95 €

ISBN 978-1-61779-091-1
The Downy Mildews - Biology, Mechanisms of Resistance and Population Ecology

The book is focused on the most recent and significant advances in research on downy mildews and related oomycete pathogens. The emphasis is on the biology of downy mildews, mechanisms of resistance in host- and non-host parasite interactions, population ecology and epidemiology, chemical control and fungicide resistance. The chapters are written by leading international experts on various aspects of downy mildews. All contributions are either comprehensive critical reviews or original research papers, and cover the most relevant and recent topics related to these biotrophic plant pathogens. The recent Special Issue is a continuation of previous one published by Springer in 2008.

Features
Knowledge of downy mildew pathogens and diseases has increased significantly in the areas of taxonomy, biology and molecular biology, mechanisms of resistance, population biology and ecology, epidemiology and chemical control. The opportunity to update comprehensively the major advances in these areas arose from the International Congress of Plant Pathology (ICPP) held in August 2008 at Torino (Italy). [...] 

Contents
Foreword.- Biology and Evolution.- Phylogenetic investigations in the genus Pseudoperonospora reveal overlooked species and cryptic diversity in the P. cubensis species cluster.- Host matrix has major impact on the morphology of Pseudoperonospora cubensis.- Cucurbit downy mildew (Pseudoperonospora cubensis) - biology, ecology, epidemiology, host-pathogen interaction and control.- Spinach: better management of downy mildew and white rust through genomics.- Advances in sunflower downy mildew research.- Resistance mechanisms and host-parasite interactions.- Histological responses of hosts [...] 

Fields of interest
Plant Pathology; Life Sciences (general); Microbial Genetics and Genomics; Community & Population Ecology; Biochemistry; Agriculture

Target groups
Research

Type of publication
Contributed volume

Available
2011. VI, 230 p. 40 illus. in color. Hardcover
139,95 €

Yeast Genetic Networks

Methods and Protocols

Regulation of gene expression, a major determinant of gene activity, occupies a central place in molecular biology. Yeast Genetic Networks: Methods and Protocols covers approaches to the systems biological analysis of small-scale gene networks in yeast. Divided into four convenient sections, this detailed volume discusses the methods used to analyze gene expression quantitatively, presents a collection of mathematical and computational tools to analyze stochasticity, adaptation, sensitivity in signal transmission, and oscillations in gene expression, provides instructional methods on how to utilize the tools of quantitative genetics to identify genes that regulate stochasticity and oscillations in gene expression, and concludes with a section devoted to the analysis of conserved gene expression systems and networks in different fungal species. Written in the highly successful Methods in Molecular Biology series format, chapters contain introductions to their respective topics, lists of the [...] 

Features
Regulation of gene expression, a major determinant of gene activity, occupies a central place in molecular biology. Yeast Genetic Networks: Methods and Protocols covers approaches to the systems biological analysis of small-scale gene networks in yeast. Divided into four convenient sections, this detailed volume discusses the methods used to analyze gene expression quantitatively, presents a [...]

Contents

Fields of interest
Microbiology; Gene Expression

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2011. XXI, 261 p. Softcover
64,95 €
ISBN 978-94-007-0550-0
Materials Science

Y. Weng, The Chinese Society for Metals, Beijing, China; H. Dong, National Engineering Research Center of Advanced Steel Technology, Central Iron & Steel Research Institute, Beijing, China; Y. Gan, Chinese Academy of Engineering, Central Iron & Steel Research Institute, Beijing, China (Eds.)

Advanced Steels

The Recent Scenario in Steel Science and Technology

“Advanced Steels: The Recent Scenario in Steel Science and Technology” contains more than 50 articles selected from the proceedings of the International Conference on Advanced Steels (ICAS) held during 9-11, Nov, 2010 in Guilin, China. This book covers almost all important aspects of steels from physical metallurgy, steel grades, processing and fabrication, simulation, to properties and applications. The book is intended for researchers and postgraduate students in the field of steels, metallurgy and materials science. Prof. Yuqiu Weng is an academician of Chinese Academy of Engineering and the president of The Chinese Society for Metals. Prof. Han Dong is the vice president of Central Iron & Steel Research Institute and the director of National Engineering Research Center of Advanced Steel Technology, China. Prof. Yong Gan is an academician of Chinese Academy of Engineering, the vice president of Chinese Academy of Engineering and the president of Central Iron & Steel Research Institute, China.

Features

“Advanced Steels: The Recent Scenario in Steel Science and Technology” contains more than 50 articles selected from the proceedings of the International Conference on Advanced Steels (ICAS) held during 9-11, Nov, 2010 in Guilin, China. This book covers almost all important aspects of steels from physical metallurgy, steel grades, processing and fabrication, simulation, to properties and applications. The book [...]"
Materials Chemistry

The 2nd edition of Materials Chemistry builds on the strengths that were recognized by a 2008 Textbook Excellence Award from the Text and Academic Authors Association (TAA). Materials Chemistry addresses inorganic-, organic-, and nano-based materials from a structure vs. property treatment, providing a suitable breadth and depth coverage of the rapidly evolving materials field — in a concise format. The 2nd edition continues to offer innovative coverage and practical perspective throughout, e.g., the opening solid-state chemistry chapter uses color illustrations of crystalline unit cells and digital photos of models to clarify their structures. This edition features more archetypical unit cells and includes fundamental principles of X-ray crystallography and band theory. In addition, an ample amorphous-solids section has been expanded to include more details regarding zeolite syntheses, as well as ceramics classifications and their biomaterial applications. The subsequent metals chapter has been [...] Features

The 2nd edition of Materials Chemistry builds on the strengths that were recognized by a 2008 Textbook Excellence Award from the Text and Academic Authors Association (TAA). Materials Chemistry addresses inorganic-, organic-, and nano-based materials from a structure vs. property treatment, providing a suitable breadth and depth coverage of the rapidly evolving materials field. The 2nd edition continues to [...] Contents


Fields of interest

Characterization and Evaluation of Materials; Condensed Matter Physics; Metallic Materials; Nanotechnology

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Available

2011. XI, 736 p. 368 illus., 100 in color. Hardcover
89,95 €
ISBN 978-94-007-0692-7

Mechanics of Generalized Continua

This collection on „Mechanics of Generalized Continua - from Micromechanical Basics to Engineering Applications“ brings together leading scientists in this field from France, Russian Federation, and Germany. The attention in this publication is focussed on the most recent research items, i.e., - new models, - application of well-known models to new problems, - micro-macro aspects, - computational effort, - possibilities to identify the constitutive equations, and - old problems with incorrect or non-satisfying solutions based on the classical continua assumptions.

Features

This collection on „Mechanics of Generalized Continua - from Micromechanical Basics to Engineering Applications“ brings together leading scientists in this field from France, Russian Federation, and Germany. The attention in this publication is focussed on the most recent research items, i.e., - new models, - application of well-known models to new problems, - micro-macro aspects, - computational effort, - [...] Contents

The book contains 15 chapters.

Fields of interest

Characterization and Evaluation of Materials; Continuum Mechanics and Mechanics of Materials; Numerical Analysis; Mechanics

Target groups

Research

Type of publication

Monograph

Available

99,95 €
ISBN 978-3-642-19218-0

Nanocosmetics and Nanomedicines

New Approaches for Skin Care

The book “Nanocosmetics and nanomedicines: new approaches for skin care” contains a summary of the most important nanocarriers for skin delivery. Although “nanocosmetics” is a subject widely commented in the academy and the beauty industry, a book covering the skin care treatments using nanotechnological approaches with cosmetics and nanomedicines is still missing, therefore the need for this publication. This book is divided in three parts: The first one (Part A) is devoted to a brief review on the main topics related to the skin delivery and to the introduction of the subject “nanocosmetics”. The second part (Part B) presents different types of nanocarriers applied as skin delivery systems for cosmetics or drugs. The last part (Part C) shows a wide range of applications of nanotechnology on the skin care area as well as on dermatocosmetic and dermato logical fields.

Features

This book contains a summary of the most important nanocarriers for skin delivery. Although “nanocosmetics” is a subject widely commented in the academy and the beauty industry, a book covering the skin care treatments using nanotechnological approaches with cosmetics and nanomedicines is still missing, therefore the need for this publication. This book is divided in three parts: The first one (Part A) is [...] Contents


Fields of interest

Nanotechnology; Pharmacy; Dermatology; Biomaterials; Nanotechnology and Microengineering; Pharmaceutical Sciences / Technology

Target groups

Research

Type of publication

Monograph

Available

129,95 €
ISBN 978-3-642-19791-8
Novel Colloidal Forming of Ceramics

"Novel Colloidal Forming of Ceramics" discusses several new near-net-shape techniques for fabricating highly reliable, high-performance ceramic parts. These techniques combine injection molding and the colloidal forming process. The book not only introduces the basic theoretical development and applications of the colloidal injection molding of ceramics, but also covers tape casting technology, the reliability of the product, and the colloidal injection molding of Si3N4 and SiC, as well as the low-toxicity system.

Contents

Fields of interest
Ceramics, Glass, Composites, Natural Materials; Physical Chemistry; Manufacturing, Machines, Tools

Target groups
Research

Type of publication
Monograph

Available
2011. 400 p. 315 illus. Hardcover
159,95 € ISBN 978-3-642-12280-4

Optical Measurement of Surface Topography

The measurement and characterisation of surface topography is crucial to modern manufacturing industry. The control of areal surface structure allows a manufacturer to radically alter the functionality of a part. Examples include structuring to effect fluidics, optics, tribology, aerodynamics and biology. To control such manufacturing methods requires measurement strategies. There is now a large range of new optical techniques on the market, or being developed in academia, that can measure areal surface topography. Each method has its strong points and limitations. The book starts with introductory chapters on optical instruments, their common language, generic features and limitations, and their calibration. Each type of modern optical instrument is described (in a common format) by an expert in the field. The book is intended for both industrial and academic scientists and engineers, and will be useful for undergraduate and postgraduate studies.

Features
- Novel Colloidal Forming of Ceramics discusses several new near-net-shape techniques for fabricating highly reliable, high-performance ceramic parts. These techniques combine injection molding and the colloidal forming process. The book not only introduces the basic theoretical development and applications of the colloidal injection molding of ceramics, but also covers tape casting technology, the reliability of the product, and the colloidal injection molding of Si3N4 and SiC, as well as the low-toxicity system.

Contents

Fields of interest
Ceramics, Glass, Composites, Natural Materials; Physical Chemistry; Manufacturing, Machines, Tools

Target groups
Research

Type of publication
Monograph

Available
2011. XIV, 326 p. 231 illus., 42 in color. Hardcover
129,95 € ISBN 978-3-642-12011-4

Wissens- und Technologietransfer als Innovationstreiber

Mit Beispielen aus der Materialforschung

A Primer on Scientific Programming with Python

The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example- and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology, and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background, and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science.

Features
The book serves as a first introduction to computer programming of scientific applications, using the high-level Python language. The exposition is example- and problem-oriented, where the applications are taken from mathematics, numerical calculus, statistics, physics, biology, and finance. The book teaches "Matlab-style" and procedural programming as well as object-oriented programming. High school mathematics is a required background, and it is advantageous to study classical and numerical one-variable calculus in parallel with reading this book. Besides learning how to program computers, the reader will also learn how to solve mathematical problems, arising in various branches of science and engineering, with the aid of numerical methods and programming. By blending programming, mathematics and scientific applications, the book lays a solid foundation for practicing computational science.

Contents

Fields of interest
Computational Science and Engineering; Programming Techniques; Software Engineering / Programming and Operating Systems; Mathematics of Computing; Numerical and Computational Physics

Target groups
Upper undergraduate

Type of publication
Undergraduate textbook

Allgemeine Chemie
Chemie-Basiswissen I


Features

Contents

Fields of interest
Ordinary Differential Equations; Probability Theory and Stochastic Processes; Partial Differential Equations; Functional Analysis; Operator Theory; Integral Equations

Target groups
Research

Type of publication
Monograph

Available
2011. XV, 235 p. Hardcover
79,95 €

Almost Periodic Stochastic Processes

This book lays the foundations for a theory on almost periodic stochastic processes and their applications to various stochastic differential equations, functional differential equations with delay, partial differential equations, and difference equations. It is in part a sequel of authors recent work on almost periodic stochastic differential equations and has the particularity to be the first book that is entirely devoted to almost periodic random processes and their applications. The topics treated in it range from existence, uniqueness, and stability of solutions, to stochastic difference and differential equations.

Features
Almost Periodic Stochastic Processes is among the few published books that is entirely devoted to almost periodic stochastic processes and their applications. The topics treated range from existence, uniqueness, boundedness, and stability of solutions, to stochastic difference and differential equations. Motivated by the studies of the natural fluctuations in nature, this work aims to lay the [...]
D. Hilbert, S. Cohn-Vossen

Anschauliche Geometrie


Features

Contents

Fields of interest
Differential Geometry; Topology

Target groups
Research

Type of publication
Monograph

Available
2011. XX, 364 S. Mit an appendix by P. Alexandrov. Softcover
23,32 €
ISBN 978-3-642-19947-9

H.H. Bauschke, University of British Columbia, Kelowna, B.C., Canada; P.L. Combettes, Université Pierre et Marie Curie, Paris, France

Convex Analysis and Monotone Operator Theory in Hilbert Spaces

This book provides a largely self-contained account of the main results of convex analysis and optimization in Hilbert space. A concise exposition of related constructive fixed point theory is presented, that allows for a wide range of algorithms to construct solutions to problems in optimization, equilibrium theory, monotone inclusions, variational inequalities, best approximation theory, and convex feasibility. The book is accessible to a broad audience, and reaches out in particular to applied scientists and engineers, to whom these tools have become indispensable.

Features
This book presents a largely self-contained account of the main results of convex analysis, monotone operator theory, and the theory of nonexpansive operators in the context of Hilbert spaces. Unlike existing literature, the novelty of this book, and indeed its central theme, is the tight interplay among the key notions of convexity, monotonicity, and nonexpansiveness. The presentation is accessible to a […]

Contents

Fields of interest
Calculus of Variations and Optimization Control; Optimization; Algorithms; Visualization

Target groups
Research

Type of publication
Monograph

Available
2011. XVI, 468 p. 30 illus. (CMS Books in Mathematics) Hardcover
89,95 €
ISBN 978-1-4419-9466-0

F. Padberg, Universität Bielefeld, C. Benz, Pädagogische Hochschule Karlsruhe

Didaktik der Arithmetik

für Lehrerausbildung und Lehrerfortbildung


Features

Contents

Fields of interest
Mathematics (general); Mathematics Education

Target groups
Lower undergraduate

Type of publication
German textbook

Available
2011. X, 374 S. 100 Abb. in Farbe. (Mathematik Primar- und Sekundarstufe) Softcover
23,32 €
Elementare Lineare Algebra

Linearisieren und Koordinatisieren


Mathematics (general); Mathematics Education; Linear and Multilinear Algebras; Matrix Theory

Target groups

Lower undergraduate

Type of publication

German textbook

Available

2011, 114 S., 111 Abb. (Mathematik Primar- und Sekundarstufe) Softcover

20,51 €

ISBN 978-3-8274-2412-9

Elementare Stochastik

Mathematische Grundlagen und didaktische Konzepte


Fields of interest

Probability Theory and Stochastic Processes; Mathematics Education

Target groups

Upper undergraduate

Type of publication

German textbook

Geometry of Algebraic Curves

Volume II with a contribution by Joseph Daniel Harris

The second volume of the Geometry of Algebraic Curves is devoted to the foundations of the theory of moduli of algebraic curves. Its authors are research mathematicians who have actively participated in the development of the Geometry of Algebraic Curves. The subject is an extremely fertile and active one, both within the mathematical community and at the interface with the theoretical physics community. The approach is unique in its blending of algebrao-geometric, complex analytic and topological/combinatorial methods. It treats important topics such as Teichmüller theory, the cellular decomposition of moduli and its consequences and the Witten conjecture. The careful and comprehensive presentation of the material is of value to students who wish to learn the subject and to experts as a reference source. The first volume appeared 1985 as vol. 267 of the same series.

Features

The second volume of the Geometry of Algebraic Curves is devoted to the foundations of the theory of moduli of algebraic curves. Its authors are research mathematicians who have actively participated in the development of the Geometry of Algebraic Curves. The subject is an extremely fertile and active one, both within the mathematical community and at the interface with the theoretical physics community. d.[..] Contents

Preface. - Guide to the Reader. - Chapter IX. The Hilbert Scheme. - Chapter X. Nodal Curves. - Chapter XI. Elementary deformation theory and some applications. - Chapter XII. The moduli space of curves. - Chapter XIII. Line bundles on moduli. - Chapter XIV. The projective variety. - Chapter XV. The Teichmüller point of view. - Chapter XVI. Smooth Godeaux covers of moduli spaces. - Chapter XVII. Cycles on the moduli spaces of curves. - Chapter

Fields of interest

Algebraic Geometry; Several Complex Variables and Analytic Spaces; Functions of a Complex Variable; Manifolds and Cell Complexes (incl. Diff. Topology); Combinatorics; Theoretical, Mathematical and Computational Physics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Available

2011, XXX, 426 S. (Grundlehren der mathematischen Wissenschaften, Vol. 268) Hardcover

89,95 €

ISBN 978-3-540-42688-2
Homogeneous Spaces and Equivariant Embeddings

Homogeneous spaces of linear algebraic groups lie at the crossroads of algebraic geometry, theory of algebraic groups, classical projective and enumerative geometry, harmonic analysis, and representation theory. By standard reasons of algebraic geometry, in order to solve various problems on a homogeneous space, it is natural and helpful to compactify it while keeping track of the group action, i.e., to consider equivariant completions or, more generally, open embeddings of a given homogeneous space. Such equivariant embeddings are the subject of this book. We focus on the classification of equivariant embeddings in terms of certain data of ‘combinatorial’ nature (the Luna-Vust theory) and description of various geometric and representation-theoretic properties of these varieties based on these data. The class of spherical varieties, intensively studied during the last three decades, is of special interest in the scope of this book. Spherical varieties include many classical examples, such as...

Features

Homogeneous spaces of linear algebraic groups lie at the crossroads of algebraic geometry, theory of algebraic groups, classical projective and enumerative geometry, harmonic analysis, and representation theory. By standard reasons of algebraic geometry, in order to solve various problems on a homogeneous space, it is natural and helpful to compactify it while keeping track of the group action, i.e., to...

Contents


Fields of interest

Algebraic Geometry; Topological Groups, Lie Groups

Target groups

Research

Type of publication

Monograph

Mathematik verstehen und anwenden – von den Grundlagen bis zu Fourier-Reihen und Laplace-Transformation

Numerische Mathematik
Eine Einführung anhand von Differentialgleichungsproblemen Band 2: Instationäre Probleme

W. Zulehner, Universität Linz

F. Pham, Université de Nice, France

Singulairties of integrals
Homology, hyperfunctions and microlocal analysis

Bringing together two fundamental texts from Frédéric Pham’s research on singular integrals, the first part of this book focuses on topological and geometrical aspects while the second explains the analytic approach. Using notions developed by J. Leray in the calculus of residues in several variables and R. Thom’s isotopy theorems, Frédéric Pham’s foundational study of the singularities of integrals lies at the interface between analysis and algebraic geometry, culminating in the Picard-Lefschetz formulae. These mathematical structures, enriched by the work of Nilsson, are then approached using methods from the theory of differential equations and generalized from the point of view of hyperfunction theory and microlocal analysis. Providing a ‘must-have’ introduction to the singularities of integrals, a number of supplementary references also offer a convenient guide to the subjects covered. This book will appeal to both mathematicians and physicists with an interest in the area of singularities of [...]"
A. Soifer, University of Colorado, Colorado Springs, CO, USA

The Colorado Mathematical Olympiad and Further Explorations
From the Mountains of Colorado to the Peaks of Mathematics

Over the past two decades, the once small local Colorado Springs Mathematics Olympiad, founded by the author himself, has now become an annual state-wide competition, hosting over one-thousand high school contenders each year. This updated printing of the first edition of Colorado Mathematical Olympiad: the First Twenty Years and Further Explorations offers an interesting history of the competition as well as an outline of all the problems and solutions that have been a part of the contest over the years. Many of the essay problems were inspired by Russian mathematical folklore and written to suit the young audience; for example, the 1989 Sugar problem was written as a pleasant Lewis Carroll-like story. Some other entertaining problems involve old Victorian map colorings, King Arthur and the knights of the round table, rocks in space, Santa Claus and his elves painting planes, football for 23, and even the Colorado Springs subway system. The book is more than just problems, their solutions, and events...

Features
This book presents the 20-year account of the Colorado Mathematical Olympiad — its dreams and rewards, hard work and conflict. It features more than just original wonderful problems and their ingenious solutions; it tells a compelling story involving the lives of those who have been part of the Olympiad. The reader will meet Olympians and follow their paths as professionals. In the vast field of Olympiad. The reader will meet Olympians and follow their paths as professionals. In the vast field of competition...

Contents

Fields of interest
Algebra; Mathematical Logic and Foundations; Geometry; Number Theory

Target groups
Lower undergraduate

Type of publication
Undergraduate textbook

Available
2011. XXXIX, 408 p. 185 illus., 18 in color. Softcover
49,95 €
ISBN 978-0-387-75471-0

W. Arendt, University of Ulm, Germany; C.J.K. Batty, St. Johns College, Oxford, UK; M. Hieber, TU Darmstadt, Germany; F. Neubrander, Louisiana State University, Baton Rouge, USA

Vector-valued Laplace Transforms and Cauchy Problems
Second Edition

This monograph gives a systematic account of the theory of vector-valued Laplace transforms, ranging from representation theory to Tauberian theorems. In parallel, the theory of linear Cauchy problems and semigroups of operators is developed completely in the spirit of Laplace transforms. Existence and uniqueness, regularity, approximation and above all asymptotic behaviour of solutions are studied. Diverse applications to partial differential equations are given. The book contains an introduction to the Bochner integral and several appendices on background material. It is addressed to students and researchers interested in evolution equations, Laplace and Fourier transforms, and functional analysis. The second edition contains detailed notes on the developments in the last decade. They include, for instance, a new characterization of well-posedness of abstract wave equations in Hilbert space due to M. Crouzeix. Moreover, new quantitative results on asymptotic behaviour of Laplace transforms have...

Features
This monograph gives a systematic account of the theory of vector-valued Laplace transforms, ranging from representation theory to Tauberian theorems. In parallel, the theory of linear Cauchy problems and semigroups of operators is developed completely in the spirit of Laplace transforms. Existence and uniqueness, regularity, approximation and above all asymptotic behaviour of solutions are studied. Diverse...

Contents

Fields of interest
Partial Differential Equations

Target groups
Research

Type of publication
Monograph

Available
99,95 €
ISBN 978-3-0348-0086-0

D.V. Cruz-Uribe, Trinity College, Hartford, CT, USA; J.M. Martell, Instituto de Ciencias Matemáticas, Madrid, Spain; C. Pérez, University of Seville, Spain

Weights, Extrapolation and the Theory of Rubio de Francia

This book provides a systematic development of the Rubio de Francia theory of extrapolation, its many generalizations and its applications to one and two-weight norm inequalities. The book is based upon a new and elementary proof of the classical extrapolation theorem that fully develops the power of the Rubio de Francia iteration algorithm. This technique allows us to give a unified presentation of the theory and to give important generalizations to Banach function spaces and to two-weight inequalities. We provide many applications to the classical operators of harmonic analysis to illustrate our approach, giving new and simpler proofs of known results and proving new theorems. The book is intended for advanced graduate students and researchers in the area of weighted norm inequalities, as well as for mathematicians who want to apply extrapolation to other areas such as partial differential equations.

Features
This book provides a systematic development of the Rubio de Francia theory of extrapolation, its many generalizations and its applications to one and two-weight norm inequalities. The book is based upon a new and elementary proof of the classical extrapolation theorem that fully develops the power of the Rubio de Francia iteration algorithm. This technique allows us to give a unified presentation of the theory...

Contents

Fields of interest
Analysis

Target groups
Research

Type of publication
Monograph

Available
79,95 €
ISBN 978-3-0348-0071-6
**1x1 der chirurgischen Instrumente**


**Features**


**Contents**


**Fields of interest**

Nursing; Surgery

**Target groups**

Professional/practitioner

**Type of publication**

Professional book

**Available**

2011. VIII, 154 S. 204 Abb. Softcover

**Price**

23,32 €

ISBN 978-3-642-16923-6

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**Basiswissen Psychiatrie und Psychotherapie**


**Features**

Psychiatrie und Psychotherapie – machen Sie sich nicht verrückt! Die menschliche Psyche ist hochkomplex und ihre Störungsbilder sind spannend. Das erfolgreiche „Basiswissen Psychiatrie und Psychotherapie“ vermittelt dies in komprimierter Form. Wer schon immer wissen wollte, was ein Psychiater bei Schizophrenie tun kann oder wie sich die Psychoanalyse von der Verhaltenstherapie unterscheidet, [...] ...

**Contents**


**Fields of interest**

Psychiatry

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2011. XV, 316 S. 74 illus., 65 in color. Hardcover

99,95 €

ISBN 978-3-642-17176-5

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**Biomechanics for Life**

Introduction to Sanomechanics

The reader will find in this book a new approach to improving health. The author has called this approach “sanomechanics,” combining the Latin sanus (healthy, sound) and mechanicus (science of the motion of bodies subjected to forces). The focus of sanomechanics is on exercising with an understanding of the biomechanical consequences of the actions. This understanding is based on the author’s theory of the floating skeleton, which postulates a hydraulic connection of synovial joints. The theory explains the greater or lesser success of any exercise utilizing the ability of the human skeleton to absorb and transform forces and moments from the body segments and the environment. This ability vanishes with age and illness, and the deeper our understanding of the nature of skeletal functioning is, the better we shall be able to improve, protect, and prolong the skeleton’s health.

**Features**

Floating skeleton concept. - Sanomechanics. - Biomechanics for life. - Sanomechanical exercises. - About forces and moments in locomotion. - Sanomechanics of respiration.

**Fields of interest**

Orthopedics; Rehabilitation; Medicine (general)

**Target groups**

Professional/practitioner

**Type of publication**

Monograph

**Available**

2011. XV, 132 p. 74 illus., 65 in color. Hardcover

21,45 €

ISBN 978-3-642-16578-8
Cancer and Sexual Health

The average physician and even cancer caregivers are not knowledgeable about the effects of cancer treatment on sex and reproductive life. They are even less aware of the options available for treatment of such patients. Cancer and Sexual Health fills a great need for a reference work devoted to the link between cancer and human sexuality. The volume is designed to give a comprehensive and state-of-the-art review of the sexual and reproductive consequences of cancer diagnosis and treatment. It will prove an invaluable resource for those clinicians caring for cancer patients as well as acting as a reference text for the sexual medicine clinician who may not see a large number of cancer patients.

Features

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Diseases of the Heart, Chest & Breast 2011-2014
Diagnostic Imaging and Interventional Techniques

Inhibitory Control and Drug Abuse Prevention
From Research to Translation

The purpose of this book is to review our state of knowledge about the neurobehavioral and psychosocial processes involved in behavioral inhibitory processes and to provide an insight into how these basic research findings may be translated into the practice of drug abuse prevention interventions. Over the last decade, there has been a wealth of information indicating that substance use disorders do not simply reflect an exaggeration of reward seeking behavior, but that they also represent a dysfunction of behavioral inhibitory processes that are critical in exercising self-control. A number of studies have determined that individuals with substance use disorders have poor inhibitory control compared to non-abusing individuals. In addition, the fact that the adolescent period is often characterized by a lack of inhibitory control may be one important reason for the heightened vulnerability for the initiation of drug use during this time. Controlled experiments utilizing neuroscience techniques indicate that substance use disorders have inhibitory control deficiencies compared to non-abusers, and that the impulsivity associated with drug use during this time. Controlled experiments utilizing neuroscience techniques indicate that substance use disorders have inhibitory control deficiencies compared to non-abusers, and that the impulsivity associated with drug use during this time. Controlled experiments utilizing neuroscience techniques indicate that substance use disorders have inhibitory control deficiencies compared to non-abusers, and that the impulsivity associated with drug use during this time. Controlled experiments utilizing neuroscience techniques indicate that substance use disorders have inhibitory control deficiencies compared to non-abusers, and that the impulsivity...
Laryngotomie
Von der Stimmlosigkeit zur Stimme


Contents

Fields of interest
Speech Pathology; Otorhinolaryngology; Behavioral Therapy

Target groups
Professional/practitioner

Type of publication
Professional book

Available


32,66 €
ISBN 978-3-642-14949-8

Malignant Mesothelioma

Malignant mesothelioma is an aggressive and fatal neoplasm of serous membranes that still shows a rising incidence worldwide. This book covers all the important aspects of the disease by bringing together contributions from selected experts in the fields of epidemiology, imaging, pathological diagnosis, ther- apy, genetics, and screening. Special emphasis is placed on the latest diagnostic techniques and current therapy standards. In addition, the mineralogy of asbestos is reviewed and clear advice is included on the analysis of tissue mineral fiber content. By providing a compact, scientifically based, and up-to-date overview of the management of malignant mesothelioma, this volume will be invaluable for all clinicians and pathologists who are engaged in the diagnosis and treatment of the disease or in related research.

Features
Malignant mesothelioma is an aggressive and fatal neoplasm of serous membranes. The pathogenesis of malignant mesothelioma is clearly linked to incorporated asbestos fibers. Owing to the late banning of asbestos use in industrial nations and the continuing mining and consumption of asbestos in many countries, the incidence of malignant mesothelioma is still rising worldwide. This book covers all the important aspects of the disease by bringing together contributions from selected experts in the fields of epidemiology, imaging, pathological diagnosis, therapy, genetics, and screening. Special emphasis is placed on the latest diagnostic techniques and current therapy standards. In addition, the mineralogy of asbestos is reviewed and clear advice is included on the analysis of tissue mineral fiber content. By providing a compact, scientifically based, and up-to-date overview of the management of malignant mesothelioma, this volume will be invaluable for all clinicians and pathologists who are engaged in the diagnosis and treatment of the disease or in related research.

Contents

Fields of interest
Oncology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available

2011. XI, 199 p. 140 illus., 40 in color. (Recent Results in Cancer Research, Vol. 189) Hardcover

139,95 €
ISBN 978-3-642-10861-7

Management of Pediatric Obesity and Diabetes

The twin epidemics of obesity and type 2 diabetes mellitus (T2DM) continue to affect an ever increas- ing number of children, adolescents, and young adults. Management of Pediatric Obesity and Dia- betes provides healthcare trainees and professionals with practical, comprehensive, and contemporary approaches to the pediatric patient at risk for obesity, T2DM, and related conditions. A unique guide on the subject, this volume provides clinical paradigms for diagnosis and management of pediatric T2DM and related conditions, while succinctly describing state-of-the-art basic and clinical sciences underlying these problems. The chapters in this volume are independent and concise. Each chapter focuses on a key clinical issue or mechanism of disease. Providing practical, data-driven resources based upon the totality of the evidence, this important text helps the reader understand the basics of pediatric obesity and T2DM and implement strategies to prevent and treat obesity and diabetes in children and...[...]

Features
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Contents

Fields of interest
Clinical Nutrition; Nutrition; Pediatrics; Diabetes; Endocrinology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available

2011. XXV, 416 p. 35 illus. (Nutrition and Health) Hardcover

159,95 €
Multiple Myeloma

Multiple myeloma is currently still an incurable disease, but during the past decade knowledge of its molecular pathogenesis has increased rapidly. This has led to remarkable progress in both diagnosis and therapy, including in particular the approval of novel and first-in-class drugs such as thalidomide, bortezomib, and lenalidomide. This book, written by internationally acknowledged experts, covers a wide range of topics relating to multiple myeloma, including history, epidemiology, pathophysiology, clinical features, staging, and prognostic systems. The principal focus, however, is on therapy, with detailed information on the various promising treatment options which give hope that this cancer will be transformed into a chronic disease or even become curable. Individualized therapy and the variety of supportive treatment options, as described in this volume, will help in achieving this goal, as well as in reducing adverse events and improving quality of life.

Features

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Contents


Fields of interest

Oncology; Hematology; Cancer Research

Type of publication

Professional/practitioner

Available

2011. XII, 339 p. 34 illus., 23 in color. (Recent Results in Cancer Research, Vol. 181) Hardcover

159,95 €

ISBN 978-3-540-85771-6

K. Lindel, Bad Wildungen

Muskeldehnung

Grundlagen, Differenzialdiagnostik, Therapeutische Dehnungen, Eigendehnungen


Features

Zur „Muskeldehnung“ (einem grundlegenden physiotherapeutischen Behandlungsinstument) alle praktisch relevanten Aspekte schulerverständlich und übersichtlich für Lernende aufbereitet. Im Theorie-Teil: Die zum Verständnis der Verfahren wichtigen Grundlagen (u.a. Umgang mit Schmerz, Wirksamkeit und unterschiedliche Wirkungen verschiedener Dehnmethoden, Definition von Kontraktur). Im [...] 

Contents


Fields of interest

Physiotherapy; Sports Medicine

Target groups

Professional/practitioner

Type of publication

Professional book

Available


34,53 €

ISBN 978-3-642-17258-8

N.S. Bryan, The University of Texas, Houston Health Science Center, Houston, TX, USA; J. Loscalzo, Brigham and Women’s Hospital, Boston, MA, USA (Eds.)

Nitrite and Nitrate in Human Health and Disease

Nitrite and Nitrate in Human Health and Disease delivers a comprehensive review of nitrite and nitrate biology, from basic biochemistry to the complex physiology and metabolism of these two naturally occurring molecules in the human body. Well-organized and well referenced chapters cover the rich history of nitrite and nitrate, sources of exposure, and the physiological effects when consumed through foods containing nitrite and nitrate. The chapters are written by leading experts, all of whom share their research and perspectives in order to help define the context for benefits vs. any potential risks associated with nitrite and nitrate use, either through dietary ingestion or therapeutic dosing. This diverse collection of authors includes vascular biologists, physiologists, physicians, epidemiologists, cancer biologists, registered dieticians, chemists, and public health experts from five countries in both academia and government. Nitrite and Nitrate in Human Health and Disease provides [...]  

Features

Nitrite and Nitrate in Human Health and Disease delivers a comprehensive review of nitrite and nitrate biology, from basic biochemistry to the complex physiology and metabolism of these two naturally occurring molecules in the human body. Well-organized and well referenced chapters cover the rich history of nitrite and nitrate, sources of exposure, and the physiological effects when consumed through [...] 

Contents


Fields of interest

Clinical Nutrition; Nutrition; Public Health; Food Science

Target groups

Professional/practitioner

Type of publication

Contributed volume

Available

2011. X, 296 p. 29 illus. (Nutrition and Health) Hardcover

159,95 €

Numerus clausus
Pourquoi la France va manquer de médecins

Numerus Clausus est le premier ouvrage du Dr Wallach destiné à un public non entièrement professionnel. Il raconte l'histoire de la politique de santé en France depuis 1971 dans trois domaines : la sélection au début des études de médecine, la sélection au début des études de spécialité, et les structures de pouvoir médical dans les hôpitaux. A partir d’une lecture du Quotidien du Médecin, le Dr Wallach analyse les décisions prises, les arguments qui les soutiennent et ceux qui s’y opposent. L’ouvrage se conclut par des propositions de nature à améliorer à la fois les études et la pratique de la médecine en France.

Features
A partir de la lecture du Quotidien du Médecin, le Dr Wallach raconte l’histoire du numero clausus instauré en France en 1971 à l’entrée en deuxième année des études de médecine. Normalement situé autour de 8000 par an, le nombre d’étudiants a été progressivement abaissé par tous les gouvernements, jusqu’à atteindre 3500 dans les années 1990. Ce n’est qu’aux alentours de 2000 qu’on a pris conscience de [...] 

Fields of interest
History of Medicine; Public Health; Medical Education; Statistics for Life Sciences, Medicine, Health Sciences; Literacy

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2011. XII, 290 p. Softcover

14.22 €

Oncologie thoracique
Cette nouvelle édition est le fruit d’un travail collégial multidisciplinaire. Les auteurs y proposent une approche très pratique de l’oncologie thoracique en abordant les aspects épidémiologiques, étiologiques, et biologiques par localisation. Une place importante est dédiée à la prévention et à la stratégie thérapeutique sans oublier les soins de support et la psycho-oncologie.

Features
Cet ouvrage est le fruit d’un travail collégial multidisciplinaire réalisé par des praticiens français, tous référents dans le domaine de l’oncologie thoracique. Les auteurs y proposent une approche très pratique en intégrant les aspects épidémiologiques, étiologiques, et biologiques. Une place importante est dédiée au CRNPC depuis la prévention, le dépistage, en passant par le diagnostic, les différentes [...] 

Fields of interest
Medicine (general); Oncology; Pneumology/Respiratory System; Radiotherapy; Surgical Oncology

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2011. XVI, 390 p. (Oncologie pratique) Softcover

52,13 €

Pediatric Informatics
Computer Applications in Child Health

Now is a critical time in pediatric informatics. As information technologies—electronic health records (EHRs), personal health records (PHRs), computerized physician order entry (CPOE)—and standards (HL7) are developed to improve the quality of health care, it is imperative for policy makers and pediatricians to be aware of their impact on pediatric care and child health. Informed child advocates must be at the planning table as national and regional health information networks are developed to assure the unique health care needs of children are being met. Pediatric Informatics: Computer Applications in Child Health is a current digest of the important trends in pediatric informatics, written by leading experts in the field. This book explores how the management of biomedical data, information, and knowledge can optimize and advance child health. The contributors investigate the specific importance of pediatric informatics is derived from the biological, psychological, social and cultural needs of children.[...]

Features
Now is a critical time in pediatric informatics. As information technologies—electronic health records (EHRs), personal health records (PHRs), computerized physician order entry (CPOE)—and standards (HL7) are developed to improve the quality of health care, it is imperative for policy makers and pediatricians to be aware of their impact on pediatric care and child health. Informed child advocates must be at [...]

Contents

Fields of interest
Health Informatics

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2011. XXIV, 484 p. 44 illus., 40 in color. (Health Informatics) Softcover

49.95 €
Post-U FMC-HGE

L’ouvrage Post-U FMC-HGE est publié chaque année lors des Journées nationales de formation médicale continue en hépato-gastroentérologie, qui ont lieu à Paris du 24 au 27 mars 2011 dans le cadre des Journées francophones d’hépato-gastroentérologie et d’oncologie digestive.

Features
L’ouvrage Post-U FMC-HGE est publié chaque année lors des Journées nationales de formation médicale continue en hépato-gastroentérologie, qui ont lieu à Paris du 24 au 27 mars 2011 dans le cadre des Journées francophones d’hépato-gastroentérologie et d’oncologie digestive.

Fields of interest
Gastroenterology; Abdominal Surgery

Target groups
Professional/practitioner

Type of publication
Contributed volume

Available
2011. VIII, 304 p. Softcover
23,70 €

Praxis LWS-Erkranungen

Diagnose und Therapie


Features

Contents

Fields of interest
Orthopedics; Pain Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2011. Etwa 400 S. 290 Abb. in Farbe Hardcover
112,10 €
ISBN 978-3-540-88505-4

Praxis der Herzschrittmacher-Nachsorge

Grundlagen, Funktionen, Kontrolle, Optimierung, Troubleshooting


Features
In Deutschland werden ca. 100.000 Schrittmacher Aggregate/Jahr implantiert. Herzschrittmacher: einer der erfolgreichsten Therapien in der Kardiologie. Nach wie vor handelt es sich aber um ein Gerät, das entsprechend der Bedürfnisse des Patienten eingestellt, überwacht und gewartet werden muss. Die Schrittmacherkontrolle ist ein komplexes Thema und birgt viele Stolperfälle. Der kompakte [..]

Contents

Fields of interest
Cardiology; Internal Medicine; General Practice / Family Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Available
2011. XV, 198 S. 250 Abb. in Farbe Hardcover
56,03 €
Praxis der Kinder- und Jugendtraumatologie


Features

Contents

Fields of interest
Traumatic Surgery; Orthopedics; Pediatrics; Surgery; Pediatric Surgery

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2011. XV, 552 S. 1200 Abb., 300 in Farbe. Hardcover

140,14 €
ISBN 978-3-642-10538-8

Psychiatrie 2020


Features

Fields of interest
Psychiatry

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2011. 80 S. 20 Abb., 10 in Farbe. Hardcover

18,64 €
ISBN 978-3-642-19330-9
Robotics in Genitourinary Surgery

Robotics in Genito-Urinary Surgery fills the void of information on robotic urological surgery; a topic that is currently highly in demand and continuously increasing. This book provides detailed information on the utility of robotic urological surgery and how to use it most effectively. Robotics in Genito-Urinary Surgery comprehensively covers specialist areas such as female urology, pelvic floor reconstructions and holds a strong focus on pediatric urology. It also presents the main operative techniques through the use of high-quality images and drawings. Compiled by expert authors from the USA, Europe and Asia, this book provides an international perspective on the basic knowledge and clinical management required for the optimal care of patients.

Features
Robotics in Genitourinary Surgery fills the void of information on robotic urological surgery; a topic that is currently highly in demand and continuously increasing. This book provides detailed information on the utility of robotic urological surgery and how to use it most effectively. Robotics in Genitourinary Surgery comprehensively covers specialist areas such as female [...]
Rekombinante Arzneimittel - medizinischer Fortschritt durch Biotechnologie


Features

Contents

Fields of interest
Pharmacy

Target groups
Professional/practitioner

Type of publication
Monograph

Available
2011. XII, 144 S. 17 Abb. Softcover
4,63 €
Destiny, the Inward Quest, Temporality and Life

"There is no greater gift to man than to understand nothing of his fate", declares poet-philosopher Paul Valery. And yet the searching human being seeks ceaselessly to disentangle the networks of experiences, desires, inward promptings, personal ambitions, and elevated strivings which directed his/her life-course within changing circumstances in order to discover his sense of life. Literature seeks in numerous channels of insight the dominant threads of "the sense of life", "the inward quest", "the frames of experience" in reaching the inward sources of what we call 'destiny' inspired by experience and temporality which carry it on. This unusual collection reveals the deeper generative elements which form sense of life stretching between destiny and doom. They escape attention in their metamorphic transformations of the inexorable, irreversibility of time which undergoes different interpretations in the phases examining our life. Our key to life has to be ever discovered anew.

Contents
INAUGURAL ADDRESS: Anna-Teresa Tymieniecka; SECTION 1: THE SENSE OF LIFE: PRESENT ETERNITY; QUESTS OF TEMPORALITY IN THE LITERARY PRODUCTION OF THE <<EXTREME CONTEMPORARY>> IN FRANCE (THE WRITINGS OF DOMINIQUE FOURCADE AND EMMANUEL HOCQUARD);Silvia Riva; A SENSE OF LIFE IN LANGUAGE LOVE AND LITERATURE Lawrence Kimmel; THE GARDEN THEN AND NOW; SENSE OF LIFE - CONTEMPORARY AND IN GENESIS Bernadette Puchaska; THE STREAM OF CONSCIOUSNESS: LITERARY PSYCHOLOGY AS THE FIRST UNIQUELY AMERICAN EXPRESSION OF PHENOMENOLOGY IN WILLIAM JAMES AND HIS SWEDEN-BORGIAN AND TRANSCENDENTALIST [...] 

Fields of interest
Metaphysics; Aesthetics; Philosophy (general); Philosophy of Mind; Humanities

Target groups
Research

Type of publication
Contributed volume

Available

Games, Norms and Reasons

Games, Norms, and Reasons: Logic at the Crossroads provides an overview of modern logic focusing on its relationships with other disciplines, including new interfaces with rational choice theory, epistemology, game theory and informatics. This book continues a series called "Logic at the Crossroads" whose title reflects a view that the deep insights from the classical phase of mathematical logic can form a harmonious mixture with a new, more ambitious research agenda of understanding and enhancing human reasoning and intelligent interaction. The editors have gathered together articles from active authors in this new area that explore dynamic logical aspects of norms, reasons, preferences and beliefs in human agency, human interaction and groups. The book pays a special tribute to Professor Rohit Parikh, a pioneer in this movement.

Contents

Fields of interest
Logic; Mathematical Logic and Foundations; Game Theory / Mathematical Methods; Game Theory, Economics, Social and Behave. Sciences

Target groups
Research

Type of publication
Contributed volume

Available

99.95 €
ISBN 978-94-007-0713-9
The Passivity of Law
Competence and Constitution in the European Court of Justice

By rethinking this relationship, a new conceptual framework to make sense of creeping competences is designed. For this, the work of Maurice Merleau-Ponty is used. Tracing back the philosophical roots of creation, legal constitution is understood as constitution in passivity. This leads to a whole new interpretation of the relationship between law and politics, rule following, authority, competences and European integration. From this perspective specific chapters in the case law of the European Court of Justice are reread and the logic behind the competence creep is unmasked. New back cover [...]"}

Features
Europe's constitutional journey has not been a smooth one, and a better division and definition of competence in the European Union is a key issue that needs to be addressed. How can the division of competence be made more transparent? Should there be a reorganization of competence? How can it be ensured that the redefined division of competence will not lead to a creeping expansion of the competence of [...]"

Contents

Fields of interest
Philosophy of Law; European Law / Public International Law; Political Science; Law Theory / Law Philosophy; Phenomenology

Target groups
Research

Type of publication
Monograph

Available
2011. XV, 171 p. Hardcover
99,95 €
ISBN 978-94-007-1033-7

Transcendentalism Overturned
From Absolute Power of Consciousness Until the Forces of Cosmic Architeconics

This collection offers a critical assessment of transcendentalism, the understanding of consciousness, absolutized as a system of a priori laws of the mind, that was advanced by Kant and Husserl. As these studies show, transcendentalism critically informed 20th Century phenomenological investigation into such issues as temporality, historicity, imagination, objectivity and subjectivity, freedom, ethical judgment, work, praxis. Advances in science have now provoked a questioning of the absolute prerogatives of consciousness. Transcendentalism is challenged by empirical reductionism. And recognition of the role the celestial sphere plays in life on planet earth suggests that a radical shift of philosophy's center of gravity be made away from absolute consciousness and toward the transcendental forces at play in the architectones of the cosmos."

Features
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Contents

Fields of interest
Phenomenology; History of Philosophy; Philosophy of Mind; Metaphysics; Philosophy of Science

Target groups
Research

Type of publication
Monograph

Available
99,95 €
ISBN 978-94-007-0528-9

Virtue Ethics for Women 1250-1500

This book locates Christine de Pizan’s argument that women are virtuous members of the political community within the context of earlier discussions of the relative virtues of men and women. It is the first to explore how women were represented and addressed within medieval discussions of the virtues. It introduces readers to the little studied Speculum Dominarum (Mirror of Ladies), a mirror for a princess, compiled for Jeanne de Navarre, which circulated in the courtly milieu that nurtured Christine. Throwing new light on the way in which Medieval women understood the virtues, and were represented by others as virtuous subjects, it positions the ethical ideas of Anne of France, Laura Cereta, Marguerite of Navarre and the Dames de la Roche within an evolving discourse on the virtues that is marked by the transition from Medieval to Renaissance thought. Virtue Ethics for Women 1250-1500 will be of interest to those studying virtue ethics, the history of women’s ideas and Medieval and Renaissance[...]"

Features
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Contents

Fields of interest
Medieval Philosophy; Political Science; Religious Studies; Ethics; History of Philosophy

Target groups
Research

Type of publication
Contributed volume

Available
99,95 €
ISBN 978-94-007-0528-9
Physics

A.A. Kamal, Murphy/Texas, USA

1000 Solved Problems in Classical Physics

An Exercise Book

This book basically caters to the needs of undergraduates and graduate physics students in the area of classical physics, especially Classical Mechanics and Electricity and Electromagnetism. Lecturers/Tutors may use it as a resource book. The contents of the book are based on the syllabi currently used in the undergraduate courses in USA, U.K., and other countries. The book is divided into 15 chapters, each chapter beginning with a brief but adequate summary and necessary formulas and line diagrams followed by a variety of typical problems useful for assignments and exams. Detailed solutions are provided at the end of each chapter.

Features
This book basically caters to the needs of undergraduate and graduate physics students in classical physics, especially Classical Mechanics and Electricity and Electromagnetism. Lecturers/Tutors may use it as a resource book. The contents of the book are based on the syllabi currently used in the undergraduate courses in the USA, U.K., and other countries. The book consists of 15 chapters, each one beginning [...]
Capire l’Universo
L’appassionante avventura della cosmologia

Si ripercorre la storia della cosmologia moderna, dal XVIII secolo fino alle più recenti scoperte (l’opera è aggiornata fino alla fine 2010). La cosmologia fa uso di concetti complessi, che vengono spesso fraintesi, o che non vengono compresi del tutto, da chi non è specialista del campo. Lo scopo del volume è di trattare esaurientemente tali concetti, entrando nel dettaglio per far cogliere intuitivamente il loro significato autentico anche ai non addetti: a questo scopo, si fa uso di metafore calzanti, di analogie newtoniane, di trattazioni quantitative che richiedono solo le conoscenze di fisica e di matematica di uno studente di scuola media superiore. Vengono discusse le idee più importanti e controversie che sono attualmente al centro del dibattito cosmologico, come la materia oscura e l’energia oscura. Vengono sviluppati i concetti di base della Relatività Generale e del Modello Standard delle particelle elementari.

Features
Per chi non è uno specialista nel campo non è facile capire a fondo i concetti della cosmologia moderna, che si basano sulla Relatività Generale e si intrecciano con le conquiste più recenti della fisica delle particelle. L’intento di questo libro è quello di riuscire ad addomesticare i tecnicismi e le astrazioni dei fisici e raggiungere, con le conquiste più recenti della fisica delle particelle, l’intento di questo libro è quello di riuscire a fondare il dibattito cosmologico, come la materia oscura e l’energia oscura. Vengono sviluppati i concetti di base della Relatività Generale e del Modello Standard delle particelle elementari.

Fields of interest
Astronomy, Astrophysics and Cosmology; Astronomy, Observations and Techniques

Target groups
Popular/general

Type of publication
Monograph

Available
2011. X, 190 pagg. 66 figg., 1 a colori. (Le Stelle) Softcover
23,99 €

Interstellar Molecules
Their Laboratory and Interstellar Habitat

This book deals with the astrophysics and spectroscopy of the interstellar molecules. In the introduction, overview and history of interstellar observations are described in order to help understanding how the modern astrophysics and molecular spectroscopy have been developed interactively. The recent progress in the study of this field is briefly summarized. Furthermore, the basic knowledge of molecular spectroscopy, which is essential to correctly comprehend the astrophysical observations, is presented in a compact form.

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Contents

Fields of interest
Astronomy, Astrophysics and Cosmology

Target groups
Research

Type of publication
Monograph

Available
149,95 €
ISBN 978-3-642-16267-1

Jacobi Dynamics
A Unified Theory with Applications to Geophysics, Celestial Mechanics, Astrophysics and Cosmology

In their approach to Earth dynamics the authors consider the fundamentals of Jacobi Dynamics (1987, Reidel) for two reasons. First, because satellite observations have proved that the Earth does not stay in hydrostatic equilibrium, which is the physical basis of today’s treatment of geodynamics. And secondly, because satellite data have revealed a relationship between gravitational moments and the potential of the Earth’s outer force field (potential energy), which is the basis of Jacobi Dynamics. This has also enabled the authors to come back to the derivation of the classical virial theorem and, after introducing the volumetric forces and moments, to obtain a generalized virial theorem in the form of Jacobi’s equation. Thus a physical explanation and rigorous solution was found for the famous Jacobi’s equation, where the measure of the matter interaction is the energy. The main dynamical effects which become understandable by that solution can be summarized as follows: • the kinetic energy of...

Features
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Contents

Fields of interest
Astronomy, Astrophysics and Cosmology; Geophysics / Geodesy; Remote Sensing / Photogrammetry

Target groups
Research

Type of publication
Monograph

Available
119,95 €
ISBN 978-94-007-0497-8
Mindful Universe
Quantum Mechanics and the Participating Observer

The classical mechanistic idea of nature that prevailed in science during the eighteenth and nineteenth centuries was an essentially mindless conception: the physically described aspects of nature were asserted to be completely determined by prior physically described aspects alone, with our conscious experiences entering only passively. During the twentieth century the classical concepts were found to be inadequate. In the new theory, quantum mechanics, our conscious experiences enter into the dynamics in specified ways not fixed by the physically described aspects alone. Consequences of this radical change in our understanding of the connection between mind and brain are described. This second edition contains two new chapters investigating the role of quantum phenomena in the problem of free will and in the placebo effect.

Features
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Contents

Fields of interest
Quantum Physics; Philosophy (general); Popular Science

Target groups
Popular/general

Type of publication
Popular science

Available
2011. XIII, 213 p. 9 illus. (The Frontiers Collection) Hardcover
29.95 €
ISBN 978-3-642-18075-0

Nanotechnological Basis for Advanced Sensors

Bringing together experts from 15 countries, this book is based on the lectures and contributions of the NATO Advanced Study Institute on “Nanotechnological Basis for Advanced Sensors” held in Sozopol, Bulgaria, 30 May - 11 June, 2010. It gives a broad overview on this topic, and includes articles on: techniques for preparation and characterization of sensor materials, different types of nanoscaled materials for sensor applications, addressing both their structure (nanoparticles, nanocomposites, nanostructured films, etc.) and chemical nature (carbon-based, oxides, glasses, etc.); and on advanced sensors that exploit nanoscience and nanotechnology. In addition, the volume represents an interdisciplinary approach with authors coming from diverse fields such as physics, chemistry, engineering, materials science and biology. A particular strength of the book is its combination of longer papers, introducing the basic knowledge on a certain topic, and brief contributions highlighting special types of […]

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Contents

Fields of interest
Nanoscale Science and Technology; Materials Science (general); Nanotechnology; Surfaces and Interfaces, Thin Films

Target groups
Graduate

Type of publication
Proceedings

Available
2011. XXXII, 582 p. 344 illus. (NATO Science for Peace and Security Series B: Physics and Biophysics, Vol. 0) Hardcover
199.95 €
ISBN 978-94-007-0902-7
Nanotechnological Basis for Advanced Sensors

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X-Ray Lasers 2010
Proceedings of the 12th International Conference on X-Ray Lasers, 30 May - 4 June 2010, Gwangju, Korea

This book provides a thorough account of the current status of developments made in the area of soft X-ray laser source development and of the increasingly diverse applications being demonstrated using such radiation sources. There is significant effort worldwide to develop very bright, short duration radiation sources in the X-Ray spectral region – driven by the multitude of potential applications in all branches of science. This book contains updates on several different approaches for comparative purposes but concentrates on developments in the area of laser-produced plasma, whereby transient population inversion and gain between ion states is pumped by optical lasers interacting with preformed plasmas. Topics covered will include Laser-driven XRLs, Collisional XRLs, Recombination XRLs, Transient Inversion Collisional XRLs, Optical Field Ionization XRLs, Alternative XRL pumping schemes Theory and simulations of XRL gain media and beam properties High order harmonic sources of XUV radiation.[…]

Features
This book provides a comprehensive review of the present status of achievements in the area of soft X-ray laser sources, supplemented by information about sources based on relativistic laser–matter interaction and their future, and incoherent sources within a very broad spectral range. The diversity of demonstrated or planned applications presented in the book supports the thesis that such sources have now […]

Fields of interest
Atoms and Molecules in Strong Fields, Laser Matter Interaction; Plasma Physics; Spectroscopy and Microscopy

Target groups
Research

Type of publication
Proceedings

Available
189,95 €
ISBN 978-94-007-1185-3

X-Ray Lasers 2010
Proceedings of the 12th International Conference on X-Ray Lasers, 30 May - 4 June 2010, Gwangju, Korea

This book provides a thorough account of the current status of developments made in the area of soft X-ray laser source development and of the increasingly diverse applications being demonstrated using such radiation sources. There is significant effort worldwide to develop very bright, short duration radiation sources in the X-Ray spectral region – driven by the multitude of potential applications in all branches of science. This book contains updates on several different approaches for comparative purposes but concentrates on developments in the area of laser-produced plasma, whereby transient population inversion and gain between ion states is pumped by optical lasers interacting with preformed plasmas. Topics covered will include Laser-driven XRLs, Collisional XRLs, Recombination XRLs, Transient Inversion Collisional XRLs, Optical Field Ionization XRLs, Alternative XRL pumping schemes Theory and simulations of XRL gain media and beam properties High order harmonic sources of XUV radiation.[…]

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Fields of interest
Atoms and Molecules in Strong Fields, Laser Matter Interaction; Plasma Physics; Spectroscopy and Microscopy

Target groups
Research

Type of publication
Proceedings

Available
189,95 €
ISBN 978-94-007-1185-3
**Psychology**

B. Hommel, Leiden University; D. Nattkemper, Humboldt-Universität Berlin

**Handlungspsychologie. Planung und Kontrolle intentionalen Handelns**


**Features**

**Fields of interest**
- General Psychology; Neurosciences; Biological Psychology

**Target groups**
- Upper undergraduate

**Type of publication**
- German textbook

**Available**
- 26,12 €
- ISBN 978-3-642-8378-7

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**Parental Involvement in Childhood Education**

G. Hornby, University of Canterbury, Christchurch, New Zealand

**Building Effective School-Family Partnerships**

**Features**
- Parental participation has long been recognized as a positive factor in children’s education. Research consistently shows that parents’ contributions to their children’s education lead to improvements in their academic and behavioral outcomes, from elementary through middle and secondary school. Recognizing the critical role of school psychologists in this equation, Parental Involvement in Childhood [...]**

**Fields of interest**
- Child and School Psychology; Family; Educational Psychology; Social Work

**Target groups**
- Professional/practitioner

**Type of publication**
- Monograph

**Available**
- 2011. XV, 137 p. Softcover
- 39,95 €

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Th. Wanhoff, Königstein im Taunus

**Wa(h)re Freunde**

Wie sich unsere Beziehungen in sozialen Online-Netzwerken verändern

Als Frank Sinatra einst sang „Start spreading the news, I’m leaving today, I want to be a part of it“, ahnte er noch nicht, dass heute mit der gleichen Begeisterung Heerscharen von Usern in virtuelle soziale Online-Netzwerke ziehen. Plötzlich hat man 1000 Freunde, von denen man die meisten noch nie gesehen hat. Man erzählt Fremden, wo man gerade Urlaub macht, oder man gründet eine Fanpage für Bonsaifreunde auf Facebook. Wie verändern die sozialen Netzwerke unsere Freundschaften und Beziehungen? Das Buch „Wa(h)re Freunde“ versucht, einige Antworten auf diese Frage zu geben. Es wird aufgezeigt, wie hinter allen Netzwerken wirtschaftliche Interessen stehen und warum das den einzelnen Nutzer nicht unbedingt zu sorgen braucht. Es werden neue Überlegungen zum Begriff „Freundschaft“ angestellt und dann mit einer sich verändernden Realität verglichen. Warum darf die Bäckersfrau wissen, dass man jeden Morgen Mohnbrötchen kauft, während man Unternehmen im Internet Zugriff auf die eigenen Einkaufsgewohnheiten hat? [...]**

**Features**
- Das Netz vergisst nie, das Netz ist 24 Stunden am Tag geöffnet. Selbst wer meint, diezente Rückhaltung wäre das Optimum, wird möglicherweise schon längst in den Netzwerken gesichteter Deutsches Social Media Forum in der [...]**

**Contents**

**Fields of interest**
- Popular Science; Computer Science (general); Sociology; Psychology (general)

**Target groups**
- Popular/general

**Type of publication**
- Popular science

**Available**
- 2011. XX, 259 S. 26 Abb. Softcover
- 12,10 €
- ISBN 978-3-8274-2783-0
Social Sciences

L. R. Loay, Department of Anthropology, Hunter College, New York, NY, USA (Ed.)

Comparative Archaeologies

A Sociological View of the Science of the Past

Archaeology, as with all of the social sciences, has always been characterized by competing theoretically-based propositions based on diverse bodies of locally acquired data. In order to fulfill local, regional expectations, different goals have been assigned to the practitioners of Archaeology in different regions. These goals might be entrenched in local politics, or social expectations behind cultural heritage research. This comprehensive book explores regional archaeologies from a sociological perspective—recognizing and explaining regional differences in archaeological practice, as well as their existing similarities. This work covers not only the currently-dominant Anglo-American archaeological paradigm, but also Latin America, Western and Eastern Europe, Asia, and Africa, all of which have developed their own unique archaeological traditions. The contributions in this work cover these "alternative archaeologies," in the context of their own geographical, political, and socio-economic settings, as well as of their uniqueness.

Features

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Contents


Fields of interest

Archaeology; Anthropology; Sociology

Target groups

Research

Type of publication

Contributed volume

Available

2011. XV, 852 p. Hardcover

129,95 €
Countries undergoing major social and legal transitions typically experience a light, but relatively insignificant, increase in crime. However, in the past decade, many transitional countries in Eastern Europe, and Russia in particular, have experienced a surge in criminal activities that came about through the collaboration of diverse players—such as criminals, state officials, businesspersons, and law enforcement—into organized networks aimed to obtain financial and economic gains.

Features
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Fields of interest
Criminology & Criminal Justice; Political Science

Target groups
Research

Type of publication
Monograph

Available
2011. XVII, 181 p. 10 illus. Hardcover
89,95 €

The area claimed by the British Empire as Western Australia was primarily colonized through two major thrusts: the development of the Swan River Colony to the southwest in 1829, and the 1863 movement of Australian born settlers to colonize the northwest region. The Western Australian story is overwhelmingly the story of the spread of market capitalism, a narrative which is at the foundation of modern western world economy and culture. Due to the timing of settlement in Western Australia there was a lack of older infrastructure patterns based on industrial capitalism to evoke geographical inertia to modify and deform the newer system in many ways making the systemic patterns which grew out of market capitalistic forces clearer and easier to delineate than in older settlement areas. However, the struggle between the forces of market capitalism, settlers and indigenous Australians over space, labor, physical and economic resources and power relationships are both unique to place and time and universal in[...]

Features
The area claimed by the British Empire as Western Australia was primarily colonized through two major thrusts: the development of the Swan River Colony to the southwest in 1829, and the 1863 movement of Australian born settlers to colonize the northwest region. The Western Australian story is overwhelmingly the story of the spread of market capitalism, a narrative which is at the foundation of modern[...]

Contents
CHAPTER 1 Introduction.- CHAPTER 2 The Swan River Colony: Settlement of the Southwest.- CHAPTER 3.- CHAPTER 4 The North District: Settlement of the Northwest.- CHAPTER 5.- CHAPTER 6.- CHAPTER 7 The Excavation of the Knight & Shenton Store Site.- CHAPTER 8 Household Analysis: Site Layout and Building Design.- CHAPTER 9 Household Analysis: Assemblage Analysis.-

Fields of interest
Archaeology; History; Anthropology

Target groups
Research

Type of publication
Monograph

Available
2011. XII, 280 p. 70 illus. Hardcover
89,95 €
ISBN 978-1-4419-8317-6
Projection Matrices, Generalized Inverse Matrices, and Singular Value Decomposition

Aside from distribution theory, projections and the singular value decomposition (SVD) are the two most important concepts for understanding the basic mechanism of multivariate analysis. The former underlies the least squares estimation in regression analysis, which is essentially a projection of one subspace onto another, and the latter underlies principal component analysis, which seeks to find a subspace that captures the largest variability in the original space. This book is about projections and SVD. A thorough discussion of generalized inverse (g-inverse) matrices is also given because it is closely related to the former. The book provides systematic and in-depth accounts of these concepts from a unified viewpoint of linear transformations finite dimensional vector spaces. More specially, it shows that projection matrices (projectors) and g-inverse matrices can be defined in various ways so that a vector subspace can be decomposed into a direct-sum of (disjoint) subspaces. Projection Matrices, [...]

Features
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Contents

Fields of interest
Statistics (general); Statistics for Life Sciences, Medicine, Health Sciences

Target groups
Research

Type of publication
Monograph

Available

49,95 €
ISBN 978-1-4419-9886-6
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