Just Released New Books October 2011

English Titles

“Sorted by author and title within the main subject”
**Arts**

S. Ducheyne, Centre for Logic and Philosophy of Science, Ghent University, Belgium

“The main Business of natural Philosophy”

Isaac Newton’s Natural-Philosophical Methodology

In this monograph, Steffen Ducheyne provides a historically detailed and systematically rich explication of Newton’s methodology. Throughout the pages of this book, it will be shown that Newton developed a complex natural-philosophical methodology which encompasses procedures to minimize inductive risk during the process of theory formation and which, thereby, surpasses a standard hypothetico-deductive methodological setting. Accordingly, it will be highlighted that the so-called ‘Newtonian Revolution’ was not restricted to the empirical and theoretical dimensions of science, but applied equally to the methodological dimension of science. Furthermore, it will be documented that Newton’s methodology was far from static and that it developed alongside with his scientific work. Attention will be paid not only to the successes of Newton’s innovative methodology, but equally to its tensions and limitations. Based on a thorough study of Newton’s extant manuscripts, this monograph will address and...

**Features**

In this monograph, a historically detailed and philosophical-systematic study will be undertaken of Newton’s scientific methodology. It will be shown that the hypothesis that Newton was a bad or confused methodologist is beset with many difficulties and that Newton was not a simplistic inductivist nor did he believe that causes can be derived unconditionally from phenomena. Special attention will be given [...]

**Contents**

List of Figures.- Introduction.- Part I: Newton’s Causal Methodology.- 1 Newton and the Causes: Something Borrowed and Something New.- Part II: Newton’s Methodology, or: How to Deduce Causes by Their Effects.- 2 Uncovering the Methodology of the Principia (I): The Phase of Model Construction.- 3 Uncovering the Methodology of the Principia (II): The Phase of Model Application and Theory Formation.- 4 Facing the Limits of Deductions from Phenomena: Newton’s Quest for a Mathematical-Demonstrative Optics.- 5 Uncovering the Methodology of the Principia (III): A Brief Chronology of Newton’s[...]

**Fields of interest**

History; Philosophy of Science; History and Philosophical Foundations of Physics

**Target groups**

Research

**Type of publication**

Monograph

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

2012. XXV, 352 p. 20 illus. (Archimedes, Vol. 29)

**Biomedicine**

R. Scatena, Catholic University, Rome, Italy; A. Mordente, Catholic University, Rome, Italy; B. Giardina, Catholic University, Rome, Italy (Eds.)

**Advances in Cancer Stem Cell Biology**

In recent years, cancer stem cells have been recognized as important component in carcinogenesis and they seem to form the basis of many (if not all) tumor types. Cancer stem cells or ‘cancer cell like stem cells’ have been isolated from various cancers of different origin (blood, breast, brain, skin, head and neck, thyroid, cervix, lung, retina, colon, pancreas and so on). Cancer stem cells - rare cells with indefinite proliferative potential that drive the formation and growth of tumours- seem to show intriguing relationships with physiological stem cells. Specifically, these cancer cells show significant similarities in the mechanisms that regulate self-renewal of normal stem cells. Moreover, tumour cells might directly arise from normal stem cells. Further, the cellular biology of cancer stem cells show a lot of similarities with normal stem cells.

**Features**

Advances in Cancer Stem Cell Biology informs the reader about both basic and potential clinical applications of an intriguing subpopulation of cancer cells -defined in different way as cancer stem cells, cancer stem like cells, tumor maintaining cells and so on- which are deeply changing some fundamental aspects of molecular and clinical oncology. This text compiled by leading expert in the field, offers [...]

**Contents**


**Fields of interest**

Cancer Research; Pharmacology / Toxicology

**Target groups**

Research

**Type of publication**

Contributed volume

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

2012. XII, 343 p. 27 illus., 13 in color. Hardcover

**$189.00**

ISBN 978-1-4614-0808-6
Computational Neuroscience of Drug Addiction

Drug addiction remains one of the most important public health problems in Western societies and is a rising concern for developing nations. Over the past 3 decades, experimental research on the neurobiology and psychology of drug addiction has generated a torrent of exciting data, from the molecular up to the behavioral levels. As a result, a new and pressing challenge for addiction research is to formulate a synthetic theoretical framework that goes well beyond mere scientific eclecticism to deepen our understanding of drug addiction and to foster our capacity to prevent and to cure drug addiction. Intrigued by the apparent irrational behavior of drug addicts, researchers from a wide range of scientific disciplines have formulated a plethora of theoretical schemes over the years to understand addiction. However, most of these theories and models are qualitative in nature and are formulated using terms that are often ill-defined. As a result, the empirical validity of these models has been difficult.[…]

Features
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Contents

Fields of interest
Neurosciences; Computer Applications in Life Sciences

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, XIV, 204 p. 28 illus., 6 in color. (Applied Bioinformatics and Biostatistics in Cancer Research) Hardcover

$189.00
ISBN 978-1-4614-0139-1

Designs for Clinical Trials

Perspectives on Current Issues
This book will examine current issues and controversies in the design of clinical trials, including topics in adaptive and sequential designs, the design of correlative genomic studies, the design of studies in which missing data is anticipated. Each chapter will be written by an expert conducting research in the topic of that chapter. As a collection, the chapters would be intended to serve as a guidance for statisticians designing trials.

Features
Statistical methods for clinical trials have been an area of active research in Biostatistics since the first modern clinical trials were mounted in 1946 by the British Medical Research Council in whooping cough and tuberculosis. Often, the participants in clinical trials suffer from potentially fatal chronic diseases, and it is especially important that these experiments in medical research use designs […]

Contents
New designs for phase I dose finding studies. - Phase II/III designs for trials. - Design issues for clinical studies with genomic measurements. - Designing studies with longitudinal measurements subject to dropout. - Issues in sample size re-estimation. - Adaptive designs. - The design of non-inferiority trials. - Issues in the design of HIV prevention trials. - Randomization algorithms. - Sequential designs for phase III studies. - Case studies of difficult designs. - Ethical issues in the design of trials.

Fields of interest
Cancer Research; Pharmacology / Toxicology

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, XIV, 204 p. 28 illus., 6 in color. (Applied Bioinformatics and Biostatistics in Cancer Research) Hardcover

$189.00
ISBN 978-1-4614-0139-1

Encyclopedia of Cancer

The merging of different basic and clinical science disciplines towards the common goal of fighting against cancer has long ago called for the establishment of a comprehensive reference source both as a tool to close the language gap between clinical and basic science investigators and as a platform of information for students and informed laymen alike. The Encyclopedia of Cancer provides rapid access to focused information on all topics of cancer research for clinicians, research scientists and advanced students. Given the overwhelming success of the Second Edition, which appeared in 2007, and fast recent development in the different fields of cancer research, it has been decided to publish a third fully revised and expanded edition, following the principal concept of the first edition that has proven so successful. Recent developments are seeing a dynamic progress in basic and clinical cancer science, with translational research increasingly becoming a new paradigm in cancer research. In[…]

Features
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Fields of interest
Cancer Research; Molecular Medicine; Oncology

Type of publication
Encyclopedia

Usually dispatched within 3 to 5 business days

2012, LXXVI, 3984 p. In 7 volumes, not available separately. Hardcover

$2,700.00
ISBN 978-3-642-16482-8
The present volume is intended to be a synopsis of seizure disorders with a goal of describing key studies in animals and humans. The translation of pertinent findings from animal studies to human studies, and to potential human studies will be emphasized. Specific cogent animal studies/results which deserve exploration in human seizure disorders will be detailed. The current rate of translation is estimated to be from 7-9 years, and the “success” rate of translation was very recently listed as less than one half. The success rate is defined as results in human studies which were predicted in advance by animal studies. Both the time between animal and human attempts plus the success rate need improvement.

Features
Correlation is a vital element in epilepsy research, especially given the condition’s notorious resistance to treatment. With a current ‘rate of translation’ estimated at between seven and nine years, and a translation ‘success rate’ of below 50 per cent, there is room for improvement in the correlative research exploring this intractable condition. Epilepsy: Animal and Human Correlations

Contents

Fields of interest
Neurosciences; Neurology; Neurochemistry

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XV, 532 p. 60 illus., 2 in color. Hardcover

$239.00

From Neurology to Methodology and Back
An Introduction to Clinical Neuroengineering

In today’s hospitals, the gap between technology and medicine constantly needs to be bridged, both by physicians and engineers. By taking a unique clinical neuroengineering approach, From Neurology to Methodology and Back offers a translational study of neurology and technology from both sides. The fundamental topics covered range from basic concepts such as sampling and simple statistical measures via Fourier analysis to source localization. Providing clinically relevant context and introduce technical concepts, the neurological diseases presented range from epilepsy, brain tumors and cerebrovascular diseases to tremor, MS and neuromuscular diseases. All topics are presented in a true clinical neuroengineering approach. Each chapter begins with one or more patient cases for inspiration. Each case is then presented to illustrate a working example of a distinct neurodiagnostic technique, and the mathematical and physical principles underlying these techniques are explained. Finally, the author returns...

Features
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Contents

Fields of interest
Biomedicine (general); Neurology; Neurosciences

Target groups
Upper undergraduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XV, 285 p. 131 illus., 86 in color. Hardcover

$79.95
ISBN 978-1-4614-1131-4
JIMD Reports - Case and Research Reports, 2011/2

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

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

Fields of interest
Human Genetics; Metabolic Diseases; Pediatrics; Human Physiology

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, VII, 123 p. 31 illus., 11 in color. (JIMD Reports, Vol. 2) Softcover

$139.00
ISBN 978-3-642-24757-6

Key Statistical Concepts in Clinical Trials for Pharma

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

Features
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Fields of interest
Biomedicine (general); Pharmaceutical Sciences / Technology

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days


$69.95
ISBN 978-1-4614-1661-6

Kinase Inhibitors

Methods and Protocols

Protein and lipid kinases are often the master regulators of cell signaling in eukaryotic systems. The human genome codes for more than 500 of these enzymes and their misregulation has been shown to be involved in the onset and progression of many diseases including cancer and inflammation. Therefore, small molecule kinase inhibitors have become important research tools for the elucidation of the many biological roles of kinases and their mechanisms of action. Kinase inhibitors thus also contribute significantly to the drug pipelines of the pharmaceutical and biotechnology industries and to the growing need to treat cancer and inflammation.

In Kinase Inhibitors: Methods and Protocols, experts in kinase biology, drug discovery, and clinical research present a series of exemplary methods that can be used to address the many challenges facing scientists in the discovery and development of kinase inhibitors both for research and clinical use. Written in the highly successful Methods in Molecular[...]

Features
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Contents
Targeting Cancer with Small Molecular Weight Kinase Inhibitors - Small Molecule Protein and Lipid Kinase Inhibitors in Inflammation and Specific Models for their Evaluation - Measuring the Activity of Lescine Rich Repeat Kinase 2 (LRRK2) - A Kinase Involved in Parkinson’s Disease - Measuring P13K Lipid Kinase Activity - A Fluorescence Polarization Assay for the Discovery of Inhibitors of the Polo-box Domain of Polo-like Kinase 1 - Assessment of Hepatotoxicity Potential of Drug Candidate Molecules Including Kinase Inhibitors by Hepatocyte Imaging Assay Technology and Bile Flux Imaging[...]

Fields of interest
Pharmacology / Toxicology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$119.00
Lactoferrin and its Role in Wound Healing

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

Features
“Lactoferrin and its Role in Wound Healing” summarizes the recent advances of molecular mechanisms of wound healing. It is a complex physiological process that requires the regulation of different types of cells such as immune cells, keratinocytes, fibroblasts, and endothelial cells. Lactoferrin was first identified as an iron-binding glycoprotein abundantly found in milk. It has been considered to [...] contents

Fields of interest
Biomedicine (general); Human Physiology; Cell Biology; Protein Science; Receptors; Membrane Biology

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

Materia Medica for Various Cancers

Cancer is one of the leading killers in the world and the incidence is increasing, but most cancer patients and cancer survivors suffer much from the disease and its conventional treatments’ side effects. In the past, clinical data showed that some complementary and alternative medicine (CAM) possessed anticancer abilities, but some clinicians and scientists have queried about the scientific validity of CAM due to the lack of scientific evidence. There is great demand in the knowledge gap to explore the scientific and evidence-based knowledge of CAM in the anticancer field. With this aim, a book series is needed to structurally deliver the knowledge to readers. There have been a number of publications on materia medica for various cancers in recent years, the scientific and medical community are thrust for up-to-date information that are supported by concrete laboratory evidences or clinical trials. This volume is a specialised book presenting the experimental and clinical evidences of anticancer[...]

Features
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Fields of interest
Biomedicine (general); Complementary & Alternative Medicine; Acupuncture

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

Nanotechnology for Biology and Medicine

At the Building Block Level

This text book will bring together a mix of both internationally known and established senior scientists along side up and coming (but already accomplished) junior scientists that have varying expertise in fundamental and applied nanotechnology to biology and medicine.

Features
Nanotechnology for Biology and Medicine: At the Building Block Level introduces the reader to current cutting-edge approaches being pursued for the design and development of nanotechnology applications to different areas of biology and medicine. It discusses the key biological challenges at the molecular and cellular levels being faced by this new field, and some of the strategies being [...] contents

Fields of interest
Biomedicine (general); Nanotechnology; Biotechnology; Biophysics and Biological Physics

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XVI, 234 p. 88 illus., 45 in color. (Fundamental Biomedical Technologies, Vol.) Hardcover

$189.00
Novel Insights in the Neurochemistry and Function of Pulmonary Sensory Receptors

With the advances of immunohistochemistry in combination with confocal microscopy, airway sensory receptor end-organs can now be examined and evaluated objectively. Based on their ‘neurochemical coding’, morphology, location and origin, three sensory receptor end organs are currently morphologically well-characterised: smooth muscle-associated airway receptors (SMARs), neuroepithelial bodies (NEBs) and visceral pleura receptors (VPRs). The present information on the functional morphological and neurochemical characteristics of these sensory receptors, leads to important conclusions about their (possible) function.

Features
Airway sensory nerve terminals are tailored to detect changes in the physical and chemical environment, thereby supplying local pulmonary information to the central nervous system. Since most intrapulmonary nerve terminals arise from fibres travelling in the vagal nerve, the classification of ‘sensory airway receptors’ is largely based on their action potential characteristics, electrophysiologically […]

Fields of interest
Human Physiology; Neurochemistry

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 118 p. 23 illus., 21 in color. (Advances in Anatomy, Embryology and Cell Biology, Vol. 211) Softcover

$139.00
ISBN 978-3-642-22771-4

Nutritional Epidemiology of Breast Cancer

The book is the first one published exclusively on the field of nutritional epidemiology of breast cancer. It summarizes the currently existing knowledge, with an updated and comprehensive international bibliography (~1,000 references). The authors also performed a review on the epidemiological studies on nutrition and breast cancer carried out in Uruguay between 1994 and 2011, which allowed exploring and identifying the main risk and protective factors for the disease in this high-risk country. Epidemiologists, Nutritionists, Public Health managers and breast specialists – from the prevention to the treatment fields – will find in this book a unique source of technical information, which will contribute in expanding their knowledge and view of the disease.

Features
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Contents
Stem Cells and Cancer Stem Cells, Volume 1

Stem Cells and Cancer Stem Cells, Therapeutic Applications in Disease and Injury: Volume 1

Difference between tissue specific stem cells and embryonic stem cells is explained. The advantages of the latter are included. The application of human pluripotent stem cells, mesenchymal stem cells, and hematopoietic stem cells in cancer therapy and tissue/organ regeneration is detailed. Role of neural stem cells specifically in glioblastoma is included. It is also emphasized that CD133 is an appropriate stem cell marker for gliomas. Targeting of cancer cells is also explained.

Features
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Contents

Fields of interest
Cancer Research; Neuroradiology; Neurosurgery; Oncology; Pathology; Transplant Surgery

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

October 28, 2011

Stem Cells and Cancer Stem Cells, Volume 2

Stem Cells and Cancer Stem Cells, Therapeutic Applications in Disease and Injury: Volume 2

As in volume 1 of this series, this volume presents information on stem cells and cancer stem cells; Therapeutic Applications in disease and tissue/organ injury. Methodologies of regenerative medicine and tissue engineering are major components of this volume. Specific stem cells discussed are: human embryonic stem cells, hematopoietic stem cells, cord blood stem cells, human pluripotent stem cells, gliosarcoma stem cells, induced pluripotent stem cells, intestinal stem cells, human thyroid cancer stem cells, tumor stem cells, menstrual stem-like cells, neural stem cells, breast cancer stem cells, allogeneic mesenchymal stem cells, fetal membrane-derived mesenchymal stem cells, and omental stem cells. The method for isolating bone marrow stromal cells is explained. Method for generating marmoset-induced pluripotent stem cells, using transcription factors, is also explained. Use of stem cell lines in therapeutic applications is discussed. Programming of stem cells is described. Methods for[...]

Features
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Contents

Fields of interest
Biomedicine (general); Occupational Medicine / Industrial Medicine; Oncology; Pathology; Thoracic Surgery; Neurology

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XV, 198 p. 26 illus., 18 in color. (Stem Cells and Cancer Stem Cells, Vol. 1) Hardcover

$189.00
ISBN 978-94-007-1708-4

K. S. Soh, Nano Primo Research Center, Seoul National University, Seoul, Korea; K.A. Kang, University of Louisville, Louisville, KY, USA; D.K. Harrison, Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, UK (Eds.)

The Primo Vascular System

Its Role in Cancer and Regeneration

Proceedings from the first International Symposium on Primo Vascular System 2010 (ISPS 2010) with special topics on cancer and regeneration was held in Jecheon, Korea during September 17-18, 2010. Includes coverage of new study results that have better revealed the functional aspects of PVS, including its roles in the areas of regenerative medicine and cancer.

Features
The first International Symposium on Primo Vascular System 2010 (ISPS 2010) with special topics on cancer and regeneration was held in Jecheon, Korea during September 17-18, 2010. The symposium dealt with the past findings, current status, and future prospect of the PVS research in the context of cutting-edge investigation in oriental and occidental medicine, molecular biology, and biophysics. This [...]

Contents

Fields of interest
Cancer Research; Acupuncture; Biochemistry; Complementary & Alternative Medicine; Human Physiology; Cell Physiology

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XIX, 338 p. 74 illus., 62 in color. Hardcover

$239.00

Disease and Injury: Volume 2

Stem Cells and Cancer Stem Cells, Therapeutic Applications in Disease and Injury: Volume 2

Perspectives. - Primo Vascular System in Various[...]

The Primo Vascular System

The Primo Vascular System

Its Role in Cancer and Regeneration

Proceedings from the first International Symposium on Primo Vascular System 2010 (ISPS 2010) with special topics on cancer and regeneration was held in Jecheon, Korea during September 17-18, 2010. Includes coverage of new study results that have better revealed the functional aspects of PVS, including its roles in the areas of regenerative medicine and cancer.

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Fields of interest
Cancer Research; Acupuncture; Biochemistry; Complementary & Alternative Medicine; Human Physiology; Cell Physiology

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XIX, 338 p. 74 illus., 62 in color. Hardcover

$239.00
The Springer Index of Viruses

The continuous growth of knowledge makes it very difficult for scientists to retrieve comprehensive and accurate data on viruses. The desired information is often dispersed in a variety of books, journals and online resources. This encyclopedia presents the latest facts about all known virus in a standardized form created by hundreds of the world’s leading virologists. Virus taxonomy represents the basic framework that allows an understanding of the complex evolutionary process that continuously takes place among viruses and their hosts. Each of the 300 taxonomically ordered chapters includes detailed information on individual genus members, historical events, the hosts they can affect (animal, man or plant), virion morphology, genome properties, replication strategy, properties of individual transcripts and proteins, sequence accession numbers, biological properties, diseases, recombinant vector constructs, vaccine strains, key references, as well as a high-resolution particle image and a drawing.[...]

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Fields of interest
Virology; Medical Microbiology; Microbiology

Target groups
Research

Type of publication
Encyclopaedia

Online orders shipping within 2-3 days

2011. XXII, 2088 p. 434 illus. $1,600.00

The Springer Index of Viruses

The continuous growth of knowledge makes it very difficult for scientists to retrieve comprehensive and accurate data on viruses. The desired information is often dispersed in a variety of books, journals and online resources. This encyclopedia presents the latest facts about all known virus in a standardized form created by hundreds of the world’s leading virologists. Virus taxonomy represents the basic framework that allows an understanding of the complex evolutionary process that continuously takes place among viruses and their hosts. Each of the 300 taxonomically ordered chapters includes detailed information on individual genus members, historical events, the hosts they can affect (animal, man or plant), virion morphology, genome properties, replication strategy, properties of individual transcripts and proteins, sequence accession numbers, biological properties, diseases, recombinant vector constructs, vaccine strains, key references, as well as a high-resolution particle image and a drawing.[...]

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Fields of interest
Virology; Medical Microbiology; Microbiology

Target groups
Research

Type of publication
Encyclopaedia

Usually dispatched within 3 to 5 business days

2011. XXII, 2088 p. 434 illus. $1,600.00

Tumors of the Central Nervous System, Volume 4

Brain Tumors (Part 2)

This volume mainly contains information on the diagnosis, therapy, and prognosis of brain tumors. Insights on the understanding of molecular pathways involved in tumor biology are explained, which should lead to the development of effective drugs. Information on pathways (e.g., hedgehog) facilitates targeted therapies in cancer. Tumor models are also presented, which utilize expression data, pathway sensitivity, and genetic abnormalities, representing targets in cancer. For example, rat model of malignant brain tumors using implantation of doxorubicin with drug eluting beads for delivery is explained. The future of pathway-driven therapies for tumors is summarized. The importance of personalizing cancer care is emphasized. The need for supportive measures for survivors of brain cancer is pointed out, so is the quality of life monitoring. The need of rehabilitation therapy for patients with primary and metastatic brain tumors is also emphasized. Role of MicroRNA in distinguishing primary tumors from[...]

Features
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Contents

Fields of interest
Cancer Research; Neuroradiology; Neurosurgery; Oncology; Pathology

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XVI, 383 p. 60 illus., 41 in color. $209.00
ISBN 978-94-007-1705-3
**Tumour-Associated Macrophages**

The subject of Tumour-Associated Macrophages is of interest in the cancer research community, and this book promises to be among the first to discuss a definitive theory on the role of macrophage in tumor development.

**Features**

Macrophages are tissue resident phagocytes that have important roles in development and immunity. The observation that cancers become infiltrated by large numbers of macrophages was first made by Virchow in 1863, clinical and experimental studies suggest tumor-associated macrophages (TAM) are critical to promote carcinogenesis and tumor-progression, however to this day it still isn’t clear what regulates [...] 

**Contents**


**Fields of interest**

Cancer Research; Pharmacology / Toxicology

**Target groups**

Research

**Type of publication**

Contributed volume

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

2012. XI, 187 p. 15 illus., 10 in color. Hardcover

$189.00


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**Advanced Planning in Supply Chains**

Illustrating the Concepts Using an SAP® APO Case Study

Advanced Planning Systems (APS) are a key enabler of the supply chain management. However, APS are highly complex and difficult to comprehend. This book provides students with valuable insights into the capabilities of state-of-the-art APS and bridges the gap between theory (model building and solution algorithms), software implementation, and adaptation to a specific business case. Our business case – named Frutado – provides a unifying framework for illustrating the different planning tasks that arise in a company – from demand planning to the distribution of goods – that are addressed by APS. In addition, the book guides through interactive learning units which have been created and recorded for each module of SAP’s APS. Learning units can be downloaded free of charge ready to be displayed in a web browser. Together, the textbook and the learning units provide the required skills to better understand the concepts, models, and algorithms underlying today’s APS.

**Features**

Advanced Planning Systems (APS) are a key enabler of the supply chain management. However, APS are highly complex and difficult to comprehend. This book provides students with valuable insights into the capabilities of state-of-the-art APS and bridges the gap between theory (model building and solution algorithms), software implementation, and adaptation to a specific business case. Our business case – [...] 

**Contents**

Preface.- Introduction (Hartmut Stadler, Christopher Haub). - Part I. - 1 The Frutado Case 11 (Bernhard Fleischmann).- 2 Hierarchical Planning and the Supply Chain Planning Matrix (Hartmut Stadler, Bernhard Fleischmann).- 3 SAP APO - Module Matrix and General Principles (Christopher Sürie).- Part II. - 4 Demand Planning (DP) (Herbert Meyr).- 5 Master Planning - Supply Network Planning (Hartmut Stadler).- 6 Production Planning and Detailed Scheduling (PP/DIS) (Hartmut Stadler, Christopher Sürie).- 7 Global Available-to-Promise (global ATP) (Bernhard Fleischmann, Sebastian Geier).- 8[...]

**Fields of interest**

Management/Business for Professionals; Production / Logistics; Industrial and Production Engineering

**Target groups**

Professional/practitioner

**Type of publication**

Professional book
Behind the Executive Door
Unexpected Lessons for Managing Your Boss and Career

Sigmund Freud meets Peter Drucker . . . Behind the Executive Door is a revealing look at the behavior of top business leaders—and how the next level of aspiring managers can learn to navigate the political and personal landscape. Based on over 25 years of psychotherapy and consulting experiences, as well as extensive empirical research, Karol Wasylyshyn has identified a dynamic continuum of executive behaviors that are manifested in three specific types of business leaders—Remarkable, Perilous, and Toxic. She describes these types in accessible terms with the intertwined goals of helping readers (1) recognize these behaviors and leadership types and (2) leverage this information to increase their savvy and effectiveness in the workplace. In the wake of Sarbanes-Oxley and the increased scrutiny of business executives, we have learned that how they lead is often their undoing—or at least it is a pressing development need and/or potential derailment factor. In short, despite financial or[...]

Features
Sigmund Freud meets Peter Drucker . . . Behind the Executive Door is a revealing look at the behavior of top business leaders—and how the next level of aspiring managers can learn to navigate the political and personal landscape. Through a variety of reflective and action-oriented exercises, she guides readers to recognize the characteristics of Remarkable, Perilous, and Toxic.[...]

Contents
PART I Understanding the Behavior of Business Leaders Chapter 1 The "How" of Leadership - An Era of Behavior Scrutiny Chapter 2 The Remarkable Business Leader Chapter 3 The Perilous Business Leader Chapter 4 The Toxic Business Leader Chapter 5 Leadership Type Survey - What Type of Leader is Your Boss? PART II LESSONS for Managing Business Leaders Chapter 6 Managing a Remarkable Boss Chapter 7 Managing a Perilous Boss Chapter 8 Managing a[...]

Fields of interest
Business & Economics (general); Personnel Management; Industrial and organizational psychology

Target groups
Popular/general

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. XIII, 174 p. 12 illus., 11 in color. Softcover

$19.95
ISBN 978-1-4614-0375-3

Capitalism
Its Origins and Evolution as a System of Governance

Two systems of governance, capitalism and democracy, prevail in the world today. Operating simultaneously in partially distinct domains, these systems rely on indirect governance through regulated competition to coordinate actors; inevitably, these systems influence and transform each other. This book rejects the simple equation of capitalism with markets in favor of a three-level system, a model which recognizes that markets are administered by regulators through institutions and governed by a political authority with the power to regulate behavior, punish transgressors, and redesign institutions. This system’s emergence required the sovereign to relinquish some power in order to release the energies of economic actors. Rather than spreading through an unguided natural process like trade, capitalism emerged where competitive pressures forced political authorities to take risks in order to achieve increased revenues by permitting markets for land, labor, and capital.

Features
Two systems of governance, capitalism and democracy, prevail in the world today. Operating in part overlapping domains, these systems influence and transform each other, but the nature of this interaction is often misunderstood—largely because capitalism has not been recognized as a system of governance. Rejecting the simple definition ‘capitalism = actions of firms in markets,’ Harvard’s Bruce R.[...]

Contents

Fields of interest
Development Economics; History; Economic Systems; Economic Growth; Political Science, general

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2011. XXXV, 670 p. 59 illus. Hardcover

$40.95
ISBN 978-1-4614-1878-8

Ecological Economics
Sustainability in Practice

In a concise and crisp manner, this book presents the state of the art in ecological economics, an interdisciplinary field focused on the analysis of sustainability of global, national and regional economic systems. An elegant guide, the book offers a range of cutting edge methods used in sustainability research including multicriteria decision aid (MCDA), input-output analysis, and life cycle analysis. This book is packed with references for students with some background in economics, environmental science or mathematics who aim to develop the analytical skills required for redirecting our development path towards sustainability in government, international organisations, academia, non-profit sector and business. As such, the book is primarily aimed at MSc and first year PhD students reading for degrees in Environmental Change and Management, Ecological Economics, Environmental Management, Philosophy, Politics and Economics, and those taking part in similar programmes. The book strives to develop[...]

Features
In a concise and crisp manner, this book presents the state of the art in ecological economics, an interdisciplinary field focused on the analysis of sustainability of global, national and regional economic systems. An elegant guide, the book offers a range of cutting edge methods used in sustainability research including multicriteria decision aid (MCDA), input-output analysis, and life cycle[...]

Contents

Fields of interest
Business & Economics (general); Environment (general); Renewable and Green Energy; Operation Research / Decision Theory; Non-Profit Enterprises/Corporate Social Responsibility

Target groups
Graduate

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIX, 248 p. 92 illus., 88 in color. Hardcover

$79.95
Econometrics of Financial High-Frequency Data

The availability of financial data recorded on high-frequency level has inspired a research area which over the last decade emerged to a major area in econometrics and statistics. The growing popularity of high-frequency econometrics is driven by technological progress in trading systems and an increasing importance of intraday trading, liquidity risk, optimal order placement as well as high-frequency volatility. This book provides a state-of-the-art overview on the major approaches in high-frequency econometrics, including univariate and multivariate autoregressive conditional mean approaches for different types of high-frequency variables, intensity-based approaches for financial point processes and dynamic factor models. It discusses implementation details, provides insights into properties of high-frequency data as well as institutional settings and presents applications to volatility and liquidity estimation, order book modelling and market microstructure analysis.

Features
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Central to the book are questions concerning the existence and the characteristics of justice motives, and concerning the influence that justice motives and justice judgements have on the emergence, but also the solution of social conflicts. Five main themes will be addressed: (1) "Introduction and justice motive", (2) "organizational justice", (3) "ecological justice", (4) "social conflicts", and (5) "solution of conflicts". The authors of the editions are scholars of psychology, as well as distinguished experts from various other disciplines, including sociologists, economists, legal scholar, educationalists, and ethicists. The common ground of all contributors is their independent conduction of empirical research on justice issues. Apart from the German contributors, authors represent scholars from the US, India, Korea, New Zealand, and various European countries (Austria, Switzerland, the Netherlands, UK, Sweden).

Features
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Network Reliability in Practice
Selected Papers from the Fourth International Symposium on Transportation Network Reliability

This book contains selected peer-reviewed papers that were presented at the Fourth International Symposium on Transportation Network Reliability (INSTR) Conference held at the University of Minnesota July 22–23, 2010. International scholars, from a variety of disciplines—engineering, economics, geography, planning and transportation—offer varying perspectives on modeling and analysis of the reliability of transportation networks in order to illustrate both vulnerability to day-to-day and unpredictability variability and risk in travel, and demonstrates strategies for addressing those issues. The scope of the chapters includes all aspects of analysis and design to improve network reliability, specifically user perception of unreliability of public transport, public policy and reliability of travel times, the valuation and economics of reliability, network reliability modeling and estimation, travel behavior and vehicle routing under uncertainty, and risk evaluation and management for transportation.[…]

Features
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Fields of interest
Economic Policy; Public Finance & Economics; R & D / Technology Policy; Regional Science

Target groups
Professional/practitioner

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. VIII, 259 p. 63 illus., 35 in color. (Transportation Research, Economics and Policy) Hardcover

$119.00

New Insights into the Theory of Giffen Goods

One might expect that after their identification in the 19th century, all aspects of Giffen goods would have been studied by now. This appears not to be the case. This book contains the latest insights into the theory of Giffen goods. In the past, surprisingly few goods could be categorized as “Giffen.” This may be because of a lack of understanding of the character of these goods. Therefore, the theories explained in this book may also produce a solid basis for further empirical research in the field. Experts throughout the world have contributed to this book, which predominantly pursues a mathematically rigorous approach. It may be used by researchers in the field of fundamental economics and in graduate-level courses in advanced microeconomics.

Features
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Contents

Fields of interest
Economic Theory; Microeconomics; Optimization

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$89.95
ISBN 978-3-642-21776-0

Non-Standard Employment and Quality of Work

The Case of Italy

The international literature on non-standard employment has mostly focused on its impact on employment, and more recently on working and living conditions. This volume explores these issues with special reference to Italy. Italy is characterized by very low participation rates (particularly women’s), a high degree of fragmentation of labour contracts and a very intense non-standard work diffusion that make this context a particularly interesting case for analysis. New elements of discussion are provided with reference to the interaction of non-standard work, employment probability and living conditions. Interesting insights on the impact of non-standard work on the transition to stable employment and workers’ careers emerge, suggesting a possible failure of companies’ internal systems of work evaluation. The effects on labour productivity and on companies’ performance are analysed. Within this framework, a new perspective on quality of work is suggested.

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Contents

Fields of interest
Labor Economics; Economic Policy; Social Policy; Labour Law / Social Law

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$139.00
ISBN 978-3-7908-2105-5
Practice-Based Innovation: Insights, Applications and Policy Implications

The book describes and analyses the new environment for innovation, it does this with an emphasis on yet uncharted regions within the field of practice-based innovation, coming up with guidelines for innovation policy measures needed in order to realise this. While it focuses on these policies it also takes into account multi-actor innovation processes, user-driven innovation, "related variety" and many other aspects; aspects such as, just to name a few: communicating creative processes and distributing practice-based innovation; then there is creativity itself, encompassing new fields of knowledge and expertise.

The authors go on to describe value networks, showing how to make practice-based innovations, explaining innovation diffusion and absorptive capacity. The book presents new insights as well as the latest research related to the frequently used term "innovation". Definitions are put forward, giving, by way of examples, a detailed description of concepts we draw upon when using these. [...]

Features

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Contents

Insights into Practice-Based Innovation and Innovation Strategies.- Micro-, Meso- and Regional Level Applications.- Case Studies and Policy Implications.

Fields of interest

Organization / Planning; R & D / Technology Policy; Pragmatism

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XIII, 452 p. 73 illus., 16 in color. Hardcover

$189.00
ISBN 978-3-642-21722-7

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Risk Habitat Megacity

Megacity development and the inherent risks and opportunities for humans and the environment is a theme of growing urgency in the 21st century. Focusing on Latin America where urbanization is most advanced, this book studies the complexity of a 'mega-urban system' and explores interrelations between sectors and issues by providing an in-depths study of one particular city, Santiago de Chile. The book attempts to (i) focus on the emergence of risk in megacities by analyzing risk elements, (ii) evaluate the extent and severity of risks, (iii) develop strategies to cope with adverse risks, and (iv) to guide urban development by combining concepts with empirical evidence. Drawing on the work of an interdisciplinary and international consortium of academic and professional partners, the book is written for scholars in cross-cutting areas of urban, sustainability, hazard, governance and planning research as well as practitioners from local, regional and international organizations.

Features

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Contents


Fields of interest

Environmental Economics; Science; Landscape, Regional and Urban Planning; Political Science, general

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XXVI, 363 p. 75 illus., 8 in color. Hardcover

$189.00
ISBN 978-3-642-11543-1

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Strategic Adaptation

Cross-Cultural Differences in Company Responses to Economic Crisis

How do companies adapt their strategies when they are faced with a global economic crisis? Do managers in different countries differ in the way they react to major changes in their companies’ environment? Is national culture influencing adaptation strategies in times of crisis? "Strategic Adaptation" explores the processes that are at work when companies adapt to environmental change – from strategic issue diagnosis and decision-making processes (including political behaviour and conflicts) to the specific strategic actions in response to economic downturn. Based on both a qualitative and a quantitative empirical study among managers in Austria and Slovenia, this book explores how firms in the two countries strategically reacted to the 2008-09 financial and economic crisis and – taking cultural differences into account – how their decision processes and strategic actions in response to the crisis differed.

Features

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Contents

1. Introduction.- 1.1 Creating and maintaining value through adaptation.- 1.2 Cultural influences on strategic adaptation.- 2. Overview of the research design.- 3. Overview of key concepts.- 3.1 Strategy and strategic decision-making.- 3.2 Major environmental changes.- 3.3 Adaptation as a concept in strategic management.- 3.4 National culture as an influencing factor on managerial decision-making.- 3.5 Summary of the key concepts.- 4. The strategic adaptation process: a literature review.- 4.1 Different approaches to adaptation.- 4.2 Cognitive perspectives of the strategic adaptation [...]
Strategic Outsourcing
The Alchemy to Business Transformation in a Globally Converged World

This book provides a road-map to successful implementation of strategic outsourcing programmes, providing down-to-earth approaches to outsourcing decision making and programme management, based on a grass-roots understanding. A practitioner-focused book for business leaders and managers providing a holistic view of strategic outsourcing, covering the three essential pillars of success: risks, rewards and relationships.

The author shows how business leaders can transform organisational business models, structures and mind-sets, taking the reader on a journey through the book’s fifteen chapters, helping the reader truly grasp: the drivers for change as a result of globalisation and convergence and their impact on organisational strategies; how outsourcing can transform the various processes and functions of an organisation; the impact outsourcing is having on various industry vertical sectors; the eight foundations of successful strategic outsourcing programmes, which when combined with strategic[...]

Features
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The Practice of Enterprise Modeling


This volume constitutes the proceedings of the 4th IFIP WG 8.1 Working Conference on the Practice of Enterprise Modeling, held in Oslo, Norway, during November 2-3, 2011. The conference series is a dedicated forum where the use of enterprise modeling (EM) in practice is addressed by bringing together researchers, users, and practitioners in order to develop a better understanding of the practice of EM, to contribute to improved industrial EM applications, and to share knowledge and experiences. The 18 papers presented were carefully reviewed and selected from 38 submissions. Authored by both researchers and practitioners, they reflect the fact that EM encompasses human, organizational issues as well as technical aspects related to the development of information systems. The papers are organized in five thematic sessions on process modeling, business modeling, enterprise architecture, EM, and model-driven development. In addition, two keynotes on EM in an agile world and on intra- and interboundary interaction were given.

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

Target groups
Research

Type of publication
Proceedings

Due: November 30, 2011


$94.00
ISBN 978-3-642-24848-1

The Reasons for Underdevelopment

The Case of Decolonisation in Somalia

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

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Contents

Fields of interest
Development Economics; Migration; Macroeconomics / Monetary Economics; International Economics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXIV, 139 p. (Contributions to Economics) Hardcover

$119.00
ISBN 978-3-7908-2777-4
Understanding Family Businesses
Undiscovered Approaches, Unique Perspectives, and Neglected Topics

Businesses owned and operated by families constitute the vast majority of firms around the world. These firms are found in all industrial segments, from retail and service establishments to heavy manufacturers. Their sizes and revenues range from the smallest venture of a husband and wife roadside food stall in rural India to the largest multinational, highly diversified corporations in the United States and Europe. Many challenges, such as competition, regulation, environmental concerns, access to capital, and macroeconomic factors confront family and nonfamily firms alike.

In addition, family and closely-held firms grapple with such issues of succession, continuity, conflict resolution, identity and organizational roles, estate and financial planning that are idiosyncratic to them; when psychological, social, and emotional factors are in play, constantly changing familial relationships influence the strategic and financial choices they make. Yet, there has been comparatively little theoretical[...]

Features
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Contents
Chapter 1 Where Have We Been and Where We Should Be Going in Family Business Research.
Chapter 3 Intentions in the Family Business: The Role of Family Norms.
Chapter 4 Identity Dynamics in the Family Business Context: A Novel(s) Perspective.
Chapter 5 Love, Hate, and Desire: The Role of Emotional Messiness in the Business Family.
Chapter 6 What’s Love Got to Do With It? Marriage and Divorce[...]

Fields of interest
Entrepreneurship, Management/Business for Professionals, Sociology, general

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$139.00

Venture Capital and the Corporate Governance of Chinese Listed Companies

State-controlled listed companies have always dominated Chinese stock markets. As a result of the rampant scandals related to them, there have been voluminous academic efforts to explore their corporate governance, underpinned by agency costs. However, these studies have yet to examine the phenomenon from the perspective of venture capital and adaptive efficiency. During the last ten years, despite China’s remarkable progress in the development of its venture capital market, its domestic venture capital has been marginalized by American competitors. Given the different performance between them, the author contends that the corporate governance system of Chinese state-controlled listed companies has hampered the performance of the institutional factors which are responsible for the prosperity of American venture capital in Chinese venture capital markets. With the practice of American venture capital as the mirror, he empirically demonstrates that Chinese domestic venture capital lacks the four[...]

Features
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Fields of interest
Business & Economics (general); Finance / Banking; R & D / Technology Policy

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 122 p. Hardcover

$139.00

A Prehistory of Polymer Science

Polymer science is now an active and thriving community of scientists, engineers and technologists, but there was a time, not so long ago, when there was no such community. The prehistory of polymer science helps to provide key insights into current issues and historical problems. The story will be divided into an ancient period (from Greek times to the creation of the molecular consensus), a nascent period (from Dalton to Kekulé to van’t Hoff) and a period of paradigm formation and controversy (from Staudinger to Mark to Carothers). The prehistory concludes with an account of the epochal 1935 Discussion of the Faraday Society on “Polymerization”. After this meeting an active community engaged in trying to solve the central problems defined by the discussions.

Features
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Fields of interest
Polymer Sciences; History of Science; History

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days


$49.95
ISBN 978-3-642-21636-7
### Application of Bacterial Pigments as Colorant

**The Malaysian Perspective**

Environmental concerns regarding continuous use of synthetic dyes saw a revival in the demand for natural dyes as natural dyes exhibit better biodegradability and generally have a higher compatibility with the environment. However, one of the limitations on the use of natural dyes or pigments is the low extraction yield factors (a few grams of pigment per kg of dried raw material). Therefore, the exploitation of other biological sources such as fungi, bacteria and cell cultures offers interesting alternative. Microbial pigments such as from bacterial origins offer the advantage in terms of production compared to pigments extracted from vegetables or animals, due to its simple cell and fast culturing technique. This book offers interesting insight into initial works carried out to demonstrate the potential use of bacterial pigment as colorant for various applications.

**Features**
- No back cover text

**Contents**

**Fields of interest**
- Biotechnology; Environmental Engineering / Biotechnology; Industrial and Production Engineering; Biomaterials; Industrial Chemistry / Chemical Engineering

**Target groups**
- Research

**Type of publication**
- Brief

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

2012. VIII, 77 p. 50 illus., 15 in color. (SpringerBriefs in Molecular Science) Softcover

$49.95  
ISBN 978-3-642-24519-0

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### Chemical Thermodynamics

**An Introduction**

This course-derived undergraduate textbook provides a concise explanation of the key concepts and calculations of chemical thermodynamics. Instead of the usual 'classical' introduction, this text adopts a straightforward postulatory approach that introduces thermodynamic potentials such as entropy and energy more directly and transparently. Structured around several features to assist students' understanding, Chemical Thermodynamics develops applications and methods for the ready treatment of equilibria on a sound quantitative basis. Requires minimal background in calculus to understand the text and presents formal derivations to the student in a detailed but understandable way. Offers end-of-chapter problems (and answers) for self-testing and review and reinforcement, of use for self- or group study. This book is suitable as essential reading for courses in a bachelor and master chemistry program and is also valuable as a reference or textbook for students of physics, biochemistry and materials science.

**Features**
- This course-derived undergraduate textbook provides a concise explanation of the key concepts and calculations of chemical thermodynamics.
- Instead of the usual 'classical' introduction, this text adopts a straightforward postulatory approach that introduces thermodynamic potentials such as entropy and energy more directly and transparently. Structured around several features to assist students' understanding.

**Contents**
- Postulates of thermodynamics.
- Thermodynamic equilibrium in isolated and isentropic systems.
- Thermodynamic equilibrium in systems with other constraints.
- Thermodynamic processes and engines.
- Thermodynamics of mixtures (multicomponent systems).
- Phase equilibria.
- Equilibria of chemical reactions.
- Extension of thermodynamics for additional interactions (non-simple systems).
- Elements of equilibrium statistical thermodynamics.
- Transport processes.

**Fields of interest**
- Physical Chemistry; Thermodynamics; Engineering Thermodynamics; Heat and Mass Transfer; Industrial Chemistry / Chemical Engineering; Materials Science (general); Biochemistry

**Target groups**
- Upper undergraduate

**Type of publication**
- Undergraduate textbook

**Due: November 28, 2011**

2012. XI, 354 p. 77 illus., 6 in color. Softcover

$59.95  
ISBN 978-3-642-19863-2

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### Desalination Concentrate Management

**The Malaysian Perspective**

This book examines five methods used for concentrate management, namely; disposal to surface water, disposal to sewerage, deep well injection, land applications and evaporation ponds. In particular, the book focuses on the design, siting, cost, and environmental impacts of these methods. While these methods are widely practiced in a variety of settings already, there are many limitations that restrict the use of certain disposal options in particular locations.

**Features**
- This book examines five methods used for concentrate management, namely; disposal to surface water, disposal to sewerage, deep well injection, land applications and evaporation ponds.

**Contents**
- Introduction.
- Characteristics of Membrane Concentrate.
- Process Feasibility.
- Disposal to Surface Water.
- Deep Well Injection.
- Spray Irrigation.
- Evaporation Ponds.

**Fields of interest**
- Industrial Chemistry / Chemical Engineering;
- Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution;
- Geoenvironment, Foundations, Hydraulics

**Target groups**
- Research

**Type of publication**
- Monograph

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

2012. VIII, 57 p. 15 illus. (SpringerBriefs in Green Chemistry for Sustainability) Softcover

$49.95  
ISBN 978-3-642-24851-1
**Fluorescent Proteins I**

**From Understanding to Design**

Fluorescent proteins are intimately connected to research in the life sciences. Tagging of gene products with fluorescent proteins has revolutionized all areas of biosciences, ranging from fundamental biochemistry to clinical oncology, to environmental research. The discovery of the Green Fluorescent Protein, its first, seminal application and the ingenious development of a broad palette of fluorescence proteins of other colours, was consequently recognised with the Nobel Prize for Chemistry in 2008. Fluorescent Proteins I is devoted to the basic photophysical and photochemical aspects of fluorescent protein technology. Experienced experts highlight colour tuning, the exploration of switching phenomena and respective methods for their investigation. The book provides a thorough understanding of primary molecular processes allowing the design of fluorescent proteins for specific applications.

**Contents**

- One-Photon and Two-Photon Excitation of Fluorescent Proteins.
- Primary Photophysical Processes in Chromoproteins.
- Fluorescence Lifetime of Fluorescent Proteins.
- Synthetic Biology of Autofluorescent Proteins.
- Vibrational spectroscopy: a tool to investigate the structure of the chromophore and its environment.
- Proton Travel in Green Fluorescent Protein.
- Photoconversion of the Green Fluorescent Protein and Related Proteins.
- Structure–Function Relationships in Fluorescent Marker Proteins of the Green[

**Fields of interest**

- Analytical Chemistry; Molecular Medicine; Medical Biochemistry; Biophysics and Biological Physics; Cell Biology; Biological Techniques

**How to Reliably Test for GMOs**

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

This thesis details the significant progress made in improving the performance of organic transistors and the network conductivity of carbon nanotubes. The first section investigates organic semiconductor nucleation and growth on the most common dielectric surface used to fabricate organic thin film transistors. The nucleation and growth of the semiconductor was determined to be a critical factor affecting the device performance. Excellent dielectric modification layers, which promote desirable semiconductor growth leading to high conductivity were identified, and a technologically relevant deposition technique was developed to fabricate high quality dielectric modification layers over large areas. This may represent an important step towards the realization of large area organic circuits. In the final section, lessons learned from studying organic semiconductor nucleation and growth were utilized to improve the conductivity of carbon nanotube networks. Selective nucleation of materials at the[-]...

Features
This thesis details the progress made in improving the performance of organic transistors and the network conductivity of carbon nanotubes. The first section investigates organic semiconductor nucleation and growth on the most common dielectric surface used to fabricate organic thin film transistors. In the final section, lessons learned from studying organic semiconductor nucleation and growth were [-]...

Contents

Fields of interest
Biochemical Engineering; Semiconductors; Industrial Chemistry / Chemical Engineering

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 130 p. 62 illus., 18 in color. (Springer Theses) Hardcover

$129.00
ISBN 978-1-4419-9703-6

Lipids, Lipophilic Components and Essential Oils from Plant Sources

An extensive collection of data on lipids and essential oils that can be extracted from a wide range of plant sources. Over 3,000 plant species are covered, arranged by broad family groups. For each plant detailed information is provided on the lipids, lipophilic compounds and oils that can be extracted from various parts of the plant, e.g. stem, leaves, fruit, seeds etc. References to peer-reviewed journal sources are provided throughout This unique reference will be of value equally to natural product chemists, botanists and those seeking sources of active compounds in pharmaceuticals, cosmetics and other commercial products.

Features
An extensive collection of data on lipids and essential oils that can be extracted from a wide range of plant sources. Over 3,000 plant species are covered, arranged by broad family groups. For each plant detailed information is provided on the lipids, lipophilic compounds and oils that can be extracted from various parts of the plant, e.g. stem, leaves, fruit, seeds etc. References to peer-reviewed journal [-]...

Contents

Fields of interest
Organic Chemistry; Plant Biochemistry; Pharmacy; Lipidology, Biorganic Chemistry; Food Science

Target groups
Research

Type of publication
Reference work

Usually dispatched within 3 to 5 business days

2012. 949 p. 50 illus. In 2 volumes, not available separately. Hardcover

$679.00
ISBN 978-0-85729-322-0

Microfluidics

Technologies and Applications

Features

Contents

Fields of interest
Microengineering; Industrial Chemistry / Chemical Engineering; Soft and Granular Matter, Complex Fluids and Microfluidics; Engineering Fluid Dynamics; Cell Biology

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2011. XII, 344 p. 149 illus., 19 in color. (Topics in Current Chemistry, Vol. 304) Hardcover

$349.00
ISBN 978-3-642-23049-3
Molecular Farming in Plants: Recent Advances and Future Prospects

Molecular farming in plants is a relatively young subject of sciences. As plants can offer an inexpensive and convenient platform for the large-scale production of recombinant proteins with various functions, the driven force from the giant market for recombinant protein pharmaceuticals and industrial enzymes makes this subject grow and advance very quickly. To summarize recent advances, current challenges and future directions in molecular farming, international authorities were invited to write this book for researchers, teachers and students who are interested in this subject. This book, with the focus on the most advanced cutting-edge breakthroughs, covers all the essential aspects of the field of molecular farming in plants: from expression technologies to downstream processing, from products to safety issues, and from current advances and holdups to future developments.

Features
Since the first recombinant plant-derived pharmaceutical protein (PDP), i.e., human serum albumin, was produced in transgenic tobacco and potato plants in 1990, molecular farming in plants has emerged as a new subject of sciences. The plant system has the potential to provide virtually unlimited quantities of these bio-products at low costs, which is impossible for any other systems. plants have been […].

Contents

Fields of interest
Biotechnology; Genetic Engineering; Plant Breeding / Biotechnology; Agriculture; Biomedicine (general); Life Sciences (general)

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 279 p. 23 illus., 15 in color. Hardcover

$189.00
ISBN 978-94-007-2216-3

Multiscale Molecular Methods in Applied Chemistry


Features

Contents

Fields of interest
Organic Chemistry; Theoretical and Computational Chemistry; Computer Applications in Chemistry; Physical Chemistry; Math. Applications in Chemistry

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days

2012. XII, 326 p. 82 illus., 40 in color. (Topics in Current Chemistry, Vol. 307) Hardcover

$339.00
Multistate GTPase Control Co-translational Protein Targeting

Proteins act as macromolecular machinery that mediate many diverse biological processes - the molecular mechanisms of this machinery has fascinated biologists for decades. Analysis of the kinetic and thermodynamic features of these mechanisms could reveal unprecedented aspects of how the machinery function and will eventually lead to a novel understanding of various biological processes. This dissertation comprehensively demonstrates how two universally conserved guanosine triphosphatases in the signal recognition particle and its membrane receptor maintain the efficiency and fidelity of the co-translational protein targeting process essential to all cells. A series of quantitative experiments reveal that the highly ordered and coordinated conformational states of the machinery are the key to their regulatory function. This dissertation also offers a mechanistic view of another fascinating system in which multistate protein machinery closely control critical biological processes. Written while...[

Features
Proteins act as macromolecular machinery that mediate many diverse biological processes - the molecular mechanisms of this machinery has fascinated biologists for decades. Analysis of the kinetic and thermodynamic features of these mechanisms could reveal unprecedented aspects of how the machinery function and will eventually lead to a novel understanding of various biological processes. This [...]
Transition Metal Catalyzed Enantioselective Allylic Substitution in Organic Synthesis


Features
Giovanni Poli, Guillaume Prestat, Frédéric Liron, Claire Kammerer-Pentier: Selectivity in Palladium Catalyzed Allylic Substitution.- Jonatan Klemark and Per-Ola Norrby: Computational Insights into Palladium-mediated Allylic Substitution Reactions.- Ludovic Milhau, Patrick J. Guiyr: Palladium-catalyzed enantioselective allylic substitution.- Wen-Bo Liu, Ji-Bao Xia, Shu-Li You: Iridium-Catalyzed…

Contents

Fields of interest
Organometallic Chemistry; Catalysis; Organic Chemistry

Target groups
Research

Type of publication
Reviews

Usually dispatched within 3 to 5 business days
December 28, 2011


$309.00
ISBN 978-3-642-22748-6

M.J. Simpson, University of Birmingham, UK

Two Studies in Gas-Phase Ion Spectroscopy

Vacuum-ultraviolet Negative Photoion Spectroscopy and Ion-Molecule Reaction Kinetics

In this thesis Matthew Simpson reportstwo areas of work in gas ion spectroscopy, each investigation in itself worthy of a PhD. The first study uses tunable vacuum-ultraviolet radiation from a synchrotron to identify negative ions from twenty four photoexcited polyatomic molecules in the gas phase. From these experiments, Matthew collects a vast amount of data and summarises and reviews ion-pair formation from polyatomic molecules. The second study is on selected ion flow tube mass spectrometry. Matthew investigates the reactions of cations and anions with ethene, monoiodoethene, 1,1-difluoroethene and tetrafluoroethene. In this study Matthew tries to explain why certain products are formed preferentially over other products at a microscopic level of understanding. The data recorded in this thesis form the most comprehensive collection of information about anion formation and are the basis of a review and numerous articles in specialist journals.

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

Contents
Introduction and background information.- The experiments.- Vacuum-ultraviolet negative photoion spectroscopy of SF6, CF4 and SF5CF3.- Vacuum-ultraviolet negative photoion spectroscopy of CF3Cl, CF3Br and CF3I.- Vacuum-ultraviolet negative photoion spectroscopy of SF5CL.- Vacuum-ultraviolet negative photoion spectroscopy of small polyatomic molecules.- The reactions of CFn+ (n = 1-3) with C2H4, C2H3F, CH2CF2 and C2HF3.- The reactions of C2F4+ with C2H4, C2H3F, CH2CF2 and C2HF3.- Reactions of OH, O-, CF3-, F- and O2- with C2H4, C2H3F, CH2CF2, C2HF3 and C2F4 .

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days
December 28, 2011

2012, XIII, 162 p. 62 illus., 42 in color. (Springer Theses) Hardcover

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

Advanced Language Technologies for Digital Libraries


This book constitutes the thoroughly refereed post proceedings of two international workshops on special aspects of digital libraries, namely the First International Workshop on Natural Language Processing for Digital Libraries, NLP4DL 2009, held in Viareggio, Italy in June 2009 and the CACAO Project Workshop Advanced Technologies for Digital Libraries, AT4DL 2009, held in Trento, Italy in September 2009. A new open call was sent after the workshops. The revised full papers presented at the workshops and the newly submitted ones went through two rounds of reviewing and revision. The 10 papers selected address various aspects of NLP in digital libraries, search, classification, and digital document processing.

Features

Contents

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

Target groups
Research

Type of publication
Proceedings

Due: December 28, 2011


$72.00
Advances in Artificial Intelligence

14th Conference of the Spanish Association for Artificial Intelligence, CAEPIA 2011, La Laguna, Spain, November 7-11, 2011. Proceedings

This book constitutes the refereed proceedings of the 14th Conference of the Spanish Association for Artificial Intelligence, CAEPIA 2011, held in La Laguna, Canary Islands, Spain, in November 2011. The 50 revised full papers presented were carefully selected from 149 submissions. The papers are organized in topical sections on agent-based and multi-agent systems; machine learning; knowledge representation, logic, search and planning; multidisciplinary topics and applications; vision and robotics; soft computing; Web intelligence and information retrieval.

Features
This book constitutes the refereed proceedings of the 14th Conference of the Spanish Association for Artificial Intelligence, CAEPIA 2011, held in La Laguna, Canary Islands, Spain, in November 2011. The 50 revised full papers presented were carefully selected from 149 submissions. The papers are organized in topical sections on agent-based and multi-agent systems; machine learning; knowledge representation, logic, search and planning; multidisciplinary topics and applications; vision and robotics; soft computing; Web intelligence and information retrieval.

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

Target groups
Research

Type of publication
Proceedings

Due: November 22, 2011


$107.00
ISBN 978-3-642-25273-0

Advances in Conceptual Modeling. Recent Developments and New Directions

ER 2011 Workshops FP-UML, MoRE-BI, Onto-CoM, SeCoGIS, Variability@ER, WISM, Brussels, Belgium, October 31 - November 3, 2011

This book constitutes the refereed proceedings of workshops, held at the 30th International Conference on Conceptual Modeling, ER 2011, in Brussels, Belgium in October/November 2011. The 31 revised full papers presented together with 9 posters and demonstrations (out of 88 submissions) for the workshops and the 6 papers (out of 11 submissions) for the industrial track were carefully reviewed and selected. The papers are organized in sections on the workshops Web Information Systems Modeling (WISM); Modeling and Reasoning for Business Intelligence (MORE-BI); Software Variability Management (Variability@ER); Ontologies and Conceptual Modeling (Onto.Com); Semantic and Conceptual Issues in GIS (SeCoGIS); and Foundations and Practices of UML (FP-UML).

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

Target groups
Research

Type of publication
Proceedings

Due: November 14, 2011


$95.00
ISBN 978-3-642-24573-2
Advances in Databases

28th British National Conference on Databases, BNCOD 28, Manchester, UK, July 12-14, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 28th British National Conference on Databases, BNCOD 28, held in Manchester, UK, in July 2011. The 13 revised full papers, 2 short papers, 2 demo papers and 1 poster paper presented together with the abstracts of 2 keynote talks and 1 tutorial paper were carefully reviewed and selected from 44 submissions. The papers cover a wide range of topics such as XML compression, XML updates, column-oriented stores, provenance, warehousing, streamed data, data mashups, dataspaces, sensor network query processing, and pattern-oriented search.

Features

This book constitutes the thoroughly refereed post-conference proceedings of the 28th British National Conference on Databases, BNCOD 28, held in Manchester, UK, in July 2011. The 13 revised full papers, 2 short papers, 2 demo papers and 1 poster paper presented together with the abstracts of 2 keynote talks and 1 tutorial paper were carefully reviewed and selected from 44 submissions. The papers cover a wide range of topics such as XML compression, XML updates, column-oriented stores, provenance, warehousing, streamed data, data mashups, dataspaces, sensor network query processing, and pattern-oriented search.

Fields of interest

Database Management; Information Storage and Retrieval; Information Systems Applications (incl.Internet); Information Systems and Communication Service; Data Structures; Data Storage Representation

Target groups

Research

Type of publication

Proceedings

Due: November 24, 2011


$72.00

ISBN 978-3-642-24576-3

Advances in Intelligent Data Analysis X


This book constitutes the refereed proceedings of the 10th International Conference on Intelligent Data Analysis, IDA 2011, held in Porto, Portugal, in October 2011. The 19 revised full papers and 16 revised poster papers presented together with 3 invited papers were carefully reviewed and selected from 73 submissions. All current aspects of intelligent data analysis are addressed, particularly intelligent support for modeling and analyzing complex, dynamical systems. The papers offer intelligent support for understanding evolving scientific and social systems including data collection and acquisition, such as crowd sourcing; data cleaning, semantics and markup; searching for data and assembling datasets from multiple sources; data processing, including workflows, mixed-initiative data analysis, and planning; data and information fusion; incremental, mixed-initiative model development, testing and revision; and visualization and dissemination of results; etc.

Features

This book constitutes the refereed proceedings of the 10th International Conference on Intelligent Data Analysis, IDA 2011, held in Porto, Portugal, in October 2011. The 19 revised full papers and 16 revised poster papers presented together with 3 invited papers were carefully reviewed and selected from 73 submissions. All current aspects of intelligent data analysis are addressed, particularly intelligent support for modeling and analyzing complex, dynamical systems. The papers offer intelligent support for understanding evolving scientific and social systems including data collection and acquisition, such as crowd sourcing; data cleaning, semantics and markup; searching for data and assembling datasets from multiple sources; data processing, including workflows, mixed-initiative data analysis, and planning; data and information fusion; incremental, mixed-initiative model development, testing and revision; and visualization and dissemination of results; etc.

Fields of interest

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

Target groups

Research

Type of publication

Proceedings

Due: November 14, 2011


$95.00

ISBN 978-3-642-24799-6

Advances in Nonlinear Speech Processing

5th International Conference on Nonlinear Speech Processing, NoLISP 2011, Las Palmas de Gran Canaria, Spain, November 7-9, 2011, Proceedings

This book constitutes the proceedings of the 5th International Conference on Nonlinear Speech Processing, NoLISP 2011, held in Las Palmas de Gran Canaria, Spain, in November 2011. The purpose of the workshop is to present and discuss new ideas, techniques and results related to alternative approaches in speech processing that may depart from the main stream. The 33 papers presented together with 2 keynote talks were carefully reviewed and selected for inclusion in this book. The topics of NoLISP 2011 were non-linear approximation and estimation; non-linear oscillators and predictors; higher-order statistics; independent component analysis; nearest neighbors; neural networks; decision trees; non-parametric models; dynamics of non-linear systems; fractal methods; chaos modeling; and non-linear differential equations.

Features

This book constitutes the proceedings of the 5th International Conference on Nonlinear Speech Processing, NoLISP 2011, held in Las Palmas de Gran Canaria, Spain, in November 2011. The purpose of the workshop is to present and discuss new ideas, techniques and results related to alternative approaches in speech processing that may depart from the main stream. The 33 papers presented together with 2 keynote talks were carefully reviewed and selected for inclusion in this book. The topics of NoLISP 2011 were non-linear approximation and estimation; non-linear oscillators and predictors; higher-order statistics; independent component analysis; nearest neighbors; neural networks; decision trees; non-parametric models; dynamics of non-linear systems; fractal methods; chaos modeling; and non-linear differential equations.

Fields of interest

Pattern Recognition; User Interfaces and Human Computer Interaction; Artificial Intelligence (incl. Robotics); Language Translation and Linguistics; Data Mining and Knowledge Discovery; Biometrics

Target groups

Research

Type of publication

Proceedings

Due: November 21, 2011

2011, XIV, 280 p. 78 illus. (Lecture Notes in Artificial Intelligence, Vol. 7015) Softcover

$72.00

ISBN 978-3-642-25019-4
Since the mid 1980s, software agents and multi-agent systems have grown into a very active area of research and also commercial development activity. One of the limiting factors in industry take-up of agent-technology, however, is the lack of adequate software engineering support. The Agent-Oriented Software Engineering Workshop, AOSE, focuses on the synergies and cross fertilization between software engineering and agent research. This volume presents both thoroughly revised selected papers from the AOSE 2010 workshop held at AAMAS 2010 in Toronto, Canada in May 2010 as well as invited articles by leading researchers in the field. The papers cover a broad range of topics related to software engineering and agent-based systems, with particular attention to the integration of concepts and techniques from multi-agent systems with conventional engineering approaches on the one hand, and to the integration of agent-oriented software engineering and methodologies with conventional engineering processes [...]
Algebraic Foundations in Computer Science

Essays Dedicated to Symeon Bozapalidis on the Occasion of His Retirement

This Festschrift volume, published in honor of Symeon Bozapalidis on the occasion of his retirement after more than 35 years of teaching activity, focuses on the subjects taught by Symeon, namely: algebra, linear algebra, mathematical logic, number theory, automata theory, tree languages and series, algebraic semantics, and fuzzy languages. Since 1982 -- at the Aristotle University of Thessaloniki -- Symeon’s main interests have been closely connected with the algebraic foundations in computer science. In particular, he contributed to the development of the theory of tree languages and series, the axiomatization of graphs, picture theory, and fuzzy languages. The volume contains 15 invited papers, written by colleagues, friends, and students of Symeon. All of the papers were carefully refereed and are connected to his research topics. Most of the papers were presented at the Workshop on Algebraic Foundations in Computer Science, held in Thessaloniki, Greece, during November 7--8, 2011.

Contents


Features

This Festschrift volume is published in honor of Symeon Bozapalidis on the occasion of his retirement after more than 35 years of teaching. The topics covered are: weighted automata over words and trees, tree transducers, quantum automata, graphs, pictures and varieties of semigroups. Since 1982 -- at the Aristotle University of Thessaloniki -- Symeon’s main interests have been closely connected with [..]

Fields of interest

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

Target groups

Research

Type of publication

Contributed volume

Due: November 21, 2011

Algorithmic Decision Theory


This book constitutes the refereed proceedings of the Second International Conference on Algorithmic Decision Theory, ADT 2011, held in Piscataway, NJ, USA, in October 2011. The 24 revised full papers presented were carefully reviewed and selected from 50 submissions.

Features

This book constitutes the refereed proceedings of the Second International Conference on Algorithmic Decision Theory, ADT 2011, held in Piscataway, NJ, USA, in October 2011. The 24 revised full papers presented were carefully reviewed and selected from 50 submissions.

Fields of interest

Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; Information Systems Applications (incl.Internet); Probability and Statistics in Computer Science; Computer Communication Networks; Programming Techniques

Target groups

Research

Type of publication

Proceedings

Due: November 2, 2011


$83.00
ISBN 978-3-642-24872-6
Algorithms and Architectures for Parallel Processing, Part I
11th International Conference, ICA3PP 2011, Melbourne, Australia, October 24-26, 2011, Proceedings, Part I

This two volume set LNCS 7016 and LNCS 7017 constitutes the refereed proceedings of the 11th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2011, held in Melbourne, Australia, in October 2011. The first volume presents 24 revised regular papers and 17 revised short papers together with the abstract of the keynote lecture - all carefully reviewed and selected from 85 initial submissions. The papers cover the many dimensions of parallel algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental results, and commercial components and systems and focus on two broad areas of parallel and distributed computing, i.e., architectures, algorithms and networks, and systems and applications.

Features
This two volume set LNCS 7016 and LNCS 7017 constitutes the refereed proceedings of the 11th International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2011, held in Melbourne, Australia, in October 2011. The first volume presents 24 revised regular papers and 17 revised short papers together with the abstract of the keynote lecture - all carefully reviewed and selected from 85 initial submissions. The papers cover the many dimensions of parallel algorithms and architectures, encompassing fundamental theoretical approaches, practical experimental results, and commercial components and systems and focus on two broad areas of parallel and distributed computing, i.e., architectures, algorithms and networks, and systems and applications.

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

Target groups
Research

Type of publication
Proceedings

Due: November 2011


$107.00
ISBN 978-3-642-24649-4
An Investigation into the Detection and Mitigation of Denial of Service (DoS) Attacks

Critical Information Infrastructure Protection

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

Features
The problem of Denial of Service is now so pervasive that virtually every computer connected to a network has the potential to be affected in some way. As things stand DoS and DDoS attacks present significant challenges to the continued use of the Internet for critical communications. The aim of this publication is to report on a collaborative research project into DoS and DDoS attacks undertaken jointly by [...]
Communications and Multimedia Security

This book constitutes the refereed proceedings of the 12th IFIP TC 6/TC 11 International Conference on Communications and Multimedia Security, CMS 2011, held in Ghent, Belgium, in October 2011. The 26 revised papers presented were carefully reviewed and selected from 52 submissions. The papers are organized in topical sections on usability, architecture and framework security, mobile identity management, secure hardware platforms, biometrics, multimedia security, network security and authentication.

Features
This book constitutes the refereed proceedings of the 12th IFIP TC 6/TC 11 International Conference on Communications and Multimedia Security, CMS 2011, held in Ghent, Belgium, in October 2011. The 26 revised papers presented were carefully reviewed and selected from 52 submissions. The papers are organized in topical sections on usability, architecture and framework security, mobile identity management, secure hardware platforms, biometrics, multimedia security, network security and authentication.

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

Target groups
Research

Type of publication
Proceedings

Due: November 2, 2011

2011, XIV, 257 p. 70 illus. (Security and Cryptology, Vol. 7025) Softcover

$94.00
ISBN 978-3-642-24711-8

Computational Complexity
Theory, Techniques, and Applications

Complex systems are systems that comprise many interacting parts with the ability to generate a new quality of collective behavior through self-organization, e.g. the spontaneous formation of temporal, spatial or functional structures. These systems are often characterized by extreme sensitivity to initial conditions as well as emergent behavior that are not readily predictable or even completely deterministic. The recognition that the collective behavior of the whole system cannot be simply inferred from an understanding of the behavior of the individual components has led to the development of numerous sophisticated new computational and modeling tools with applications to a wide range of scientific, engineering, and societal phenomena. Computational Complexity: Theory, Techniques and Applications presents a detailed and integrated view of the theoretical basis, computational methods, and state-of-the-art approaches to investigating and modeling of inherently difficult problems whose solution[...]

Features
Complex systems are systems that comprise many interacting parts with the ability to generate a new quality of collective behavior through self-organization, e.g. the spontaneous formation of temporal, spatial or functional structures. These systems are often characterized by extreme sensitivity to initial conditions as well as emergent behavior that are not readily predictable or even completely [...]
Computer Analysis of Human Behavior

This book provides a broad survey of advanced pattern recognition techniques for human behavior analysis. Clearly structured, the book begins with concise coverage of the major concepts, before introducing the most frequently used techniques and algorithms in detail, and then discussing examples of real applications. Features: contains contributions from an international selection of experts in the field; presents a thorough introduction to the fundamental topics of human behavior analysis; investigates methods for activity recognition, including gait and posture analysis, hand gesture analysis, and semantics of human behavior in image sequences; provides an accessible psychological treatise on social signals for the analysis of social behaviors; discusses voice and speech analysis, combined audiovisual cues, and social interactions and group dynamics; examines applications in different research fields; each chapter concludes with review questions, a summary of the topics covered, and a glossary.

Features
Computer analysis of human behavior opens up possibilities of advanced applications in a wide range of diverse areas. Computer Analysis of Human Behavior presents the key issues and computational tools which will form the foundation of such future applications. With dedicated chapters on both methodology and applications, this essential text/reference provides a broad survey of advanced pattern recognition techniques for human behavior analysis.

Contents

Fields of interest
User Interfaces and Human Computer Interaction - Pattern Recognition - Computer Appl. in Social and Behavioral Sciences

Target groups
Graduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2011. XV, 409 p. 117 illus., 86 in color. Hardcover

$89.95
Computing with Spatial Trajectories

Spatial trajectories have been bringing the unprecedented wealth to a variety of research communities. A spatial trajectory records the paths of a variety of moving objects, such as people who log their travel routes with GPS trajectories. The field of moving objects related research has become extremely active within the last few years, especially with all major database and data mining conferences and journals. Computing with Spatial Trajectories introduces the algorithms, technologies, and systems used to process, manage and understand existing spatial trajectories for different applications. This book also presents an overview on both fundamentals and the state-of-the-art research inspired by spatial trajectory data, as well as a special focus on trajectory pattern mining, spatio-temporal data mining and location-based social networks. Each chapter provides readers with a tutorial-style introduction to one important aspect of location trajectory computing, case studies and many valuable[...]

Features

Contents
Part I Foundations.- Trajectory Preprocessing.- Trajectory Indexing and Retrieval.- Part II Advanced Topics.- Uncertainty in Spatial Trajectories.- Privacy of Spatial Trajectories.- Trajectory Pattern Mining.- Activity Recognition from Trajectory Data.- Trajectory Analysis for Driving.- Location-Based Social Networks: Users.- Location-Based Social Networks: Locations.

Fields of interest
Database Management; Geographical Information Systems / Cartography; Data Mining and Knowledge Discovery; Computer Imaging, Vision, Pattern Recognition and Graphics; Pattern Recognition; Information Storage and Retrieval

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2011, XXV, 308 p. 151 illus. Hardcover
$129.00

Critical Infrastructure Protection V

The information infrastructure—comprising computers, embedded devices, networks and software systems—is vital to day-to-day operations in every sector: information and telecommunications, banking and finance, energy, chemicals and hazardous materials, agriculture, food, water, public health, emergency services, transportation, postal and shipping, government and defense. Global business and industry, governments, indeed society itself, cannot function effectively if major components of the critical information infrastructure are degraded, disabled or destroyed. Critical Infrastructure Protection V describes original research results and innovative applications in the interdisciplinary field of critical infrastructure protection. Also, it highlights the importance of weaving science, technology and policy in crafting sophisticated, yet practical, solutions that will help secure information, computer and network assets in the various critical infrastructure sectors. Areas of coverage include:[...]

Features

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

Target groups
Research

Type of publication
Proceedings

Due: November 11, 2011

2011, XIV, 216 p. 79 illus. IFIP Advances in Information and Communication Technology, Vol. 367) Hardcover
$109.00
ISBN 978-3-642-24863-4
Dependable and Historic Computing
Essays Dedicated to Brian Randell on the Occasion of his 75th Birthday

This Festschrift volume, published in honor of Brian Randell on the occasion of his 75th birthday, contains a total of 37 refereed contributions. Two biographical papers are followed by the six invited papers that were presented at the conference ‘Dependable and Historic Computing: The Randell Tales’, held during April 7-8, 2011 at Newcastle University, UK. The remaining contributions are authored by former scientific colleagues of Brian Randell. The papers focus on the core of Brian Randell’s work: the development of computing science and the study of its history. Moreover, his wider interests are reflected and so the collection comprises papers on software engineering, storage fragmentation, computer architecture, programming languages and dependability. There is even a paper that echoes Randell’s love of maps. After an early career with English Electric and then with IBM in New York and California, Brian Randell joined Newcastle University. His main research has been on dependable computing in all [...]
Direct and Large-Eddy Simulation VIII

This volume continues previous DLES proceedings books, presenting modern developments in turbulent flow research. It is comprehensive in its coverage of numerical and modeling techniques for fluid mechanics. After Surrey in 1994, Grenoble in 1996, Cambridge in 1999, Enschede in 2001, Munich in 2003, Poitiers in 2005, and Trieste in 2009, the 8th workshop, DLES8, was held in Eindhoven, The Netherlands, again under the auspices of ERCOFTAC. Following the spirit of the series, the goal of this workshop is to establish a state-of-the-art of DNS and LES techniques for the computation and modeling of transitional/turbulent flows covering a broad scope of topics such as aerodynamics, acoustics, combustion, multiphase flows, environment, geophysics and bio-medical applications. This gathering of specialists in the field was a unique opportunity for discussions about the more recent advances in the prediction, understanding and control of turbulent flows in academic or industrial situations.

Features

This volume continues previous DLES proceedings books, presenting modern developments in turbulent flow research. It is comprehensive in its coverage of numerical and modeling techniques for fluid mechanics. After Surrey in 1994, Grenoble in 1996, Cambridge in 1999, Enschede in 2001, Munich in 2003, Poitiers in 2005, and Trieste in 2009, the 8th workshop, DLES8, was held in Eindhoven, The Netherlands, again [...]
Flexible Query Answering Systems

This book constitutes the refereed proceedings of the 9th International Conference on Flexible Query Answering Systems, FQAS 2011, held in Roskilde, Denmark, in October 2011. The 43 papers included in this volume were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on logical approaches to flexible querying, fuzzy logic in spatial and temporal data modeling and querying, knowledge-based approaches, multimedia, data fuzziness, reliability and trust, information retrieval, preference queries, flexible querying of graph data, ranking, ordering and statistics, query recommendation and interpretation, as well as on fuzzy databases and applications (8 papers presented in a special session).

Features
This book constitutes the refereed proceedings of the 9th International Conference on Flexible Query Answering Systems, FQAS 2011, held in Roskilde, Denmark, in October 2011. The 43 papers included in this volume were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on logical approaches to flexible querying, fuzzy logic in spatial and temporal data [...]

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

Target groups
Research

Type of publication
Proceedings

Due: November 9, 2011


$107.00
ISBN 978-3-642-24763-7

S. Qin, Teesside University, Tees Valley, UK, Z. Qiu, Peking University, China (Eds.)

Formal Methods and Software Engineering

This book constitutes the refereed proceedings of the 13th International Conference on Formal Engineering Methods, ICFEM 2011, held in Durham, UK, October 2011. The 40 revised full papers together with 3 invited talks presented were carefully reviewed and selected from 103 submissions. The papers address all current issues in formal methods and their applications in software engineering. They are organized in topical sections on formal models; model checking and probability; specification and development; security; formal verification; cyber physical systems; event-B; verification, analysis and testing; refinement; as well as theorem proving and rewriting.

Features
This book constitutes the refereed proceedings of the 13th International Conference on Formal Engineering Methods, ICFEM 2011, held in Durham, UK, October 2011. The 40 revised full papers together with 3 invited talks presented were carefully reviewed and selected from 103 submissions. The papers address all current issues in formal methods and their applications in software engineering. They are organized in [...]
Formal Modeling: Actors; Open Systems, Biological Systems

Essays Dedicated to Carolyn Talcott on the Occasion of Her 70th Birthday

This Festschrift volume, published in honor of Carolyn Talcott on the occasion of her 70th birthday, contains a collection of papers presented at a symposium held in Menlo Park, California, USA, in November 2011. Carolyn Talcott is a leading researcher and mentor of international renown among computer scientists. She has made key contributions to a number of areas of computer science including: semantics and verification of programming languages; foundations of actor-based systems; middleware, meta-architectures, and systems; Maude and rewriting logic; and computational biology. The 21 papers presented are organized in topical sections named: Essays on Carolyn Talcott; actors and programming languages; cyberphysical systems; middleware and meta-architectures; formal methods and reasoning tools; and computational biology.

Contents


Fields of interest

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

Target groups

Research

Type of publication

Contributed volume

Due: December 12, 2011

2011. XX, 447 p. 100 illus. (Programming and Software Engineering, Vol. 7000) Softcover

$95.00
ISBN 978-3-642-24932-7

GENETIC PROGRAMMING AND EVOLUTIONARY COMPUTATION

Genetic Programming Theory and Practice IX

These contributions, written by the foremost international researchers and practitioners of Genetic Programming (GP), explore the synergy between theoretical and empirical results on real-world problems, producing a comprehensive view of the state of the art in GP. Topics include: modularity and scalability; evolvability; human-competitive results; the need for important high-impact GP-solvable problems; the risks of search stagnation and of cutting off paths to solutions; the need for novelty; empowering GP search with expert knowledge; In addition, GP symbolic regression is thoroughly discussed, addressing such topics as guaranteed reproducibility of SR; validating SR results, measuring and controlling genotypic complexity; controlling phenotypic complexity; identifying, monitoring, and avoiding over-fitting; finding a comprehensive collection of SR benchmarks, comparing SR to machine learning. This text is for all GP explorers. Readers will discover large-scale, real-world applications of[...]

Features

These contributions, written by the foremost international researchers and practitioners of Genetic Programming (GP), explore the synergy between theoretical and empirical results on real-world problems, producing a comprehensive view of the state of the art in GP. Topics include: modularity and scalability; evolvability; human-competitive results; the need for important high-impact GP-solvable problems; the[...]

Contents

What’s in an evolved name? The evolution of modularity via tag-based Reference.- Let the Games Evolve!.- Novelty Search and the Problem with Objectives.- A fine-grained view of phenotypes and locality in genetic programming.- Evolution of an Effective Brain-Computer Interface Mouse via Genetic Programming with Adaptive Targeted Brain-Computer Interface.- Improved Time Series Prediction and Symbolic Regression with Affine Arithmetic.- Computational Complexity Analysis of Genetic Programming - Initial Results and Future Directions.- Accuracy in Symbolic Regression.- Human-Computer Interaction in a[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Mathematical Applications in Computer Science; Geographical Information Systems / Cartography; Data Mining and Knowledge Discovery; Theory of Computation

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2011. XVI, 168 p. 57 illus. Hardcover

$99.00
ISBN 978-1-4614-1793-4

Geospatial Abduction

Principles and Practice

Imagine yourself as a military officer in a conflict zone trying to identify locations of weapons caches supporting road-side bomb attacks on your country’s troops. Or imagine yourself as a public health expert trying to identify the location of contaminated water that is causing diarrheal diseases in a local population. Geospatial abduction is a new technique introduced by the authors that allows such problems to be solved. Geospatial Abduction provides the mathematics underlying geospatial abduction and the algorithms to solve them in practice; it has wide applicability and can be used by practitioners and researchers in many different fields. Real-world applications of geospatial abduction to military problems are included. Compelling examples drawn from other domains as diverse as criminology, epidemiology and archaeology are covered as well. This book also includes access to a dedicated website on geospatial abduction hosted by University of Maryland. Geospatial Abduction targets[...]

Fields of interest

Artificial Intelligence (incl. Robotics); Engineering (incl. Robotics); Mathematical Applications in Computer Science; Geographical Information Systems / Cartography; Data Mining and Knowledge Discovery; Theory of Computation

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2011. XXVI, 168 p. 57 illus., 4 in color. (Genetic and Evolutionary Computation) Hardcover

$99.00
Informatics Engineering and Information Science, Part III


This 4-Volume-Set, CCIS 0251 - CCIS 0254, constitutes the refereed proceedings of the International Conference on Informatics Engineering and Information Science, ICIEIS 2011, held in Kuala Lumpur, Malaysia, in November 2011. The 210 revised full papers presented together with invited papers in the 4 volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on e-learning, information security, software engineering, image processing, algorithms, artificial intelligence and soft computing, e-commerce, data mining, neural networks, social networks, grid computing, biometric technologies, networks, distributed and parallel computing, wireless networks, information and data management, web applications and software systems, multimedia, ad hoc networks, mobile computing, as well as miscellaneous topics in digital information and communications.

Features
This 4-Volume-Set, CCIS 0251 - CCIS 0254, constitutes the refereed proceedings of the International Conference on Informatics Engineering and Information Science, ICIEIS 2011, held in Kuala Lumpur, Malaysia, in November 2011. The 210 revised full papers presented together with invited papers in the 4 volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on e-learning, information security, software engineering, image processing, algorithms, artificial intelligence and soft computing, e-commerce, data mining, neural networks, social networks, grid computing, biometric technologies, networks, distributed and parallel computing, wireless networks, information and data management, web applications and software systems, multimedia, ad hoc networks, mobile computing, as well as miscellaneous topics in digital information and communications.

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

Target groups
Research

Type of publication
Proceedings

Due: November 21, 2011


$143.00
ISBN 978-3-642-25461-1

Informatics Engineering and Information Science, Part II


This 4-Volume-Set, CCIS 0251 - CCIS 0254, constitutes the refereed proceedings of the International Conference on Informatics Engineering and Information Science, ICIEIS 2011, held in Kuala Lumpur, Malaysia, in November 2011. The 210 revised full papers presented together with invited papers in the 4 volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on e-learning, information security, software engineering, image processing, algorithms, artificial intelligence and soft computing, e-commerce, data mining, neural networks, social networks, grid computing, biometric technologies, networks, distributed and parallel computing, wireless networks, information and data management, web applications and software systems, multimedia, ad hoc networks, mobile computing, as well as miscellaneous topics in digital information and communications.

Features
This 4-Volume-Set, CCIS 0251 - CCIS 0254, constitutes the refereed proceedings of the International Conference on Informatics Engineering and Information Science, ICIEIS 2011, held in Kuala Lumpur, Malaysia, in November 2011. The 210 revised full papers presented together with invited papers in the 4 volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on e-learning, information security, software engineering, image processing, algorithms, artificial intelligence and soft computing, e-commerce, data mining, neural networks, social networks, grid computing, biometric technologies, networks, distributed and parallel computing, wireless networks, information and data management, web applications and software systems, multimedia, ad hoc networks, mobile computing, as well as miscellaneous topics in digital information and communications.

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

Target groups
Research

Type of publication
Proceedings

Due: November 21, 2011

2011. XXIV, 751 p. (Communications in Computer and Information Science, Vol. 252) Softcover

$143.00
ISBN 978-3-642-25452-9

Informatics Engineering and Information Science, Part IV


This 4-Volume-Set, CCIS 0251 - CCIS 0254, constitutes the refereed proceedings of the International Conference on Informatics Engineering and Information Science, ICIEIS 2011, held in Kuala Lumpur, Malaysia, in November 2011. The 210 revised full papers presented together with invited papers in the 4 volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on e-learning, information security, software engineering, image processing, algorithms, artificial intelligence and soft computing, e-commerce, data mining, neural networks, social networks, grid computing, biometric technologies, networks, distributed and parallel computing, wireless networks, information and data management, web applications and software systems, multimedia, ad hoc networks, mobile computing, as well as miscellaneous topics in digital information and communications.

Features
This 4-Volume-Set, CCIS 0251 - CCIS 0254, constitutes the refereed proceedings of the International Conference on Informatics Engineering and Information Science, ICIEIS 2011, held in Kuala Lumpur, Malaysia, in November 2011. The 210 revised full papers presented together with invited papers in the 4 volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on e-learning, information security, software engineering, image processing, algorithms, artificial intelligence and soft computing, e-commerce, data mining, neural networks, social networks, grid computing, biometric technologies, networks, distributed and parallel computing, wireless networks, information and data management, web applications and software systems, multimedia, ad hoc networks, mobile computing, as well as miscellaneous topics in digital information and communications.

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

Target groups
Research

Type of publication
Proceedings

Due: November 21, 2011

2011. XXV, 524 p. (Communications in Computer and Information Science, Vol. 254) Softcover

$119.00
ISBN 978-3-642-25482-6
Informatics in Schools: Contributing to 21st Century Education

5th International Conference, ISSEP 2011, Bratislava, Slovakia, October 26-29, 2011, Proceedings

This book constitutes the refereed proceedings of the 5th International Conference on Informatics in Schools: Situation, Evolution and Perspectives, ISSEP 2011, held in Bratislava, Slovakia, in October 2011. The 20 revised full papers presented were carefully reviewed and selected from 69 submissions. A broad variety of topics related to teaching informatics in schools is addressed ranging from national experience reports to pedagogical and methodological issues. The papers are organized in topical sections on informatics education - the spectrum of options, national perspectives, outreach programmes, teacher education, informatics in primary schools, advanced concepts of informatics in schools, as well as competitions and exams.

Features
This book constitutes the refereed proceedings of the 5th International Conference on Informatics in Schools: Situation, Evolution and Perspectives, ISSEP 2011, held in Bratislava, Slovakia, in October 2011. The 20 revised full papers presented were carefully reviewed and selected from 69 submissions. A broad variety of topics related to teaching informatics in schools is addressed ranging from national [...]
Modern Transport Telematics

11th International Conference on Transport Systems Telematics, TST 2011, Katowice-Ustron, Poland, October 19-22, 2011, Selected Papers

This book constitutes the proceedings of the 11th International Conference on Transport Systems Telematics, TST 2011, held in Katowice-Ustron, Poland, in October 2011. The 47 papers included in this volume were carefully reviewed and selected for inclusion in this book. Transport telematics systems are information technologies that are used in the field of transport, including infrastructure, vehicles and users. Intelligent transport systems are advanced applications that are to provide innovative services for the various modes of transport and traffic management. Also they should enable users to be better informed and make safer, more coordinated and smarter use of transport networks. Telematics services integrate telecommunications, electronics and information technology in transport engineering in order to plan, design, operate, maintain and manage transport systems.

Features
This book constitutes the proceedings of the 11th International Symposium on Integrated Uncertainty in Knowledge Modeling and Decision Making, IUKM 2011, held in Hangzhou, China, in October 2011. The 21 revised full papers presented together with 1 keynote lecture and 5 invited talks were carefully reviewed and selected from 55 submissions. The papers provide a wealth of new ideas and report both theoretical and applied research on integrated uncertainty modeling and management.

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

Target groups
Research

Type of publication
Proceedings

Due: November 4, 2011

2011. XII, 272 p. (Lecture Notes in Artificial Intelligence, Vol. 7027) Softcover

$72.00
ISBN 978-3-642-24917-4

Motion in Games


This book constitutes the proceedings of the 4th International Workshop on Motion in Games, held in Edinburgh, UK, in November 2011. The 30 revised full papers presented together with 8 revised poster papers in this volume were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on character animation, motion synthesis, physically-based character motion, behavior animation, animation systems, crowd simulation, as well as path planning and navigation.

Fields of interest
Computer Imaging, Vision, Pattern Recognition and Graphics; Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction; Simulation and Modeling; Algorithm Analysis and Problem Complexity

Target groups
Research

Type of publication
Proceedings

Due: November 25, 2011

2011. XIV, 418 p. 176 illus. (Communications in Computer and Information Science, Vol. 239) Softcover

$107.00
ISBN 978-3-642-24659-3
Neural Information Processing
18th International Conference, ICONIP 2011, Shanghai, China, November 13-17, 2011, Proceedings, Part I

The three volume set LNCS 7062, LNCS 7063, and LNCS 7064 constitutes the proceedings of the 18th International Conference on Neural Information Processing, ICONIP 2011, held in Shanghai, China, in November 2011. The 262 regular session papers presented were carefully reviewed and selected from numerous submissions. The papers of part I are organized in topical sections on perception, emotion and development, bioinformatics, biologically inspired vision and recognition, bio-medical data analysis, brain signal processing, brain-computer interfaces, brain-like systems, brain-realistic models for learning, memory and embodied cognition, Clifford algebraic neural networks, combining multiple learners, computational advances in bioinformatics, and computational-intelligent human computer interaction. The second volume is structured in topical sections on cybersecurity and data mining workshop, data mining and knowledge discovery, evolutionary design and optimisation, graphical models, human-originated[...]

Features
The three volume set LNCS 7062, LNCS 7063, and LNCS 7064 constitutes the proceedings of the 18th International Conference on Neural Information Processing, ICONIP 2011, held in Shanghai, China, in November 2011. The 262 regular session papers presented were carefully reviewed and selected from numerous submissions. The papers of part I are organized in topical sections on perception, emotion and [...] Fields of interest
Computation by Abstract Devices; Artificial Intelligence (incl. Robotics); Pattern Recognition; Data Mining and Knowledge Discovery; Simulation and Modeling; Image Processing and Computer Vision

Target groups
Research

Type of publication
Proceedings

Due: November 21, 2011

$131.00
ISBN 978-3-642-24954-9

Neural Information Processing
18th International Conference, ICONIP 2011, Shanghai, China, November 13-17, 2011, Proceedings, Part II

The three volume set LNCS 7062, LNCS 7063, and LNCS 7064 constitutes the proceedings of the 18th International Conference on Neural Information Processing, ICONIP 2011, held in Shanghai, China, in November 2011. The 262 regular session papers presented were carefully reviewed and selected from numerous submissions. The papers of part I are organized in topical sections on perception, emotion and development, bioinformatics, biologically inspired vision and recognition, bio-medical data analysis, brain signal processing, brain-computer interfaces, brain-like systems, brain-realistic models for learning, memory and embodied cognition, Clifford algebraic neural networks, combining multiple learners, computational advances in bioinformatics, and computational-intelligent human computer interaction. The second volume is structured in topical sections on cybersecurity and data mining workshop, data mining and knowledge discovery, evolutionary design and optimisation, graphical models, human-originated[...]

Features
The three volume set LNCS 7062, LNCS 7063, and LNCS 7064 constitutes the proceedings of the 18th International Conference on Neural Information Processing, ICONIP 2011, held in Shanghai, China, in November 2011. The 262 regular session papers presented were carefully reviewed and selected from numerous submissions. The papers of part I are organized in topical sections on perception, emotion and [...] Fields of interest
Computation by Abstract Devices; Artificial Intelligence (incl. Robotics); Pattern Recognition; Data Mining and Knowledge Discovery; Simulation and Modeling; Image Processing and Computer Vision

Target groups
Research

Type of publication
Proceedings

Due: November 21, 2011

$131.00
ISBN 978-3-642-24953-2

Neural Information Processing
18th International Conference, ICONIP 2011, Shanghai, China, November 13-17, 2011, Proceedings, Part III

The three volume set LNCS 7062, LNCS 7063, and LNCS 7064 constitutes the proceedings of the 18th International Conference on Neural Information Processing, ICONIP 2011, held in Shanghai, China, in November 2011. The 262 regular session papers presented were carefully reviewed and selected from numerous submissions. The papers of part I are organized in topical sections on perception, emotion and development, bioinformatics, biologically inspired vision and recognition, bio-medical data analysis, brain signal processing, brain-computer interfaces, brain-like systems, brain-realistic models for learning, memory and embodied cognition, Clifford algebraic neural networks, combining multiple learners, computational advances in bioinformatics, and computational-intelligent human computer interaction. The second volume is structured in topical sections on cybersecurity and data mining workshop, data mining and knowledge discovery, evolutionary design and optimisation, graphical models, human-originated[...]

Features
The three volume set LNCS 7062, LNCS 7063, and LNCS 7064 constitutes the proceedings of the 18th International Conference on Neural Information Processing, ICONIP 2011, held in Shanghai, China, in November 2011. The 262 regular session papers presented were carefully reviewed and selected from numerous submissions. The papers of part I are organized in topical sections on perception, emotion and [...] Fields of interest
Computation by Abstract Devices; Artificial Intelligence (incl. Robotics); Pattern Recognition; Data Mining and Knowledge Discovery; Simulation and Modeling; Image Processing and Computer Vision

Target groups
Research

Type of publication
Proceedings

Due: November 21, 2011

$131.00
ISBN 978-3-642-24955-6
New Studies in Global IT and Business Services Outsourcing

5th Global Sourcing Workshop 2011, Courchevel, France, March 14-17, 2011. Revised Selected Papers

This book contains 11 carefully revised and selected papers from the 5th Workshop on Global Sourcing, held in Courchevel, France, March 14-17, 2011. They have been gleaned from a vast empirical base brought together by leading researchers in information systems, strategic management, and operations. This volume is intended for use by students, academics, and practitioners interested in the outsourcing and offshoring of information technology and business processes. It offers a review of the key topics in outsourcing and offshoring, populated with practical frameworks that serve as a tool kit for students and managers. The topics discussed combine theoretical and practical insights, and they are extensively illustrated by case studies from client and vendor organizations. Last but not least, the book examines current and future trends in outsourcing and offshoring, paying particular attention to how innovation can be realized in global or outsourced software development environments.

Features
This book contains 11 carefully revised and selected papers from the 5th Workshop on Global Sourcing, held in Courchevel, France, March 14-17, 2011. They have been gleaned from a vast empirical base brought together by leading researchers in information systems, strategic management, and operations. This volume is intended for use by students, academics, and practitioners interested in the outsourcing of business services.

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

Target groups
Research

Type of publication
Proceedings

Due: November 22, 2011

Pattern Recognition in Bioinformatics


This book constitutes the refereed proceedings of the 6th International Conference on Pattern Recognition in Bioinformatics, PRIB 2011, held in Delft, The Netherlands, in November 2011. The 29 revised full papers presented were carefully reviewed and selected from 35 submissions. The papers cover the wide range of possible applications of bioinformatics in pattern recognition: novel algorithms to handle traditional pattern recognition problems such as (bi)clustering, classification and feature selection; applications of (novel) pattern recognition techniques to infer and analyze biological networks and studies on specific problems such as biological image analysis and the relation between sequence and structure. They are organized in the following topical sections: clustering, biomarker selection and classification, network inference and analysis, image analysis, and sequence, structure, and interactions.

Features
This book constitutes the refereed proceedings of the 6th International Conference on Pattern Recognition in Bioinformatics, PRIB 2011, held in Delft, The Netherlands, in November 2011. The 29 revised full papers presented were carefully reviewed and selected from 35 submissions. The papers cover the wide range of possible applications of bioinformatics in pattern recognition: novel algorithms to handle problems such as (bi)clustering, classification, network inference and analysis, image analysis, and sequence, structure, and interactions.

Fields of interest
Computational Biology / Bioinformatics; Health Informatics; Pattern Recognition; Data Mining and Knowledge Discovery; Algorithm Analysis and Problem Complexity; Artificial Intelligence (incl. Robotics)

Target groups
Research

Type of publication
Proceedings

Due: November 16, 2011

Programming for Engineers

A Foundational Approach to Learning C and Matlab

To learn to program is to be initiated into an entirely new way of thinking about engineering, mathematics, and the world in general. Computation is integral to all modern engineering disciplines, so the better you are at programming, the better you will be in your chosen field. The author departs radically from the typical presentation by teaching concepts and techniques in a rigorous manner rather than listing how to use libraries and functions. He presents pointers in the very first chapter as part of the development of a computational model that facilitates an ab initio presentation of subjects such as function calls, call-by-reference, arrays, the stack, and the heap. The model also allows students to practice the essential skill of memory manipulation throughout the entire course rather than just at the end. As a result, this textbook goes further than is typical for a one-semester course -- abstract data types and linked lists, for example, are covered in depth. The computational model will.[…]

Features
To learn to program is to be initiated into an entirely new way of thinking about engineering, mathematics, and the world in general. Computation is integral to all modern engineering disciplines, so the better you are at programming, the better you will be in your chosen field. The author departs radically from the typical presentation by teaching concepts and techniques in a rigorous manner.[…]

Contents

Fields of interest
Software Engineering / Programming and Operating Systems; Electrical Engineering; Data Structures, Cryptology and Information Theory; Mathematics of Computing

Target groups
Upper undergraduate

Type of publication
Undergraduate textbook

Usually dispatched within 3 to 5 business days

Due: November 16, 2011

A.R. Bradley, University of Colorado, Boulder, CO, USA

2011. XII, 325 p. 27 Illus. Hardcover

$69.95
ISBN 978-3-642-23302-9
Progress in Artificial Intelligence

This book contains a selection of higher quality and reviewed papers of the 15th Portuguese Conference on Artificial Intelligence, EPiA 2011, held in Lisbon, Portugal, in October 2011. The 50 revised full papers presented were carefully reviewed and selected from a total of 203 submissions. The papers are organized in topical sections on affective computing, ambient intelligence environments, artificial intelligence methodologies for games, artificial intelligence in transportation systems, artificial life evolutionary algorithms, computational logic with applications, general artificial intelligence, intelligent robotics, knowledge discovery and business intelligence, multi-agent systems: theory and applications, social simulation and modeling, text mining and applications, and doctoral symposium on artificial intelligence.

Features
This book contains a selection of higher quality and reviewed papers of the 15th Portuguese Conference on Artificial Intelligence, EPiA 2011, held in Lisbon, Portugal, in October 2011. The 50 revised full papers presented were carefully reviewed and selected from a total of 203 submissions. The papers are organized in topical sections on affective computing, ambient intelligence environments, artificial intelligence environments, artificial intelligence methodologies for games, artificial intelligence in transportation systems, artificial life evolutionary algorithms, computational logic with applications, general artificial intelligence, intelligent robotics, knowledge discovery and business intelligence, multi-agent systems: theory and applications, social simulation and modeling, text mining and applications, and doctoral symposium on artificial intelligence.

Fields of interest
Artificial Intelligence (incl. Robotics); Information Systems Applications (incl.Internet); Simulation and Modeling; Computer Imaging, Vision, Pattern Recognition and Graphics; Data Mining and Knowledge Discovery; Database Management

Target groups
Research

Type of publication
Proceedings

Due: October 27, 2011


$131.00
ISBN 978-3-642-24768-2

Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications
16th Iberoamerican Congress on Pattern Recognition, CIARP 2011, Pucon, Chile, November 15-18, 2011. Proceedings

This book constitutes the refereed proceedings of the 16th Iberoamerican Congress on Pattern Recognition, CIARP 2011, held in Pucon, Chile, in November 2011. The 81 revised full papers presented together with 3 keynotes were carefully reviewed and selected from numerous submissions. Topics of interest covered are image processing, restoration and segmentation; computer vision; clustering and artificial intelligence; pattern recognition and classification; applications of pattern recognition; and Chilean Workshop on Pattern Recognition.

Features
This book constitutes the refereed proceedings of the 16th Iberoamerican Congress on Pattern Recognition, CIARP 2011, held in Pucon, Chile, in November 2011. The 81 revised full papers presented together with 3 keynotes were carefully reviewed and selected from numerous submissions. Topics of interest covered are image processing, restoration and segmentation; computer vision; clustering and artificial intelligence.

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

Target groups
Research

Type of publication
Proceedings

Due: December 23, 2011


$131.00
ISBN 978-3-642-25084-2

Quality-Based Content Delivery over the Internet
"Quality-Based Content Delivery over the Internet" mainly discusses the methodology of doing quality-based content delivery in an Internet environment. Because the network is becoming intelligent and active, more and more researchers are talking about achieving personalization and customization in Internet content delivery. As researchers are aware, by introducing intelligence into a web intermediary server, they can make the content delivery more efficient and of higher quality. Still, the detailed methodology of doing so is never illustrated fully. The most critical part will be the active content transformation model. This book gives a detailed description of the active content transformation model, and provides experiments and data to show its feasibility. Some examples of how to do efficient content transformation in active web intermediary to achieve high quality are also presented to help understand the whole process. The book is an introduction and excellent reference for researchers in the[...]

Features
"Quality-Based Content Delivery over the Internet" mainly discusses the methodology of doing quality-based content delivery in an Internet environment. Because the network is becoming intelligent and active, more and more researchers are talking about achieving personalization and customization in Internet content delivery. As researchers are aware, by introducing intelligence into a web intermediary [...]

Contents

Fields of interest
Computer Systems Organization and Communication Networks; Computer Communication Networks; Computer System Implementation

Target groups
Research

Type of publication
Monograph

Due: October 29, 2011

2011. 275 p. 30 illus. Hardcover

$109.00
ISBN 978-3-642-19145-9
Quantum Interaction

5th International Symposium, QI 2011, Aberdeen, UK, June 26-29, 2011, Revised Selected Papers

This book constitutes the thoroughly refereed post-conference proceedings of the 5th International Symposium on Quantum Interaction, QI 2011, held in Aberdeen, UK, in June 2011. The 26 revised full papers and 6 revised poster papers, presented together with 1 tutorial and 1 invited talk were carefully reviewed and selected from numerous submissions during two rounds of reviewing and improvement. The papers show the cross-disciplinary nature of quantum interaction covering topics such as computation, cognition, mechanics, social interaction, semantic space and information representation and retrieval.

Features

This book constitutes the thoroughly refereed post-conference proceedings of the 5th International Symposium on Quantum Interaction, QI 2011, held in Aberdeen, UK, in June 2011. The 26 revised full papers and 6 revised poster papers, presented together with 1 tutorial and 1 invited talk were carefully reviewed and selected from numerous submissions during two rounds of reviewing and improvement. The [...]
Rule-Based Modeling and Computing on the Semantic Web

5th International Symposium, RuleML 2011 - America, Ft. Lauderdale, FL, USA, November 3-5, 2011, Proceedings

This book constitutes the refereed proceedings of the International RuleML Symposium, RuleML 2011 - America, held in Fort Lauderdale, FL, USA, in November 2011 - collocated with the 22nd International Joint Conference on Artificial Intelligence, IJCAI 2011. It is the second of two RuleML Symposium, RuleML 2011 - Europe, has been held in Barcelona, Spain, in July 2011. The 12 full papers, 5 short papers and 5 invited track and position papers presented together with 3 keynote speeches were carefully reviewed and selected from numerous submissions. The accepted papers address a wide range of rules, semantic technology, and cross-industry standards, rules and automated reasoning, rule-based event processing and reaction rules, vocabularies, ontologies and business rules, cloud computing and rules, clinical semantics and rules.

Features
This book constitutes the refereed proceedings of the International RuleML Symposium, RuleML 2011 - America, held in Fort Lauderdale, FL, USA, in November 2011 - collocated with the 22nd International Joint Conference on Artificial Intelligence, IJCAI 2011. It is the second of two RuleML Symposium, RuleML 2011 - Europe, has been held in Barcelona, Spain, in July […]

Fields of interest
Information Systems Applications (incl.Internet); Artificial Intelligence (incl. Robotics); Computer Communication Networks; Software Engineering; Programming Techniques; Database Management

Target groups
Research

Type of publication
Proceedings

Due: November 10, 2011

Semantic Web Services for Web Databases

Semantic Web Services for Web Databases introduces an end-to-end framework for querying Web databases using novel Web service querying techniques. This includes a detailed framework for the query infrastructure for Web databases and services. Case studies are covered in the last section of this book. Semantic Web Services For Web Databases is designed for practitioners and researchers focused on service-oriented computing and Web databases.

Features
 Semantic Web Services for Web Databases introduces an end-to-end framework for querying Web databases using novel Web service querying techniques. This includes a detailed framework for the query infrastructure for Web databases and services. Case studies are covered in the last section of this book. Semantic Web Services For Web Databases is designed for practitioners and researchers focused on service-oriented computing and Web databases.

Fields of interest
Databases.- Conclusions, Open Issues, and Future Directions.

Contents

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

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2011. XXI, 134 p. 33 illus. Hardcover
$99.00

Social Informatics

Third International Conference, SocInfo 2011, Singapore, October 6-8, 2011, Proceedings

This book constitutes the proceedings of the Third International Conference on Social Informatics, SocInfo 2011, held in Singapore in October 2011. The 15 full papers, 8 short papers and 13 posters included in this volume were carefully reviewed and selected from 68 full paper and 13 poster submissions. The papers are organized in topical sections named: network analysis; eGovernance and knowledge management; applications of network analysis; community dynamics; case studies; trust, privacy and security; peer-production.

Features
This book constitutes the proceedings of the Third International Conference on Social Informatics, SocInfo 2011, held in Singapore in October 2011. The 15 full papers, 8 short papers and 13 posters included in this volume were carefully reviewed and selected from 68 full paper and 13 poster submissions. The papers are organized in topical sections named: network analysis; eGovernance and knowledge management; […]

Fields of interest
Information Systems Applications (incl.Internet); Computer Communication Networks; Artificial Intelligence (incl. Robotics); Computer Appl. in Social and Behavioral Sciences; User Interfaces and Human Computer Interaction; Data Mining and Knowledge Discovery

Target groups
Research

Type of publication
Proceedings

Due: November 3, 2011

$83.00
ISBN 978-3-642-24703-3
Software Engineering and Formal Methods

9th International Conference, SEFM 2011, Montevideo, Uruguay, November 14-18, 2011, Proceedings

This book constitutes the refereed proceedings of the 9th International Conference on Software Engineering and Formal Methods, SEFM 2011, held in Montevideo, Uruguay, in November 2011. The 22 revised regular papers presented together with 1 short paper, 2 tool papers, and 4 keynote talks were carefully reviewed and selected from 105 initial abstracts and 85 full submissions. Besides the regular session the conference held a special track devoted to “Modeling for Sustainable Development” with 5 accepted papers - selected from 7 submissions - that are also part of this volume. The aim of SEFM is to advance the state of the art in formal methods, to scale up their application in software industry and to encourage their integration with practical engineering methods.

Features

This book constitutes the refereed proceedings of the 9th International Conference on Software Engineering and Formal Methods, SEFM 2011, held in Montevideo, Uruguay, in November 2011. The 22 revised regular papers presented together with 1 short paper, 2 tool papers, and 4 keynote talks were carefully reviewed and selected from 105 initial abstracts and 85 full submissions. Besides the regular session the [...] fields of interest:

- Software Engineering
- Logics and Meanings of Programs
- Programming Languages
- Compilers
- Interpreters
- Programming Techniques
- Computer Communication Networks
- Artificial Intelligence (incl. Robotics)

Target groups

- Research

Type of publication

Proceedings

Due: November 21, 2011


$107.00
ISBN 978-3-642-24689-0

String Processing and Information Retrieval

18th International Symposium, SPIRE 2011, Pisa, Italy, October 17-21, 2011, Proceedings

This book constitutes the proceedings of the 18th International Symposium on String Processing and Information Retrieval, SPIRE 2011, held in Pisa, Italy, in October 2011. The 30 long and 10 short papers together with 1 keynote presented were carefully reviewed and selected from 102 submissions. The papers are structured in topical sections on introduction to web retrieval, sequence learning, computational geometry, space-efficient data structures, algorithmic analysis of biological data, compression, text and algorithms.

Features

This book constitutes the proceedings of the 18th International Symposium on String Processing and Information Retrieval, SPIRE 2011, held in Pisa, Italy, in October 2011. The 30 long and 10 short papers together with 1 keynote presented were carefully reviewed and selected from 102 submissions. The papers are structured in topical sections on introduction to web retrieval, sequence learning, computational [...] fields of interest:

- Information Storage and Retrieval
- Computational Biology / Bioinformatics
- Data Mining and Knowledge Discovery
- Database Management
- Pattern Recognition
- Information Systems Applications (incl. Internet)

Target groups

- Research

Type of publication

Proceedings

Due: October 31, 2011


$95.00
ISBN 978-3-642-24582-4

Teaching and Learning in Information Retrieval

Information Retrieval has become a very active research field in the 21st century. Many from academia and industry present their innovations in the field in a wide variety of conferences and journals. Companies transfer this new knowledge directly to the general public via services such as web search engines in order to improve their information seeking experience. In parallel, teaching IR is turning into an important aspect of IR generally, not only because it is necessary to impart effective search techniques to make the most of the IR tools available, but also because we must provide a good foundation for those students who will become the driving force of future IR technologies. There are very few resources for teaching and learning in IR, the major problem which this book is designed to solve. The objective is to provide ideas and practical experience of teaching and learning IR, for those whose job requires them to teach in one form or another, and where delivering IR courses is a major part [...] features:

- Information Retrieval has become a very active research field in the 21st century. Many from academia and industry present their innovations in the field in a wide variety of conferences and journals. Companies transfer this new knowledge directly to the general public via services such as web search engines in order to improve their information seeking experience. In parallel, teaching IR is turning into [...] contents:

- Introduction
- Fostering Student Engagement in an Online IR Course
- Teaching IR: Curricular Considerations
- Pedagogical Enhancements for Information Retrieval Courses
- Pedagogical Design and Evaluation of Interactive Information Retrieval Learning Environment
- Shifting Contexts: Relating the User, Search and System in Teaching IR
- A Technical Approach to Information Retrieval Pedagogy
- Using Multiple Choice Questions to Assist Learning for Information Retrieval
- Information Retrieval Systems Evaluation: Learning and Teaching Process
- Teaching Web Information Retrieval to Computer

Fields of interest:

- Information Storage and Retrieval
- Computers and Education
- Curriculum Studies

Target groups:

- Research

Type of publication:

Monograph

Usually dispatched within 3 to 5 business days

2011, XV, 213 p. 32 illus. (The Information Retrieval Series, Vol. 31) Hardcover

$99.00
ISBN 978-3-642-22510-9
Testing Software and Systems

This book constitutes the refereed proceedings of the 23rd IFIP WG 6.1 International Conference on Testing Software and Systems, ICTSS 2011, held in Paris, France, in November 2011. The 13 revised full papers presented together with 2 invited talks were carefully selected from 40 submissions. The papers address the conceptual, theoretic, and practical problems of testing software systems, including communication protocols, services, distributed platforms, middleware, controllers, and security infrastructures.

Features
This book constitutes the refereed proceedings of the 23rd IFIP WG 6.1 International Conference on Testing Software and Systems, ICTSS 2011, held in Paris, France, in November 2011. The 13 revised full papers presented together with 2 invited talks were carefully selected from 40 submissions. The papers address the conceptual, theoretic, and practical problems of testing software systems, including communication protocols, services, distributed platforms, middleware, controllers, and security infrastructures.

Fields of interest
Software Engineering; Programming Languages; Compilers, Interpreters; Logics and Meanings of Programs; Mathematical Logic and Formal Languages; Programming Techniques; Models and Principles

Target groups
Research

Type of publication
Proceedings

Due: November 15, 2011

The Block Cipher Companion

Block ciphers encrypt blocks of plaintext, messages, into blocks of ciphertext under the action of a secret key, and the process of encryption is reversed by decryption which uses the same user-supplied key. Block ciphers are fundamental to modern cryptography, in fact they are the most widely used cryptographic primitive – useful in their own right, and in the construction of other cryptographic mechanisms. In this book the authors provide a technically detailed, yet readable, account of the state of the art of block cipher analysis, design, and deployment. The authors first describe the most prominent block ciphers and give insights into their design. They then consider the role of the cryptanalyst, the adversary, and provide an overview of some of the most important cryptanalytic methods. The book will be of value to graduate and senior undergraduate students of cryptography and to professionals engaged in cryptographic design. An important feature of the presentation is the authors' exhaustive [...]"
The Semantic Web -- ISWC 2011


The two-volume set LNCS 7031 and LNCS 7032 constitutes the proceedings of the 10th International Semantic Web Conference, ISWC 2011, held in Bonn, Germany, in October 2011. Part I, LNCS 7031, contains 50 research papers which were carefully reviewed and selected from 264 submissions. The 17 semantic Web in-use track papers contained in part II, LNCS 7032, were selected from 75 submissions. This volume also contains 15 doctoral consortium papers, selected from 31 submissions. The topics covered are: ontologies and semantics; database, IR, and AI technologies for the semantic Web; management of semantic Web data; reasoning over semantic Web data; search, query, integration, and analysis on the semantic Web; robust and scalable knowledge management and reasoning on the Web; interacting with semantic Web data; ontology modularity, mapping, merging and alignment; languages, tools, and methodologies for representing and managing semantic Web data; ontology, methodology, evaluation, reuse, extraction and [...] Features

The two-volume set LNCS 7031 and LNCS 7032 constitutes the proceedings of the 10th International Semantic Web Conference, ISWC 2011, held in Bonn, Germany, in October 2011. Part I, LNCS 7031, contains 50 research papers which were carefully reviewed and selected from 264 submissions. The 17 semantic Web in-use track papers contained in part II, LNCS 7032, were selected from 75 submissions. This volume also contains 15 doctoral consortium papers, selected from 31 submissions. The topics covered are: ontologies and semantics; database, IR, and AI technologies for the semantic Web; management of semantic Web data; reasoning over semantic Web data; search, query, integration, and analysis on the semantic Web; robust and scalable knowledge management and reasoning on the Web; interacting with semantic Web data; ontology modularity, mapping, merging and alignment; languages, tools, and methodologies for representing and managing semantic Web data; ontology, methodology, evaluation, reuse, extraction and [...] Fields of interest

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

Target groups

Research

Type of publication

Proceedings

Due: November 20, 2011


$143.00
ISBN 978-3-642-25072-9

Towards a Service-Based Internet. ServiceWave 2010 Workshops

International Workshops, OCS, EMSOA, SMART, and EDBPM 2010, Ghent, Belgium, December 13-15, 2010, Revised Selected Papers

This book constitutes the refereed proceedings of four workshops held in conjunction with the Third European Conference, ServiceWave 2010, held in Ghent, Belgium, in December 2010. The book includes 23 reviewed papers from four workshops that were selected from eight high-quality workshop session proposals. They represent diverse aspects of the theory and practice of service computing, ranging from service engineering to service infrastructures. The workshops are: First Workshop on Optimising Cloud Services (OCS 2010), International Workshop on Emergency Management through Service-Oriented Architectures (EMSOA 2010), First International Workshop on Service Modelling and Representation Techniques (SMART 2010), and From Event-Driven Business Process Management to Ubiquitous Complex Event Processing (EDBPM 2010).

Features

This book constitutes the refereed proceedings of four workshops held in conjunction with the Third European Conference, ServiceWave 2010, held in Ghent, Belgium, in December 2010. The book includes 23 reviewed papers from four workshops that were selected from eight high-quality workshop session proposals. They represent diverse aspects of the theory and practice of service computing, ranging from service [...] Fields of interest

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

Target groups

Research

Type of publication

Proceedings

Due: November 29, 2011


$72.00
ISBN 978-3-642-22759-2
Towards a Service-Based Internet

This volume constitutes the refereed proceedings of the Fourth European Conference, ServiceWave 2011, held in Poznan, Poland, in October 2011. The 25 revised full papers presented together with 3 invited presentations were carefully reviewed and selected from numerous submissions. They are organized in topical sections on cloud computing, security, privacy and trust, service engineering fundamentals, business services, and FI-PPP. In addition to the scientific track, 14 extended abstracts of demonstrations covering a wide spectrum of technology and application domains were accepted.

Features
This volume constitutes the refereed proceedings of the Fourth European Conference, ServiceWave 2011, held in Poznan, Poland, in October 2011. The 25 revised full papers presented together with 3 invited presentations were carefully reviewed and selected from numerous submissions. They are organized in topical sections on cloud computing, security, privacy and trust, service engineering fundamentals, [...]
Universal Semantic Communication

Is meaningful communication possible between two intelligent parties who share no common language or background? In this work, a theoretical framework is proposed in which it is possible to address when and to what extent such semantic communication is possible: such problems can be rigorously addressed by explicitly focusing on the goals of the communication. Under this framework, it is possible to show that for many goals, communication without any common language or background is possible using universal protocols. This work should be accessible to anyone with an undergraduate-level knowledge of the theory of computation. The theoretical framework presented here is of interest to anyone wishing to design systems with flexible interfaces, either among computers or between computers and their users.

Features
Is meaningful communication possible between two intelligent parties who share no common language or background? In this work, a theoretical framework is proposed in which it is possible to address when and to what extent such semantic communication is possible: such problems can be rigorously addressed by explicitly focusing on the goals of the communication. Under this framework, it is possible to show [...]
Visual Analysis of Humans

Looking at People

This unique text/reference provides a coherent and comprehensive overview of all aspects of video analysis of humans. Broad in coverage and accessible in style, the text presents original perspectives collected from preeminent researchers gathered from across the world. In addition to presenting state-of-the-art research, the book reviews the historical origins of the different existing methods, and predicts future trends and challenges. Features: with a Foreword by Professor Larry Davis; contains contributions from an international selection of leading authorities in the field; includes an extensive glossary; discusses the problems associated with detecting and tracking people through camera networks; examines topics related to determining the time-varying 3D pose of a person from video; investigates the representation and recognition of human and vehicular actions; reviews the most important applications of activity recognition, from biometrics and surveillance, to sports and driver assistance.

Contents

Part I: Detection and Tracking. - Is There Anybody Out There? - Beyond the Static Camera: Issues and Trends in Active Vision - Figure-Ground Segmentation - Pixel-Based: Figure-Ground Segmentation - Object Based - Face Detection - Wide Area Tracking in Single and Multiple Views - Benchmark Datasets for Detection and Tracking - Part II: Pose Estimation - Articulated Pose Estimation and Tracking: Introduction - Model-Based Pose Estimation - Motion Models for People Tracking - Part-Based Models for Finding People and Estimating Their Pose - Feature-Based Pose Estimation - Benchmark Datasets for [...] Fields of interest Image Processing and Computer Vision; Pattern Recognition

Target groups Research

Type of publication Contributed volume

Usually dispatched within 3 to 5 business days

2011. XXI, 632 p. 186 illus., 168 in color. Hardcover

$159.00

Visual Informatics: Sustaining Research and Innovations


The two-volume set LNCS 7066 and LNCS 7067 constitutes the proceedings of the Second International Visual Informatics Conference, IVIC 2011, held in Selangor, Malaysia, during November 9-11, 2011. The 71 revised papers presented were carefully reviewed and selected for inclusion in these proceedings. They are organized in topical sections named computer vision and simulation; virtual image processing and engineering; visual computing; and visualisation and social computing. In addition the first volume contains two keynote speeches in full paper length, and one keynote abstract.

Features

The two-volume set LNCS 7066 and LNCS 7067 constitutes the proceedings of the Second International Visual Informatics Conference, IVIC 2011, held in Selangor, Malaysia, during November 9-11, 2011. The 71 revised papers presented were carefully reviewed and selected for inclusion in these proceedings. They are organized in topical sections named computer vision and simulation; virtual image processing and engineering; visual computing; and visualisation and social computing. In addition the first volume contains two keynote speeches in full paper length, and one keynote abstract.

Fields of interest Image Processing and Computer Vision; Pattern Recognition; Computer Graphics; Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; User Interfaces and Human Computer Interaction

Target groups Research

Type of publication Proceedings

Due: December 26, 2011


$83.00
ISBN 978-3-642-25190-0

Visual Informatics: Sustaining Research and Innovations


The two-volume set LNCS 7066 and LNCS 7067 constitutes the proceedings of the Second International Visual Informatics Conference, IVIC 2011, held in Selangor, Malaysia, during November 9-11, 2011. The 71 revised papers presented were carefully reviewed and selected for inclusion in these proceedings. They are organized in topical sections named computer vision and simulation; virtual image processing and engineering; visual computing; and visualisation and social computing. In addition the first volume contains two keynote speeches in full paper length, and one keynote abstract.

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Fields of interest Image Processing and Computer Vision; Pattern Recognition; Computer Graphics; Artificial Intelligence (incl. Robotics); Algorithm Analysis and Problem Complexity; User Interfaces and Human Computer Interaction

Target groups Research

Type of publication Proceedings

Due: November 22, 2011


$95.00
ISBN 978-3-642-25199-3
## Earth Sciences

M. Zentner, Oregon State University, Corvallis, OR, USA

### Design and impact of water treaties

**Managing climate change**

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

**Features**

This study presents a unique way to utilize the existing literature to explain the success of treaties in managing hydrologic stress. Literature-derived core concepts are summarized as seven treaty mechanisms categories (specificity, uncertainty management, enforcement, communications, flexibility, integrativeness, and scale) and are hypothesized as important for shaping the institutional resiliency of a treaty.

**Contents**


**Fields of interest**

Hydrogeology; Climate Change; Meteorology / Climatology; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution; Environmental Management

### Earth System Modelling - Volume 2

#### Algorithms, Code Infrastructure and Optimisation

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

**Features**

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

### Earth System Modelling - Volume 3

#### Coupling Software and Strategies

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

**Features**

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

**Contents**


**Fields of interest**

Earth Sciences (general); Software Engineering

**Target groups**

Research

**Type of publication**

Brief

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

2012. XVII, 96 p. 20 illus. (SpringerBriefs in Earth System Sciences) Softcover

$49.95

ISBN 978-3-642-23359-3
Handbook of Environmental Isotope Geochemistry

Applications of radioactive and stable isotopes have revolutionized our understanding of the Earth and near-earth surface processes. The utility of the isotopes are ever-increasing and our sole focus is to bring out the applications of these isotopes as tracers and chronometers to a wider audience so that they can be used as powerful tools to solve environmental problems. New developments in this field remain mostly in peer-reviewed journal articles and hence our goal is to synthesize these findings for easy reference for students, faculty, regulators in governmental and non-governmental agencies, and environmental companies. While this volume maintains its rigor in terms of its depth of knowledge and quantitative information, it contains the breadth needed for wide variety problems and applications in the environmental sciences. This volume presents all of the newer and older applications of isotopes pertaining to the environmental problems in one place that is readily accessible to readers. This...

Features
Applications of radioactive and stable isotopes have revolutionized our understanding of the Earth and near-earth surface processes. The utility of the isotopes are ever-increasing and our sole focus is to bring out the applications of these isotopes as tracers and chronometers to a wider audience so that they can be used as powerful tools to solve environmental problems. New developments in this field...

Contents

Fields of interest
Geochemistry; Environmental Chemistry; Physical Geography; Analytical Chemistry

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days

2012. XXI, 951 p. 315 illus., 139 in color. (Advances in Isotope Geochemistry) Hardcover

$279.00
ISBN 978-3-642-10636-1

Natural Hazard Mitigation Policy
Implementation, Organizational Choice, and Contextual Dynamics

The negative consequences of natural hazard events are staggering and growing. Governments are acting to increase community resilience, reduce losses, and facilitate recovery, but these actions do not always yield anticipated consequences. This book is a compelling interdisciplinary analysis of California’s efforts to ensure that acute care hospitals survive earthquakes and continue to function in the aftermath. The book weaves together several threads essential to understanding the effectiveness of public policies intended to reduce the consequences of natural hazard events: public policy design and administration, the hazard mitigation investment decision made by targeted organizations, and contextual dynamics. ‘A terrific study of shortfalls in the implementation of risk-reduction policy -- highly readable, full of insights, and very policy relevant.’ Peter J. May, Donald R. Matthews Distinguished Professor of American Politics, University of Washington, Seattle USA ‘This is an exceptional book[...]

Features
The negative consequences of natural hazard events are staggering and growing. Governments are acting to increase community resilience, reduce losses, and facilitate recovery, but these actions do not always yield anticipated consequences. This book is a compelling interdisciplinary analysis of California’s efforts to ensure that acute care hospitals survive earthquakes and continue to function in the [...]

Contents

Fields of interest
Natural Hazards; Political Science, general; Health Administration

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XV, 238 p. 4 illus. (Environmental Hazards) Hardcover

$129.00
ISBN 978-94-007-2234-7

Natural Processes and Human Impacts
Interactions between Humanity and the Environment

This highly topical book comes at a time when the two-way relationship between humankind and the environment is moving inexorably to the top of the agenda. It covers both sides of this delicate balancing act, explaining how various natural processes influence humanity, including its economic activities and engineering structures, while also illuminating the ways in which human activity puts pressure on the natural environment. Chapters analyze a varied selection of phenomena that directly affect people’s lives, from geological processes such as earthquakes and tsunamis to cosmic events such as magnetic storms. The author moves on to consider the effect we have on nature, ranging from the impact of heavy industry to the environmental consequences of sport and recreational pastimes. Complete with maps, photographs and detailed case studies, this book provides a comprehensive overview of the biggest issue we face as a species—the way we relate to the natural world around us. This book includes more than[...]

Features
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Contents

Fields of interest
Natural Hazards; Climate Change; Physical Geography

Target groups
Research

Type of publication
Monograph

Due: November 28, 2011

2012. XXI, 657 p. 607 illus., 424 in color. Hardcover

$129.00
ISBN 978-94-007-1423-6

Natural Processes and Human Impacts
Interactions between Humanity and the Environment

This highly topical book comes at a time when the two-way relationship between humankind and the environment is moving inexorably to the top of the agenda. It covers both sides of this delicate balancing act, explaining how various natural processes influence humanity, including its economic activities and engineering structures, while also illuminating the ways in which human activity puts pressure on the natural environment. Chapters analyze a varied selection of phenomena that directly affect people’s lives, from geological processes such as earthquakes and tsunamis to cosmic events such as magnetic storms. The author moves on to consider the effect we have on nature, ranging from the impact of heavy industry to the environmental consequences of sport and recreational pastimes. Complete with maps, photographs and detailed case studies, this book provides a comprehensive overview of the biggest issue we face as a species—the way we relate to the natural world around us. This book includes more than[...]

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Contents

Fields of interest
Natural Hazards; Climate Change; Physical Geography

Target groups
Research

Type of publication
Monograph

Due: November 28, 2011

2012. XXI, 657 p. 607 illus., 424 in color. Hardcover

$129.00
ISBN 978-94-007-1423-6
Principles of Tidal Sedimentology

This book presents a comprehensive, contemporary review of tidal environments and deposits. Individual chapters, each written by world-class experts, cover the full spectrum of coastal, shallow-marine and even deep-marine settings where tidal action influences or controls sediment movement and deposition. Both siliciclastic and carbonate deposits are covered. Various chapters examine the dynamics of sediment transport by tides, and the morphodynamics of tidal systems. Several chapters explore the occurrence of tidal deposits in the stratigraphic context of entire sedimentary basins. This book is essential reading for both coastal geologists and managers, and geologists interested in extracting hydrocarbons from complex tidal successions.

Features
This book presents a comprehensive, contemporary review of tidal environments and deposits. Individual chapters, each written by world-class experts, cover the full spectrum of coastal, shallow-marine and even deep-marine settings where tidal action influences or controls sediment movement and deposition. Both siliciclastic and carbonate deposits are covered. Various chapters examine the dynamics of [...]

Contents

Fields of interest
Sedimentology; Marine & Freshwater Sciences; Physical Geography; Mineral Resources

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XV, 621 p. 423 illus., 231 in color. Hardcover

$279.00
ISBN 978-94-007-0122-9

The Paleogene and Neogene of Western Iberia (Portugal)
A Cenozoic record in the European Atlantic domain

This book includes a general description of the Portuguese Cenozoic basins in the Iberian tectonic context. The main stratigraphic units, including sedimentological, stratigraphical and palaeontological data, are characterized. Correlations between different sectors are presented as well as general paleogeographical evolution maps. The volume includes a general bibliography concerning the Cenozoic of Portugal.

Features
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Contents

Fields of interest
Geology; Sedimentology; Historical Geology; Palaeontology

Target groups
Research

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012, VI, 158 p. 37 illus., 21 in color. (SpringerBriefs in Earth Sciences) Softcover

$49.95
ISBN 978-3-642-22400-3

Water Resources in Mexico
Scarcity, Degradation, Stress, Conflicts, Management, and Policy

Water resources in Mexico are threatened by scarcity, pollution and climate change. In two decades water consumption doubled, producing water stress in dry seasons and semi-arid and arid regions. Water stress rises due to physical and economic stress. In seven parts a multidisciplinary team analyzes hydrological processes in basins and their interaction with climate, soil and biota. Competing water use in agriculture, industry and domestic needs require savings, decontamination processes and desalinization to satisfy the growing demand. Water quality affects health and ecosystems. This creates conflicts and cooperation that may be enhanced by public policy, institution building and social organization.

Features
Water resources in Mexico are threatened by scarcity, pollution and climate change. In two decades water consumption doubled, producing water stress in dry seasons and semi-arid and arid regions. Water stress rises due to physical and economic stress. In seven parts a multidisciplinary team analyzes hydrological processes in basins and their interaction with climate, soil and biota. Competing water use in [...]

Contents

Fields of interest
Hydrogeology; Agriculture; Soil Science & Conservation; Physical Geography

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XXII, 532 p. 197 illus. (Hexagon Series on Human and Environmental Security and Peace, Vol. 7) Hardcover

$229.00
ISBN 978-3-642-05431-0
Collaborating to Meet Language Challenges in Indigenous Mathematics Classrooms

Language can be simultaneously both a support and a hindrance to students’ learning of mathematics. When students have sufficient fluency in the mathematics register so that they can discuss their ideas, they become chiefs who are able to think mathematically. However, learning the mathematics register of an Indigenous language is not a simple exercise and involves many challenges not only for students, but also for their teachers and the wider community. Collaborating to Meet Language Challenges in Indigenous Mathematics Classrooms identifies some of the challenges—political, mathematical, community based, and pedagogical—to the mathematics register, faced by an Indigenous school, in this case a Māori immersion school. It also details the solutions created by the collaboration of teachers, researchers and community members.

Features
Language can be simultaneously both a support and a hindrance to students’ learning of mathematics. When students have sufficient fluency in the mathematics register so that they can discuss their ideas, they become chiefs who are able to think mathematically. However, learning the mathematics register of an Indigenous language is not a simple exercise and involves many challenges not only for students, but […]

Contents
Table of Contents.- Acknowledgement.- Glossary.- Chapter 1 Introduction to the book and themes.- The school and the data.- Using case studies.- The complexity of learning mathematics in an Indigenous language.- Meeting and overcoming challenges. Section A Meeting Political Challenges.- Chapter 2 The development of a mathematics register in an Indigenous language.- Te wero no waho – the external challenge..- Te wero no roto – the internal challenge.- The process of expanding the mathematics register in te reo Māori.- The Standardising Process.- Challenges to Te Reo Māori from[...]

Fields of interest
Mathematics Education; Language Education

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012, XV, 345 p. 60 illus. Hardcover
$189.00
ISBN 978-94-007-2323-8
Educational Research with Our Youngest: Voices of Infants and Toddlers

Interpreting the voices of under three year olds is central to early childhood education. Yet entering into their life-worlds is fraught with challenges and unrealised possibilities. This ground-breaking book generates a dialogue about the multiple ways researchers have exploited a range of methods for approaching, accessing, understanding and interpreting infant voice. Each chapter explores the kinds of ethical considerations and dilemmas that may arise in this process. The book itself represents a chorus of international voices (researchers, children, teachers and parents), all adding to a discussion about various circumstances, dilemmas and possibilities involved in doing research with our youngest. This book is an essential read for researchers and teachers alike who seek to ‘listen’ and ‘see’ very young children with fresh ears and eyes.

Features
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Contents

Fields of interest
Childhood Education; Teaching and Teacher Education; Educational Philosophy; Sociology of Education

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$139.00
ISBN 978-94-007-2393-1

Encyclopedia of the Sciences of Learning

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

Features
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Contents
Animal Learning and Ecology/Artificial Intelligence / Intelligent Systems/Biology / Neurobiology/ Clinical Psychology and Psychotherapy/Comparative Psychology and Ethology/Education / Socio-cultural aspects/Instructional Psychology and Learning/Machine Learning (and robotics)/Neurologic Problems/Neuroscience(s)/Philosophy, Information Technology

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

Target groups
Research

Type of publication
Encyclopaedia

Usually dispatched within 3 to 5 business days

2012. 4300 p. 100 illus. In 7 volumes, not available separately. Hardcover

$3,400.00

International Handbook of Migration, Minorities and Education

Understanding Cultural and Social Differences in Processes of Learning

Migrants and minorities are always at risk of being caught in essentialized cultural definitions and being denied the right to express their cultural preferences because they are perceived as threats to social cohesion. Migrants and minorities respond to these difficulties in multiple ways — as active agents in the pedagogical, political, social, and scientific processes that position them in this or that cultural sphere. On the one hand, they reject ascribed cultural attributes while striving towards integration in a variety of social spheres, e.g. school and workplace, in order to achieve social mobility. On the other hand, they articulate demands for cultural self-determination. This discursive duality is met with suspicion by the majority culture. For societies with high levels of migration or with substantial minority cultures, questions related to the meaning of cultural heterogeneity and the social and cultural limits of learning and communication (e.g. migration education or critical[…]…

Features
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Contents

Fields of interest
Sociology of Education; Migration; Regional and Cultural Studies; Sociology, general

Target groups
Research

Type of publication
Handbook

Usually dispatched within 3 to 5 business days

2012. XXVI, 753 p. 10 illus. Hardcover

$349.00
ISBN 978-94-007-1465-6
Metacognition in Science Education

Trends in Current Research

Why is metacognition gaining recognition, both in education generally and in science learning in particular? What does metacognition contribute to the theory and practice of science learning? Metacognition in Science Education discusses emerging topics at the intersection of metacognition with the teaching and learning of science concepts, and with higher order thinking more generally. The book provides readers with a background on metacognition and analyses the latest developments in the field. It also gives an account of best-practice methodology. Expanding on the theoretical underpinnings of metacognition, and written by world leaders in metacognitive research, the chapters present cutting-edge studies on how various forms of metacognitive instruction enhance understanding and thinking in science classrooms. The editors strive for conceptual coherency in the various definitions of metacognition that appear in the book, and show that the study of metacognition is not an end in itself. Rather, it[...]

Features

Why is metacognition gaining recognition, both in education generally and in science learning in particular? What does metacognition contribute to the theory and practice of science learning? Metacognition in Science Education discusses emerging topics at the intersection of metacognition with the teaching and learning of science concepts, and with higher order thinking more generally. The [-][...]

Contents

Introduction. - Metacognition in science education: Definitions, constituents, and their intricate relation with cognition. - Reading science: How a naïve view of reading hinders so much else. - Metacognitive knowledge and field-based science learning in an outdoor environmental education program... - The role of metacognition in students’ understanding and transfer of explanatory structures in science. - Self-regulated learning and conceptual development in young children: The development of biological understanding. - The role of knowledge integration in learning chemistry with dynamic[...]

Fields of interest

Science Education; Learning and Instruction; Teaching and Teacher Education

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days


$189.00

ISBN 978-94-007-2131-9

Perspectives on Scientific Argumentation

Theory, Practice and Research

Argumentation—arriving at conclusions on a topic through a process of logical reasoning that includes debate and persuasion—has in recent years emerged as a central topic of discussion among science educators and researchers. There is now a firm and general belief that fostering argumentation in learning activities can develop students’ critical thinking and reasoning skills, and that dialogic and collaborative inquiries are key precursors to an engagement in scientific argumentation. It is also reckoned that argumentation helps students assimilate knowledge and generate complex meaning. The consensus among educators is that involving students in scientific argumentation must play a critical role in the education process itself. Recent analysis of research trends in science education indicates that argumentation is now the most prevalent research topic in the literature. This book attempts to consolidate contemporary thinking and research on the role of scientific argumentation in[...]

Features

Argumentation—arriving at conclusions on a topic through a process of logical reasoning that includes debate and persuasion—has in recent years emerged as a central topic of discussion among science educators and researchers. There is now a firm and general belief that fostering argumentation in learning activities can develop students’ critical thinking and reasoning skills, and that dialogic and [-][...]

Contents

Foreword, Deanna Kuhn. - PART I: Theoretical Premises of the Study of Argumentation. - Chapter 1 Introduction, Jonathan Osborne, Anna MacPherson, Alexis Patterson, Evan Szu. - Chapter 2 The Two Faces of Scientific Argumentation: Applications to Global Climate Change, E. Michael Nussbaum, Gale M. Sinatra, Marissa C. Owens. - Chapter 3 The Importance of Embedding Argument within Science Classrooms, Andy Cavagnetto, Brian Hand.- Chapter 4 Scientific Reasoning and Argumentation from a Bayesian Perspective, Evan Szu, Jonathan Osborne.- Chapter 5 Students’ Framings and Their Participation in[...]

Fields of interest

Science Education; Teaching and Teacher Education; Learning and Instruction; Curriculum Studies

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 290 p. 40 illus. Hardcover

$139.00

ISBN 978-94-007-2469-3

The Researching, Teaching, and Learning Triangle

It is impossible not to ask ourselves how to cope with the role and impact of scientific research in teaching and learning. The researching, teaching and learning triangle explores a growing trend among top universities across the world to focus attention on the quality of post-graduate education and the success of the educators, using pioneering examples, ranging from classroom-level initiatives to university-wide projects. This book will be of interest to all scientists, from the budding beginner to the seasoned supervisor.

Features

Although it is currently well accepted that training for research is a component of all stages of education, its peak is naturally reached at the postgraduate level. Successful post-graduate education requires the guidance and mentoring of senior researchers and educators. Most university educators are also scientific researchers, and aligning innovations in education with scientific advances is a major[...]

Contents


Fields of interest

Science Education; Biomedicine (general); Biochemistry

Target groups

Graduate

Type of publication

Contributed volume

Due: October 31, 2011

2012. VII, 91 p. 29 illus., 15 in color. (Mentoring in Academia and Industry, Vol. 10) Softcover

$49.95

Wind Bands and Cultural Identity in Japanese Schools

This well researched volume tells the story of music education in Japan and of the wind band contest organized by the All-Japan Band Association. Identified here for the first time as the world’s largest musical competition, it attracts 14,000 bands and well over 500,000 competitors. The book’s insightful contribution to our understanding of both music and education chronicles music learning in Japanese schools and communities. It examines the contest from a range of perspectives, including those of policy makers, adjudicators, conductors and young musicians. The book is an illuminating window on the world of Japanese wind bands, a unique hybrid tradition that comingles contemporary western idioms with traditional Japanese influences. In addition to its social history of Japanese school music programs, it shows how participation in Japanese school bands contributes to students’ sense of identity, and sheds new light on the process of learning to play European orchestral instruments.

Features
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Fields of interest
Arts Education; Regional and Cultural Studies

Contents
Advanced Control of Turbofan Engines

Advanced Control of Turbofan Engines describes the operational performance requirements of turbofan (commercial) engines from a controls systems perspective, covering industry-standard methods and research-edge advances. This book allows the reader to design controllers and produce realistic simulations using public-domain software like CMAPSS: Commercial Modular Aero-Propulsion System Simulation, whose versions are released to the public by NASA. The scope of the book is centered on the design of thrust controllers for both steady flight and transient maneuvers. Classical control theory is not dwelled on, but instead an introduction to general undergraduate control techniques is provided. Advanced Control of Turbofan Engines is ideal for graduate students doing research in aircraft engine control and non-aerospace oriented control engineers who need an introduction to the field.

Features
Advanced Control of Turbofan Engines describes the operational performance requirements of turbofan (commercial) engines from a controls systems perspective, covering industry-standard methods and research-edge advances. This book allows the reader to design controllers and produce realistic simulations using public-domain software like CMAPSS: Commercial Modular Aero-Propulsion System Simulation, [...]
Blind Signal Processing

Theory and Practice

"Blind Signal Processing: Theory and Practice" not only introduces related fundamental mathematics, but also reflects the numerous advances in the field, such as probability density estimation-based processing algorithms, underdetermined models, complex value methods, uncertainty of order in the separation of convolutive mixtures in frequency domains, and feature extraction using Independent Component Analysis (ICA). At the end of the book, results from a study conducted at Shanghai Jiao Tong University in the areas of speech signal processing, underwater signals, image feature extraction, data compression, and the like are discussed. This book will be of particular interest to advanced undergraduate students, graduate students, university instructors, and research scientists in related disciplines. Xizhi Shi is a Professor at Shanghai Jiao Tong University.

Features

"Blind Signal Processing: Theory and Practice" not only introduces related fundamental mathematics, but also reflects the numerous advances in the field, such as probability density estimation-based processing algorithms, underdetermined models, complex value methods, uncertainty of order in the separation of convolutive mixtures in frequency domains, and feature extraction using Independent Component [..]

Contents


Fields of interest

Signal, Image and Speech Processing; Information and Communication, Circuits; Communications Engineering, Networks; Image Processing and Computer Vision

Target groups

Research

Type of publication

Monograph

Due: January 28, 2012

2012. XXV, 642 p. 356 illus., 17 in color. Hardcover

$229.00
ISBN 978-3-642-20951-6

Combustion Engines Development

Mixture Formation, Combustion, Emissions and Simulation

Combustion Engines Development nowadays is based on simulation, not only of the transient reaction of vehicles or of the complete drivetrain, but also of the highly unstable processes in the carburation process and the combustion chamber of an engine. Different physical and chemical approaches are described to show the potentials and limits of the models used for simulation.

Features

In the development of engines and vehicles it is nowadays standard practice to use commercially available computing programmes for simulation, not only of the transient reaction of vehicles or of the complete drivetrain, but also of the highly unstable processes in the combustion chamber of an engine. Normally the source code is not available for these computing programmes and it takes too much time to study [..]

Contents


Fields of interest

Automotive Engineering; Engineering Thermodynamics, Heat and Mass Transfer; Operating Procedures, Materials Treatment; Energy Technology; Classical Continuum Physics

Target groups

Professional/practitioner

Type of publication

Monograph

Due: November 28, 2011

2012. XXV, 642 p. 356 illus., 17 in color. Hardcover

$229.00
ISBN 978-3-642-20951-6

Computer and Information Sciences II

26th International Symposium on Computer and Information Sciences

Information technology is the enabling foundation for all of human activity at the beginning of the 21st century, and advances in this area are crucial to all of us. These advances are taking place all over the world and can only be followed and perceived when researchers from all over the world assemble, and exchange their ideas in conferences such as the one presented in this proceedings volume regarding the 26th International Symposium on Computer and Information Systems, held at the Royal Society in London on 26th to 28th September 2011. Computer and Information Sciences II contains novel advances in the state of the art covering applied research in electrical and computer engineering and computer science, across the broad area of information technology. It provides access to the main innovative activities in research across the world, and points to the results obtained recently by some of the most active teams in both Europe and Asia.

Features

Information technology is the enabling foundation for all of human activity at the beginning of the 21st century, and advances in this area are crucial to all of us. These advances are taking place all over the world and can only be followed and perceived when researchers from all over the world assemble, and exchange their ideas in conferences such as the one presented in this proceedings volume regarding [..]

Contents


Fields of interest

Circuits and Systems; Computer Systems Organization and Communication Networks; Database Management; Artificial Intelligence (incl. Robotics); Image Processing and Computer Vision; Electrical Engineering

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days

2012. XIV, 585 p. 141 illus. Hardcover

$349.00
ISBN 978-1-4471-2154-1
Detection and Identification of Rare Audio-visual Cues

Machine learning builds models of the world using training data from the application domain and prior knowledge about the problem. The models are later applied to future data in order to estimate the current state of the world. An implied assumption is that the future is stochastically similar to the past. The approach fails when the system encounters situations that are not anticipated from the past experience. In contrast, successful natural organisms identify new unanticipated stimuli and situations and frequently generate appropriate responses. The observation described above lead to the initiation of the DIRAC EC project in 2006. In 2010 a workshop was held, aimed to bring together researchers and students from different disciplines in order to present and discuss new approaches for identifying and reacting to unexpected events in information-rich environments. This book includes a summary of the achievements of the DIRAC project in chapter 1, and a collection of the papers presented in them[...]

Features
Machine learning builds models of the world using training data from the application domain and prior knowledge about the problem. The models are later applied to future data in order to estimate the current state of the world. An implied assumption is that the future is stochastically similar to the past. The approach fails when the system encounters situations that are not anticipated from the past.[...]

Contents
Introduction.- The DIRAC project.- The detection of incongruent events, project survey and algorithms.- Alternative frameworks to detect meaningful novel events.- Dealing with meaningful novel events, what to do after detection.- How biological systems deal with novel and incongruent events.

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VIII, 192 p. 69 illus., 57 in color. (Studies in Computational Intelligence, Vol. 384) Hardcover

$129.00
ISBN 978-3-642-24033-1
Energy Methods in Dynamics

The above examples should make clear the necessity of understanding the mechanism of vibrations and waves in order to control them in an optimal way. However vibrations and waves are governed by differential equations which require, as a rule, rather complicated mathematical methods for their analysis. The aim of this textbook is to help students acquire both a good grasp of the first principles from which the governing equations can be derived, and the adequate mathematical methods for their solving. Its distinctive features, as seen from the title, lie in the systematic and intensive use of Hamilton’s variational principle and its generalizations for deriving the governing equations of conservative and dissipative mechanical systems, and also in providing the direct variational-asymptotic analysis, whenever available, of the energy and dissipation for the solution of these equations. It will be demonstrated that many well-known methods in dynamics like those of Lindstedt-Poincare, [...]
Energy Systems in the Era of Energy Vectors

A Key to Define, Analyze and Design Energy Systems Beyond Fossil Fuels

What lies beyond the era of fossil fuels? While most answers focus on different primary energy resources, Energy Systems in the Era of Energy Vectors provides a completely new approach. Instead of providing a traditional consumption analysis of classical primary energy resources such as oil, coal, nuclear power and gas, Energy Systems in the Era of Energy Vectors describes and assesses energy technologies, markets and future strategies, focusing on their capacity to produce, exchange, and use energy vectors. Special attention is given to the renewable energy resources available in different areas of the world and made exploitable by the integration of energy vectors in the global energy system. Clear definitions of energy vectors and energy systems are used as the basis for a complete explanation and assessment of up-to-date, available technologies for energy resources, transport and storage systems, conversion and use. The energy vectors scheme allows the potential realization of a worldwide...

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Contents

Fields of interest
Renewable and Green Energy; Economics; Climate Change; Power Electronics, Electrical Machines and Networks; Energy Systems

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. VII, 362 p. 176 illus., 38 in color. (Green Energy and Technology) Hardcover

$179.00

Energy and the Wealth of Nations

Understanding the Biophysical Economy

For the past 150 years, economics has been treated as a social science in which economies are modeled as a circular flow of income between producers and consumers. In this “perpetual motion” of interactions between firms that produce and households that consume, little or no accounting is given of the flow of energy and materials from the environment and back again. In the standard economic model, energy and matter are completely recycled in these transactions, and economic activity is seemingly exempt from the Second Law of Thermodynamics. As we enter the second half of the age of oil, and as energy supplies and the environmental impacts of energy production and consumption become major issues on the world stage, this exemption appears illusory at best. In Energy and the Wealth of Nations, concepts such as energy return on investment (EROI) provide powerful insights into the real balance sheets that drive our “petroleum economy.” Hall and Kihlgard explore the relation between energy and the...

Features
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Contents

Fields of interest
Energy Economics; Sustainable Development; Environmental Economics; Energy Policy; Economics and Management; Socio- and Econophysics; Population and Evolutionary Models; Engineering Thermodynamics, Heat and Mass Transfer

Target groups
Research

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XIV, 407 p. 104 illus., 66 in color. Hardcover

$99.00

Engineering Education and Management

Vol 1, Results of the 2011 International Conference on Engineering Education and Management (ICEEM2011)

This is the proceedings of the selected papers presented at 2011 International Conference on Engineering Education and Management (ICEEM2011) held in Guangzhou, China, during November 18-20, 2011. ICEEM2011 is one of the most important conferences in the field of Engineering Education and Management and is co-organized by Guangzhou University, The University of New South Wales, Zhejiang University and Xi’an Jiaotong University. The conference aims to provide a high-level international forum for scientists, engineers, and students to present their new advances and research results in the field of Engineering Education and Management: This volume comprises 121 papers selected from over 400 papers originally submitted by universities and industrial concerns all over the world. The papers specifically cover the topics of Management Science and Engineering, Engineering Education and Training, Project/Engineering Management, and Other related topics. All of the papers were peer-reviewed by selected...]

Features
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Contents

Fields of interest
Engineering Economics, Organization, Logistics, Marketing; Educational Technology; Quality Control, Reliability, Safety and Risk

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XIV, 770 p. 70 illus. (Lecture Notes in Electrical Engineering, Vol. 111) Hardcover

$279.00
Engineering Education and Management

Vol 2, Results of the 2011 International Conference on Engineering Education and Management (ICEEM2011)

This is the proceedings of the selected papers presented at 2011 International Conference on Engineering Education and Management (ICEEM2011) held in Guangzhou, China, during November 18-20, 2011. ICEEM2011 is one of the most important conferences in the field of Engineering Education and Management and is co-organized by Guangzhou University, The University of New South Wales, Zhejiang University and Xi’an Jiaotong University. The conference aims to provide a high-level international forum for scientists, engineers, and students to present their new advances and research results in the field of Engineering Education and Management. This volume comprises 122 papers selected from over 400 papers originally submitted by universities and industrial concerns all over the world. The papers specifically cover the topics of Management Science and Engineering, Engineering Education and Training, Project/Engineering Management, and Other related topics. All of the papers were peer-reviewed by selected.

Features
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Contents
Introduction.- Solutions to Improve the Reliability of On-Chip Interconnects.- Networks-on-Chip (NoC).- Error Control Coding for On-Chip Interconnects.- Energy Efficient Error Control Implementation.- Combining Error Control Codes with Crosstalk Reduction.

Fields of interest
Circuits and Systems; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

$129.00
ISBN 978-1-4419-9312-0

Error Control for Network-on-Chip Links

This book provides readers with a comprehensive review of the state of the art in error control for Network on Chip (NoC) links. Coverage includes detailed description of key issues in NOC error control faced by circuit and system designers, as well as practical error control techniques to minimize the impact of these errors on system performance.

Features
As technology scales into nanoscale regime, it is impossible to guarantee the perfect hardware design. Moreover, if the requirement of 100% correctness in hardware can be relaxed, the cost of manufacturing, verification, and testing will be significantly reduced. Many approaches have been proposed to address the reliability problem of on-chip communications. This book focuses on the use of error control.

Contents
Introduction.- Solutions to Improve the Reliability of On-Chip Interconnects.- Networks-on-Chip (NoC).- Error Control Coding for On-Chip Interconnects.- Energy Efficient Error Control Implementation.- Combining Error Control Codes with Crosstalk Reduction.

Fields of interest
Circuits and Systems; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

$129.00
ISBN 978-1-4419-9312-0
Experience from the DARPA Urban Challenge

Experience from the DARPA Urban Challenge provides details of the types of systems, software and processes that were used to develop the complex unmanned vehicles that participated in the DARPA Urban Challenge. The vehicle developers explain how autonomous vehicle software in this race was designed and implemented. The chapters range from system and software architecture, navigation, path planning, steering, perception, engineering autonomous systems, and testing and performance evaluation. This book is based on papers from entrants in the Urban Challenge. The content is broken into five parts: an introduction to the DARPA Urban Challenge systems and software architecture; navigation; control and sensors; and development and test. Experience from the DARPA Urban Challenge provides graduate students in robotics and engineering professionals with an insight into multiple ways of approaching the development of autonomous vehicles.

Features
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Contents

Fields of interest
Automotive Engineering; Robotics and Automation; Artificial Intelligence (incl. Robotics); Control

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XV, 320 p. 159 illus., 12 in color. Hardcover

$179.00

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

Extraction and Representation of Prosodic Features for Speech Processing Applications deals with prosody from speech processing point of view with topics including: The significance of prosody for speech processing applications. Why prosody need to be incorporated in speech processing applications? Different methods for extraction and representation of prosody for applications such as speech synthesis, speaker recognition, language recognition and speech recognition. This book is for researchers and students at the graduate level.

Features
N/A

Contents
1. Significance of Prosody for Speaker, Language and Speech Recognition.- 1.1 Introduction.- 1.2 What is prosody.- 1.3 Probabilistic formulation of recognition.- 1.4 Significance of prosody for robust recognition.- 1.5 Automatic speaker recognition.- 1.6 Automatic language recognition.- 1.7 Automatic speech recognition.- 1.8 Summary.- 2. Automatic Extraction of Prosody for Speaker, Language and Speech Recognition.- 2.1 Introduction.- 2.2 Extraction and representation of prosodic features in ASR free approaches.- 2.3 Extraction and representation of prosodic features in ASR based...[

Fields of interest
Signal, Image and Speech Processing; Computational Linguistics; Language Translation and Linguistics

Target groups
Professional/practitioner

Type of publication
Brief

Usually dispatched within 3 to 5 business days

2012. X, 61 p. 32 illus. (SpringerBriefs in Speech Technology) Softcover

$49.95
ISBN 978-1-4614-1158-1

Extremum-Seeking Control and Applications

Extremum-seeking control tracks a varying maximum or minimum in a performance function such as output or cost. It attempts to determine the optimal performance of a control system as it operates, thereby reducing downtime and the need for system analysis. Extremum-seeking Control and Applications is divided into two parts. In the first, the authors review existing analog-optimization-based extremum-seeking control including gradient-, perturbation- and sliding-mode-based control designs. They then propose a novel numerical-optimization-based extremum-seeking control based on optimization algorithms and state regulation. This control design is developed for simple linear time-invariant systems and then extended for a class of feedback linearizable nonlinear systems. The two main optimization algorithms – line search and trust region methods – are analyzed for robustness. Finite-time and asymptotic state regulators are put forward for linear and nonlinear systems respectively. Further design...[

Features
Extremum seeking control tracks a varying maximum or minimum in a performance function such as a cost. It attempts to determine the optimal performance of a control system as it operates, thereby reducing downtime and the need for system analysis. Extremum-Seeking Control and Applications is divided into two parts. In the first, the authors review existing analog optimization based extremum...[

Contents

Fields of interest
Control; Calculus of Variations and Optimal Control; Optimization; Automotive Engineering; Communications Engineering; Networks; Aerospace Technology and Astronautics; Power Electronics, Electrical Machines and Networks

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

December 28, 2011

2012. XVIII, 203 p. 87 illus., 73 in color. (Advances in Industrial Control) Hardcover

$129.00
ISBN 978-1-4471-2223-4
Fatigue of Beta Processed and Beta Heat-treated Titanium Alloys

This publication reviews most of the available literature on the fatigue properties of β annealed Ti-6Al-4V and titanium alloys with similar microstructures. The focus is on β processed and β heat-treated alloys because β annealed Ti-6Al-4V has been selected for highly loaded and fatigue-critical structures, including the main wing carry-through bulkheads and vertical tail stubs, of advanced high-performance military aircraft. An important aspect of the review is a concise survey of fatigue life assessment methods and the required types of fatigue data. This survey provides the background to recommendations for further research, especially on the fatigue behaviour of β annealed Ti-6Al-4V under realistic fatigue load histories, including the essential topic of short/small fatigue crack growth. Such research is required for independent fatigue life assessments that conform to the aircraft manufacturer’s design requirements, and also for life reassessments that most probably will have to be made.[...]

Contents
Contents: 1 Introduction. 1.1 Survey of fatigue life assessment methods. 2 Metallurgy and microstructure. 2.1 The general metallurgy of titanium alloys. 2.2 Conventional thermomechanical processing of alloys like Ti-6Al-4V. 2.3 β processing and/or β heat-treatment. 2.4 Crystallography of the β to α phase transition. 2.5 Microstructure of β annealed Ti-6Al-4V ELI thick plate. 3 Fatigue crack initiation. 3.1 Microstructural initiation sites in near-α and a – β alloys: literature. 3.2 Microstructural initiation sites: β annealed Ti-6Al-4V ELI thick plate. [...]

Fault Detection and Flight Data Measurement

Demonstrated on Unmanned Air Vehicles using Neural Networks

This book considers two popular topics: fault detection and isolation (FDI) and flight data estimation using flush air data sensing (FADS) systems. Literature surveys, comparison tests, simulations and wind tunnel tests are performed. In both cases, a UAV platform is considered for demonstration purposes. In the first part of the book, FDI is considered for sensor faults where a neural network approach is implemented. FDI is applied both in academia and industry resulting in many publications over the past 50 years or so. However few publications consider neural networks in comparison to traditional techniques such as observer based, parameter estimations and parity space approaches. The second part of this book focuses on how to estimate flight data (angle of attack, airspeed) using a matrix of pressure sensors and a neural network model. In conclusion this book can serve as an introduction to FDI and FADS systems, a literature survey, and a case study for UAV applications.

Contents
Contents: Introduction. Fault detection and isolation (FDI). Introduction to FADS systems. Neural Networks. SFDA and Multiple sensor faults. SFDA: Multiple sensor faults. FADS system applied to a MAV. Conclusions and Future Work. Fields of interest

Fields of interest: Control, Computational Intelligence, Aerospace Technology and Astronautics; Systems Theory, Control

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2011. XX, 176 p. 82 illus., 23 in color. (Lecture Notes in Control and Information Sciences, Vol. 419) Softcover

$109.00
ISBN 978-3-642-24051-5

Forensic Speaker Recognition

Law Enforcement and Counter-Terrorism

Forensic Speaker Recognition: Law Enforcement and Counter-Terrorism is an anthology of the research findings of 35 speaker recognition experts from around the world. The volume provides a multidimensional view of the complex science involved in determining whether a suspect’s voice truly matches forensic speech samples, collected by law enforcement and counter-terrorism agencies, that are associated with the commission of a terrorist act or other crimes. While addressing such topics as the challenges of forensic case work, handling speech signal degradation, analyzing features of speaker recognition to optimize voice verification system performance, and designing voice applications that meet the practical needs of law enforcement and counter-terrorism agencies, this material all sounds a common theme: how the rigors of forensic utility are demanding new levels of excellence in all aspects of speaker recognition. The contributors are among the most eminent scientists in speech engineering and signal.[...]

Contents


Fields of interest

Signal, Image and Speech Processing; Language Translation and Linguistics; Linguistics (general)

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XXI, 540 p. 150 illus. Hardcover

$229.00

2012. X, 51 p. 33 illus., 27 in color. (SpringerBriefs in Applied Sciences and Technology) Softcover

$49.95
Fractional Processes and Fractional-Order Signal Processing

Techniques and Applications

Fractional processes are widely found in science, technology and engineering systems. In Fractional Processes and Fractional-order Signal Processing, some complex random signals, characterized by the presence of a heavy-tailed distribution or non-negligible dependence between distant observations (local and long memory), are introduced and examined from the ‘fractional’ perspective using simulation, fractional-order modeling and filtering and realization of fractional-order systems. These fractional-order signal processing (FOSP) techniques are based on fractional calculus, the fractional Fourier transform and fractional lower-order moments. Fractional Processes and Fractional-order Signal Processing presents fractional processes of fixed, variable and distributed order studied as the output of fractional-order differential systems; introduces FOSP techniques and the fractional signals and fractional systems point of view; details real-world application examples of FOSP techniques to.[…]

Features

Fractional processes are widely found in science, technology and engineering systems. In Fractional Processes and Fractional-order Signal Processing, some complex random signals, characterized by the presence of a heavy-tailed distribution or non-negligible dependence between distant observations (local and long memory), are introduced and examined from the ‘fractional’ perspective using simulation, […]

Contents


Fields of interest

Signal, Image and Speech Processing; Image Processing and Computer Vision; Information and Communication, Circuits

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XXVI, 295 p. 162 illus., 146 in color. (Signals and Communication Technology) Hardcover

Fundamentals of Digital Manufacturing Science

The manufacturing industry will reap significant benefits from encouraging the development of digital manufacturing science and technology. Digital Manufacturing Science uses theorems, illustrations and tables to introduce the definition, theory architecture, main content, and key technologies of digital manufacturing science. Readers will be able to develop an in-depth understanding of the emergence and the development, the theoretical background, and the techniques and methods of digital manufacturing science. Furthermore, they will also be able to use the basic theories and key technologies described in Digital Manufacturing Science to solve practical engineering problems in modern manufacturing processes. Digital Manufacturing Science is aimed at advanced undergraduate and postgraduate students, academic researchers and researchers in the manufacturing industry. It allows readers to integrate the theories and technologies described with their own research works, and to propose new ideas and new.[…]

Features

The manufacturing industry will reap significant benefits from encouraging the development of digital manufacturing science and technology. Digital Manufacturing Science uses theorems, illustrations and tables to introduce the definition, theory architecture, main content, and key technologies of digital manufacturing science. Readers will be able to develop an in-depth understanding of the.[…]

Contents


Fields of interest

Manufacturing, Machines, Tools; Computer-Aided Engineering (CAD, CAE) and Design; Technology Management

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XIII, 366 p. 156 illus. (Springer Series in Advanced Manufacturing) Hardcover

$179.00


Fundamentals of GPS Receivers

A Hardware Approach

Fundamentals of GPS receivers covers GPS receivers’ theory and practice. The book begins with the basics of GPS receivers and moves onward to more advanced material. The book examines three types of GPS receiver implementations: first is the custom design by the author; second is an industry standard design, now part of the open source network; the third relates to the receiver designed by JPL/ NASA. Each receiver is unique allowing the reader to see how each design solves the same problems. Chapters discuss carrier phase measurements and GPS time and frequency measurements. The overall text is measurement oriented as opposed to processing the measurements. With a focus on the fundamentals of measurements the reader will be building their intuition for the physical phenomenon at work.

Features

While much of the current literature on GPS receivers is aimed at those intimately familiar with their workings, this volume summarizes the basic principles using as little mathematics as possible, and details the necessary specifications and circuits for constructing a GPS receiver that is accurate to within 300 meters. Dedicated sections deal with the features of the GPS signal and its data stream, the.[…]

Contents


Fields of interest

Communications Engineering, Networks; Geophysics / Geodesy; Microwaves, RF and Optical Engineering

Target groups

Research

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2012, XVI, 329 p. 139 illus. Hardcover

$119.00

ISBN 978-1-4614-0408-8
Handbook of Memetic Algorithms

Memetic Algorithms (MAs) are computational intelligence structures combining multiple and various operators in order to address optimization problems. The combination and interaction amongst operators evolves and promotes the diffusion of the most successful units and generates an algorithmic behavior which can handle complex objective functions and hard fitness landscapes.

“Handbook of Memetic Algorithms” organizes, in a structured way, all the most important results in the field of MAs since their earliest definition until now. A broad review including various algorithmic solutions as well as successful applications is included in this book. Each class of optimization problems, such as constrained optimization, multi-objective optimization, continuous vs combinatorial problems, uncertainties, are analysed separately and, for each problem, memetic recipes for tackling the difficulties are given with some successful examples. Although this book contains chapters written by multiple authors.

Features
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Contents

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XXVI, 370 p. 22 illus., 5 in color. (Studies in Computational Intelligence, Vol. 379) Hardcover

$179.00
ISBN 978-3-642-23246-6

Harnessing VLSI System Design with EDA Tools

With the proliferation of VHDL, the reference material also grew in the same order. Today there is good amount of scholarly literature including many books describing various aspects of VHDl. However, an indepth review of these books reveals a different story. Many of them have emerged simply as an improved version of the manual. While some of them deal with the system design issues, they lack appropriate exemplifying to illustrate the concepts. Others give large number of examples, but lack the VLSI system design issues. In nutshell, the fact which gone unnoticed by most of the books, is the growth of the VLSI is not merely due to the language itself, but more due to the development of large number of third party tools useful from the FPGA or semicustom ASIC realization point of view. In the proposed book, the authors have synergized the VHDL programming with appropriate EDA tools so as to present a full proof system design to the readers. In this book along with the VHDL coding issues, the

Features
This book explores various dimensions of EDA technologies for achieving different goals in VLSI system design. Although the scope of EDA is very broad and comprises diversified hardware and software tools to accomplish different phases of VLSI system design, such as design, layout, simulation, testability, prototyping and implementation, this book focuses only on demystifying the code, a.k.a. firmware

Contents
Introduction. - Development of FPGA Based Network on Chip for Circumventing Spam. - Analog Front End and FPGA Based Soft IP Core for ECG Logger. - FPGA Based Multifunction Interface for Embedded Applications. - FPGA Based High Resolution Time to Digital Converter.

Fields of interest
Circuits and Systems; Special Purpose and Application-Based Systems

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012, XXVII, 154 p. 67 illus. Hardcover

$129.00
ISBN 978-94-007-1863-0

Heat Transfer
Basics and Practice

The book provides an easy way to understand the fundamentals of heat transfer. The reader will acquire the ability to design and analyze heat exchangers. Without extensive derivation of the fundamentals, the latest correlations for heat transfer coefficients and their application are discussed. The following topics are presented - Steady state and transient heat conduction - Free and forced convection - Finned surfaces - Condensation and boiling - Radiation - Heat exchanger design - Problem-solving After introducing the basic terminology, the reader is made familiar with the different mechanisms of heat transfer. Their practical application is demonstrated in examples, which are available in the Internet as MathCad files for further use. Tables of material properties and formulas for their use in programs are included in the appendix. This book will serve as a valuable resource for both students and engineers in the industry. The author’s experience indicates that students, after 40 lectures and -

Features
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Contents

Fields of interest
Engineering Thermodynamics, Heat and Mass Transfer; Engineering Fluid Dynamics

Target groups
Upper undergraduate

Type of publication
Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012, XIII, 276 p. 115 illus. With online files/update. Softcover

$79.95
ISBN 978-3-642-19182-4
High Performance Fiber Reinforced Cement Composites

High Performance Fiber Reinforced Cement Composites (HPFRCC) represent a class of cement composites whose stress-strain response in tension undergoes strain hardening behaviour accompanied by multiple cracking, leading to a high strain prior to failure. The primary objective of this International Workshop was to provide a compendium of up-to-date information on the most recent developments and research advances in the field of High Performance Fiber Reinforced Cement Composites. Approximately 65 contributions from leading world experts are assembled in these proceedings and provide an authoritative perspective on the subject. Special topics include fresh and hardening state properties; self-compacting mixtures; mechanical behavior under compressive, tensile, and shear loading; structural applications; impact, earthquake and fire resistance; durability issues; ultra-high performance fiber reinforced concrete; and textile reinforced concrete. Target readers: graduate students, researchers, fiber...-

Features
High Performance Fiber Reinforced Cement Composites (HPFRCC) represent a class of cement composites whose stress-strain response in tension undergoes strain hardening behaviour accompanied by multiple cracking, leading to a high strain prior to failure. The primary objective of this International Workshop was to provide a compendium of up-to-date information on the most recent developments and [...] Contents

Fields of interest
Civil Engineering; Building Materials; Building Repair and Maintenance; Theoretical and Applied Mechanics; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$229.00
ISBN 978-94-007-2435-8

Human – Computer Systems Interaction: Backgrounds and Applications

Part 2
This volume of the book contains a collection of chapters selected from the papers which originally (in shortened form) have been presented at the 3rd International Conference on Human-Systems Interaction held in Rzeszow, Poland, in 2010. The chapters are divided into five sections concerning: IV. Environment monitoring and robotic systems, V. Diagnostic systems, VI. Educational Systems, and VII. General Problems. The novel concepts and realizations of humanoid robots, talking robots and orthopedic surgical robots, as well as those of direct brain-computer interface are examples of particularly interesting topics presented in Sec. VI. In Sec. V the problems of skin cancer recognition, colonoscopy diagnosis, and brain strokes diagnosis as well as more general problems of ontology design for medical diagnostic knowledge are presented. Example of an industrial diagnostic system and a concept of new algorithm for edges detection in computer-analyzed images are also presented in this Section. Among [...]

Features
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Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$349.00
ISBN 978-3-642-23171-1

IAENG Transactions on Engineering Technologies Volume 6 - Special Edition of the World Congress on Engineering and Computer Science 2010

This volume contains twenty-two revised and extended research articles written by prominent researchers participating in the World Congress on Engineering and Computer Science (WCES 2009). The book offers the state of art of tremendous advances in engineering technologies and also serves as an excellent reference work for researchers and graduate students working with/on engineering technologies.

Features
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Fields of interest
Electrical Engineering; Physical Chemistry; Quantum Computing; Mathematical Methods in Physics; Fluid- and Aerodynamics; Industrial Chemistry / Chemical Engineering

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days


$150.00
ISBN 978-0-7354-0933-0

IAENG Secretariat, Hong Kong, China (Ed.)

S.-l. Ao, IAENG Secretariat, Hong Kong, China (Ed.)

G.J. Parra Montesinos, University of Michigan, Ann Arbor, MI, USA; H.W. Reinhardt, University of Stuttgart, Germany; A.E. Naaman, The University of Michigan, Ann Arbor, MI, USA (Eds.)

High Performance Fiber Reinforced Cement Composites 6

HPFRCC 6

S.Z. Hippe, University of Information Technology and Management, Rzeszow, Poland; J.L. Kuklikowski, Polish Academy of Sciences, Warsaw, Poland; T. Mroczek, University of Information Technology and Management, Rzeszow, Poland (Eds.)

Human – Computer Systems Interaction: Backgrounds and Applications 2

Part 2
This volume of the book contains a collection of chapters selected from the papers which originally (in shortened form) have been presented at the 3rd International Conference on Human-Systems Interaction held in Rzeszow, Poland, in 2010. The chapters are divided into five sections concerning: IV. Environment monitoring and robotic systems, V. Diagnostic systems, VI. Educational Systems, and VII. General Problems. The novel concepts and realizations of humanoid robots, talking robots and orthopedic surgical robots, as well as those of direct brain-computer interface are examples of particularly interesting topics presented in Sec. VI. In Sec. V the problems of skin cancer recognition, colonoscopy diagnosis, and brain strokes diagnosis as well as more general problems of ontology design for medical diagnostic knowledge are presented. Example of an industrial diagnostic system and a concept of new algorithm for edges detection in computer-analyzed images are also presented in this Section. Among [...]

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Contents

Fields of interest
Computational Intelligence; Artificial Intelligence (incl. Robotics); User Interfaces and Human Computer Interaction

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$349.00
ISBN 978-3-642-23171-1

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Fields of interest
Electrical Engineering; Physical Chemistry; Quantum Computing; Mathematical Methods in Physics; Fluid- and Aerodynamics; Industrial Chemistry / Chemical Engineering

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days


$150.00
ISBN 978-0-7354-0933-0

IAENG Secretariat, Hong Kong, China (Ed.)

S.-l. Ao, IAENG Secretariat, Hong Kong, China (Ed.)
Innovation Design presents an approach to designing shared value for businesses, non-profit organizations, end-users and society. The societal and economic challenges we are currently facing – such as the aging population, energy scarcity and environmental issues – are not just threats but are also great opportunities for organizations. Innovation Design shows how organizations can contribute to the process of generating value for society by finding true solutions to these challenges. And at the same time it describes how they can capture value for themselves in business ecosystems that care for both people and planet.

This book covers: creating meaningful innovations that improve quality of life, engage users and provide value for organizations and other stakeholders, guiding the creation of shared value throughout the innovation process, with a practical and integrative approach towards value that connects ideas from economics, psychology, sociology and ecology, designing new business models and [...] Features

Innovation Design presents an approach to designing shared value for businesses, non-profit organizations, end-users and society. The societal and economic challenges we are currently facing – such as the aging population, energy scarcity and environmental issues – are not just threats but are also great opportunities for organizations. Innovation Design shows how organizations can contribute to the process [...] Contents


Fields of interest

Engineering Economics, Organization, Logistics, Marketing; Management/Business for Professionals; Professional and Vocational Education; Organization / Planning; Entrepreneurship

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2012. XII, 196 p. 61 illus., 32 in color. With online files/ update. Hardcover

$129.00
ISBN 978-1-4471-2267-8

Innovations in Intelligent Machines -2

Intelligent Paradigms and Applications

This research volume is a continuation of our previous volume on intelligent machines. We have laid the foundation of intelligent machines in Springer SCI Series Volume 70 by including the possible and successful applications of computational intelligence paradigms in machines for mimicking the human behaviour. The present volume includes the recent advances in intelligent paradigms and innovative applications such as document processing, language translation, English academic writing, crawling system for web pages, web-page retrieval technique, aggregate k-Nearest Neighbour for answering queries, context-aware guide, recommendation system for museum, meta-learning environment, case-based reasoning approach for adaptive modelling in exploratory learning, discussion support system for understanding research papers, system for recommending e-Learning courses, community site for supporting multiple motor-skill development, community size estimation of internet forum, lightweight reprogramming for [...] Features

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From the content: Advances in Information Processing Paradigms.- The Extraction of Figure-related Sentences to Effectively Understand Figures.- Alignment-based Translation Unit for Simultaneous Japanese-English Spoken Dialogue Translation.- Automatic Collection of Useful Phrases for English Academic Writing.- An Effectively Focused Crawling System.

Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics)

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 284 p. 130 illus., 77 in color. (Studies in Computational Intelligence, Vol. 376) Hardcover

$179.00
ISBN 978-3-642-23189-6

Innovative Materials and Techniques in Concrete Construction

ACES Workshop

Recent years have seen enormous advances in the technology of concrete as a material, through which its strength, compactness and ductility can reach levels never dreamed of before. Thanks to these improved material properties, the strength and durability of concrete structures is greatly improved, their weight and dimensions reduced, the scope of concrete as a structural material is widened and – despite the higher material costs - overall economy is possible, with positive impacts on sustainability as well. Similar advances are underway in reinforcing materials, notably high strength steel and fibre-reinforced polymers, and in the way they are combined with concrete into high performance structures. Developments in materials and equipment, as well as new concepts, have lead to innovative construction techniques, reducing cost and construction time and making possible the application of concrete under extreme conditions of construction or environment. All these advances will be highlighted in the [...] Features

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Civil Engineering; Structural Mechanics; Building Materials; Basics of Construction; Construction Management

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days

2012. XV, 379 p. 289 illus., 168 in color. Hardcover

$179.00
ISBN 978-3-642-23189-6
Integrated Filters for Short Range Wireless and Biomedical Applications

This book describes the design of low-voltage analog integrated filters using current mirrors, one of the most common building blocks both in analog and mixed-signal VLSI circuits, offering the advantages of low-voltage operation, derivation of resistorless topologies and electronic adjustment capability of their frequency characteristics. Several design examples are described, using current mirrors that fulfill the requirements of modern low-power wireless and biomedical applications, such as universal biquadratic filter topologies, complex filters for Bluetooth/ZigBee low-IF receivers and Wavelet filters for cardiac signal detection. The experimental results from the fabricated chips will also be presented, showing their utility in modern low-voltage low-power portable devices.

Features
This book describes the design of low-voltage analog integrated filters using current mirrors, one of the most common building blocks both in analog and mixed-signal VLSI circuits, offering the advantages of low-voltage operation, derivation of resistorless topologies and electronic adjustment capability of their frequency characteristics. Several design examples are described, using current mirrors that fulfill the requirements of modern low-power wireless and biomedical applications.

Contents

Target groups
Research 

Type of publication
Brief 

Usually dispatched within 3 to 5 business days

2012. VIII, 103 p. 72 illus. (SpringerBriefs in Electrical and Computer Engineering) Softcover 

$49.95
ISBN 978-1-4614-0259-6

Intelligent Computer Graphics 2011

In Computer Graphics, the use of intelligent techniques started more recently than in other research areas. However, during these last two decades, the use of intelligent Computer Graphics techniques is growing up year after year and more and more interesting techniques are presented in this area. The purpose of this volume is to present current work of the Intelligent Computer Graphics community, a community growing up year after year. This volume is a kind of continuation of the previously published Springer volumes "Artificial Intelligence Techniques for Computer Graphics" (2008), "Intelligent Computer Graphics 2009" (2009) and "Intelligent Computer Graphics 2010" (2010). This volume contains selected extended papers from the last 3IA Conference (3IA’2011), which has been held in Athens (Greece) in May 2011. This year papers are particularly exciting and concern areas like virtual reality, artificial life, data visualization, games, global illumination, point cloud modelling, declarative[...]

Features
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Contents

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

Target groups
Research 

Type of publication
Monograph 

Usually dispatched within 3 to 5 business days

2012. X, 175 p. 111 illus., 95 in color. (Studies in Computational Intelligence, Vol. 374) Hardcover 

$129.00
ISBN 978-3-642-22906-0

Lead Free Solder

Mechanics and Reliability

Lead-free solders are used extensively as interconnection materials in electronic assemblies and play a critical role in the global semiconductor packaging and electronics manufacturing industry. Electronic products such as smart phones, notebooks and high performance computers rely on lead-free solder joints to connect IC chip components to printed circuit boards. Lead Free Solder: Mechanics and Reliability provides in-depth design knowledge on lead-free solder elastic-plastic-crimp and strain-rate dependent deformation behavior and its application in failure assessment of solder joint reliability. It includes coverage of advanced mechanics of materials theory and experiments, mechanical properties of solder and solder joint specimens, constitutive models for solder deformation behavior; numerical modeling and simulation of solder joint failure subject to thermal cycling, mechanical bending fatigue, vibration fatigue and board-level drop impact tests.

Features
Lead-free solders are used extensively as interconnection materials in electronic assemblies and play a critical role in the global semiconductor packaging and electronics manufacturing industry. Electronic products such as smart phones, notebooks and high performance computers rely on lead-free solder joints to connect IC chip components to printed circuit boards. Lead Free Solder: Mechanics and Reliability provides in-depth design knowledge on lead-free solder elastic-plastic-crimp and strain-rate dependent deformation behavior and its application in failure assessment of solder joint reliability. It includes coverage of advanced mechanics of materials theory and experiments, mechanical properties of solder and solder joint specimens, constitutive models for solder deformation behavior; numerical modeling and simulation of solder joint failure subject to thermal cycling, mechanical bending fatigue, vibration fatigue and board-level drop impact tests.

Contents

Fields of interest
Electronics and Microelectronics; Instrumentation; Optical and Electronic Materials; Continuum Mechanics and Mechanics of Materials; Circuits and Systems 

Target groups
Professional/practitioner 

Type of publication
Monograph 

Usually dispatched within 3 to 5 business days

2012. X, 175 p. 162 illus. Hardcover 

$129.00
ISBN 978-1-4614-0462-0
Lee de Forest
King of Radio, Television, and Film

The life-long inventor, Lee de Forest invented the three-element vacuum tube used between 1906 and 1916 as a detector, amplifier, and oscillator of radio waves. Beginning in 1918 he began to develop a light valve, a device for writing and reading sound using light patterns. While he received many patents for his process, he was initially ignored by the film industry. In order to promote and demonstrate his process he made several hundred sound short films, he rented space for their showing; he sold the tickets and did the publicity to gain audiences for his invention. Lee de Forest officially brought sound to film in 1919. Lee De Forest: King of Radio, Television, and Film is about both invention and early film making; de Forest as the scientist and producer, director, and writer of the content. This book tells the story of de Forest’s contribution in changing the history of film through the incorporation of sound. The text includes primary source historical material, U.S. patents and [...]
Modular Neural Networks and Type-2 Fuzzy Systems for Pattern Recognition

This book describes hybrid intelligent systems using type-2 fuzzy logic and modular neural networks for pattern recognition applications. Hybrid intelligent systems combine several intelligent computing paradigms, including fuzzy logic, neural networks, and bio-inspired optimization algorithms, which can be used to produce powerful pattern recognition systems. Type-2 fuzzy logic is an extension of traditional type-1 fuzzy logic that enables managing higher levels of uncertainty in complex real world problems, which are of particular importance in the area of pattern recognition. The book is organized in three main parts, each containing a group of chapters built around a similar subject. The first part consists of chapters with the main theme of the theory and design algorithms, which are basically chapters that propose new models and concepts, which are the basis for achieving intelligent pattern recognition. The second part contains chapters with the main theme of using type-2 fuzzy models and modular [...]

Features
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New Approaches in Modeling Multiphase Flows and Dispersion in Turbulence, Fractal Methods and Synthetic Turbulence

This book contains a collection of the main contributions from the first five workshops held by Ercoftac Special Interest Group on Synthetic Turbulence Models (SIG42). It is intended as an illustration of the sig’s activities and of the latest developments in the field. This volume investigates the use of Kinematic Simulation (KS) and other synthetic turbulence models for the particular application to environmental flows. This volume offers the best syntheses on the research status in KS, which is widely used in various domains, including Lagrangian aspects in turbulence mixing/stirring, particle dispersion/clustering, and last but not least, aeroacoustics. Flow realizations with complete spatial, and sometime spatio-temporal, dependency, are generated via superposition of random modes (mostly spatial, and sometime spatial and temporal, Fourier modes), with prescribed constraints such as strict incompressibility (divergence-free velocity field at each point), high Reynolds energy spectrum. Recent [...] [1-8]

Features
This book contains a collection of the main contributions from the first five workshops held by Ercoftac Special Interest Group on Synthetic Turbulence Models (SIG42). It is intended as an illustration of the sig’s activities and of the latest developments in the field. This volume investigates the use of Kinematic Simulation (KS) and other synthetic turbulence models for the particular application to [...] [9-12]

Contents

Fields of interest
Engineering Fluid Dynamics; Fluid and Aerodynamics; Numerical and Computational Physics; Computational Science and Engineering

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 176 p. (Studies in Computational Intelligence, Vol. 383) Hardcover

$129.00
ISBN 978-3-642-24695-1

New Trends in Agent-Based Complex Automated Negotiations

Complex Automated Negotiations represent an important, emerging area in the field of Autonomous Agents and Multi-Agent Systems. Automated negotiations can be complex, since there are a lot of factors that characterize such negotiations. These factors include the number of issues, dependencies between these issues, representation of utilities, the negotiation protocol, the number of parties in the negotiation (bilateral or multi-party), time constraints, etc. Software agents can support automation or simulation of such complex negotiations on the behalf of their owners, and can provide them with efficient bargaining strategies. To realize such a complex automated negotiation, we have to incorporate advanced Artificial Intelligence technologies includes search, CSP, graphical utility models, Bayes nets, auctions, utility graphs, predicting and learning methods. Applications could include e-commerce tools, decision-making support tools, negotiation support tools, collaboration tools, etc. This book [...] [13-20]

Features
Complex Automated Negotiations represent an important, emerging area in the field of Autonomous Agents and Multi-Agent Systems. Automated negotiations can be complex, since there are a lot of factors that characterize such negotiations. These factors include the number of issues, dependencies between these issues, representation of utilities, the negotiation protocol, the number of parties in the [...] [21-24]

Contents

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$129.00
ISBN 978-94-007-2505-8
Noise and Vibration Mitigation for Rail Transportation Systems

Proceedings of the 10th International Workshop on Railway Noise, Nagahama, Japan, 18-22 October 2010

This volume contains the contributions to the 10th International Workshop on Railway Noise, held October 18–22, 2010, in Nagahama, Japan, organized by the Railway Technical Research Institute (RTRI), Japan. With 11 sessions and 3 poster sessions, the workshop featured presentations by international leaders in the field of railway noise and vibration. All subjects relating to 1. prospects, legal regulation, and perception; 2. wheel and rail noise; 3. structure-borne noise and squeal noise; 4. ground-borne vibration; 5. aerodynamic noise and micro-pressure waves from tunnel portals; 6. interior noise and sound barriers; and 7. prediction, measurements, and monitoring are addressed here. This book is a useful "state-of-the-art" reference for scientists and engineers involved in solving environmental problems of railways.

Features
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Fields of interest
Vibration, Dynamical Systems, Control; Civil Engineering; Engineering Design

Target groups
Professional/practitioner

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days


$319.00
ISBN 978-4-431-53926-1

Nonlinear Dynamic Phenomena in Mechanics

Nonlinear phenomena should play a crucial role in the design and control of engineering systems and structures as they can drastically change the prevailing dynamical responses. This book covers theoretical and applications-based problems of nonlinear dynamics concerned with both discrete and continuous systems of interest in civil and mechanical engineering. They include pendulum-like systems, slender footbridges, shape memory alloys, sagged elastic cables and non-smooth problems. Pendulums can be used as a dynamic absorber mounted in high buildings, bridges or chimneys. Geometrical nonlinearities introduced by pendulum motion may change the system dynamics, and entail a rapid increase of the oscillations of both the structure and the pendulum, leading to full pendulum rotation or chaotic dynamics. To magnetorheological damping is proposed. Nonlinear mechanics has to be used to explain undesired response in slender footbridges, such as that occurred in the famous event of the London Millennium Bridge.[…]

Features
Nonlinear phenomena should play a crucial role in the design and control of engineering systems and structures as they can drastically change the prevailing dynamical responses. This book covers theoretical and applications-based problems of nonlinear dynamics concerned with both discrete and continuous systems of interest in civil and mechanical engineering. They include […]

Contents

Fields of interest
Theoretical and Applied Mechanics; Structural Mechanics; Vibration, Dynamical Systems, Control; Engineering Design

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$129.00
ISBN 978-94-007-2472-3
On Integrating Unmanned Aircraft Systems into the National Airspace System

This book presents, in a comprehensive way, current unmanned aviation regulation, airworthiness certification, special aircraft categories, pilot certification, federal aviation requirements, operation rules, airspace classes and regulation development models. It discusses unmanned aircraft systems levels of safety derived mathematically based on the corresponding levels for manned aviation. It provides an overview of the history and current status of UAS airworthiness and operational regulation worldwide. Existing regulations have been developed considering the need for a complete regulatory framework for UAS. It focuses on UAS safety assessment and functional requirements, achieved in terms of defining an "Equivalent Level of Safety", or ELOS, with that of manned aviation, specifying what the ELOS requirement entails for UAS regulations. To accomplish this, the safety performance of manned aviation is first evaluated, followed by a novel model to derive reliability requirements for achieving target.[…]

Features
This book presents, in a comprehensive way, current unmanned aviation regulation, airworthiness certification, special aircraft categories, pilot certification, federal aviation requirements, operation rules, airspace classes and regulation development models. It discusses unmanned aircraft systems levels of safety derived mathematically based on the corresponding levels for manned aviation. It […]

Contents
1 Introduction. - 1.1 What’s in a name . . . UAV or UAS? - 1.2 Motivation and Rationale. - 1.3 On Regulating Safety.- 1.4 Book Objectives and Outline.- References.- 2 Aviation History and Unmanned Flight. - 2.1 Precursors of Flight and Unmanned Aircraft - 2.2 1916–1944. - 2.3 The Machines of the Cold War. - 2.4 Modern Systems. - 2.5 Remarks.- References. - 3 Current Manned Aviation Regulation.- 3.1 Introduction.- 3.2 Airworthiness Certification.- 3.2.1 Type Certificate.- 3.2.2 Standard Certificates.- 3.3 Special Aircraft Categories.- 3.3.1[…]

Fields of interest
Robotics and Automation; Law of the Sea, Air and Outer Space; Aerospace Technology and Astronautics; Artificial Intelligence (incl. Robotics); Medicine (general)

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 305 p. 119 illus., 96 in color. [Intelligent Systems, Control and Automation: Science and Engineering, Vol. 54] Hardcover

$179.00

Optimal Mobile Sensing and Actuation Policies in Cyber-physical Systems

A successful cyber-physical system, a complex interweaving of hardware and software with some part of the physical environment, depends on proper identification of the, often pre-existing, physical element. A bespoke "cyber" part of the system may then be designed from scratch. Optimal Mobile Sensing and Actuation Strategies in Cyber-physical Systems focuses on distributed-parameter systems the dynamics of which can be modelled with partial differential equations. These are very challenging to observe, their states and inputs being distributed throughout a spatial domain. Consequently, systematic approaches to the optimization of sensor location have to be devised for parameter estimation. The text begins by reviewing the field of cyber-physical systems and introducing background notions of distributed parameter systems and optimal observation theory. New research problems are then defined within this framework. Two important problems considered are optimal mobile sensor trajectory planning and the […]

Features
A successful cyber-physical system, a complex interweaving of hardware and software in direct interaction with some parts of the physical environment, relies heavily on proper identification of the, often pre-existing, physical elements. Based on information from that process, a bespoke "cyber" part of the system may then be designed for a specific purpose. Optimal Mobile Sensing and Actuation Strategies in […]

Contents

Fields of interest
Mechatronics; Computer Communication Networks; Control; Communications Engineering, Networks; Soil Science & Conservation

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVIII, 170 p. 63 illus., 35 in color. Hardcover

$129.00
ISBN 978-1-4471-2261-6
PEM Fuel Cells with Bio-Ethanol Processor Systems

A Multidisciplinary Study of Modelling, Simulation, Fault Diagnosis and Advanced Control

An apparently appropriate control scheme for PEM fuel cells may actually lead to an inoperable plant when it is connected to other unit operations in a process with recycle streams and energy integration. PEM Fuel Cells with Bio-Ethanol Processor Systems presents a control system design that provides basic regulation of the hydrogen production process with PEM fuel cells. It then goes on to construct a fault diagnosis system to improve plant safety above this control structure. PEM Fuel Cells with Bio-Ethanol Processor Systems is divided into two parts: the first covers fuel cells and the second discusses plants for hydrogen production from bio-ethanol to feed PEM fuel cells. Both parts give detailed analyses of modeling, simulation, advanced control, and fault diagnosis. They give an extensive, in-depth discussion of the problems that can occur in fuel cell systems and propose a way to control these systems through advanced control algorithms. A significant part of the book is also given over to [...]
Quantitative Methods in Supply Chain Management

Models and Algorithms

Quantitative Methods in Supply Chain Management presents some of the most important methods and tools available for modeling and solving problems arising in the context of supply chain management. In the context of this book, "solving problems" usually means designing efficient algorithms for obtaining high-quality solutions. The first chapter is an extensive optimization review covering continuous unconstrained and constrained linear and nonlinear optimization algorithms, as well as dynamic programming and discrete optimization exact methods and heuristics. The second chapter presents time-series forecasting methods together with prediction market techniques for demand forecasting of new products and services. The third chapter details models and algorithms for planning and scheduling with an emphasis on production planning and personnel scheduling. The fourth chapter presents deterministic and stochastic models for inventory control with a detailed analysis on periodic review systems and [...]
Reset Control Systems

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

Features
Reset Control Systems addresses the analysis for reset control treating both its basic form which requires only that the state of the controller be reinitialized to zero (the reset action) each time the tracking error crosses zero (the reset condition), and some useful variations of the reset action (partial reset with fixed or variable reset percentage) and of the reset condition (fixed or variable [..])

Contents

Fields of interest
Control; Information Systems Applications (incl.Internet); Building Construction, HVAC, Refrigeration; Renewable and Green Energy

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 252 p. 137 illus., 32 in color. (Advances in Industrial Control) Hardcover

$129.00
ISBN 978-1-4471-2216-6

Role of Seismic Testing Facilities in Performance-Based Earthquake Engineering
SERIES Workshop

Nowadays research in earthquake engineering is mainly experimental and in large-scale; advanced computations are integrated with large-scale experiments, to complement them and extend their scope, even by coupling two different but simultaneous tests. Earthquake testing cannot give answers by testing and qualifying few, small typical components or single large prototypes. Besides, the large diversity of Civil Engineering structures does not allow drawing conclusions from only a few tests; structures are large and their seismic response and performance cannot be meaningfully tested in an ordinary lab or in the field. So, seismic testing facilities should be much larger than in other scientific fields; their staff has to be resourceful, devising intelligent ways to carry out simultaneously different tests and advanced computations. To better serve such a mission European testing facilities and researchers in earthquake engineering have shared their resources and activities in the framework of[..]

Features
Nowadays research in earthquake engineering is mainly experimental and in large-scale; advanced computations are integrated with large-scale experiments, to complement them and extend their scope, even by coupling two different but simultaneous tests. Earthquake engineering cannot give answers by testing and qualifying few, small typical components or single large prototypes. Besides, the large diversity [..]

Contents

Fields of interest
Civil Engineering; Structural Mechanics; Geotechnical Engineering & Applied Earth Sciences; Vibration, Dynamical Systems, Control

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XVII, 384 p. 167 illus., 97 in color. (Geotechnical, Geological and Earthquake Engineering, Vol. 22) Hardcover

$179.00
Scalable Multi-core Architectures

Design Methodologies and Tools

As Moore’s law continues to unfold, two important trends have recently emerged. First, the growth of chip capacity is translated into a corresponding increase of number of cores. Second, the parallelization of the computation and 3D integration technologies lead to distributed memory architectures. This book describes recent research that addresses urgent challenges in many-core architectures and application mapping. It addresses the architectural design of many core chips, memory and data management, power management, design and programming methodologies. It also describes how new techniques have been applied in various industrial case studies.

Features

As Moore’s law continues to unfold, two important trends have recently emerged. First, the growth of chip capacity is translated into a corresponding increase of number of cores. Second, the parallelization of the computation and 3D integration technologies lead to distributed memory architectures. This book provides a current snapshot of industrial and academic research, conducted as part of the [...].

Contents


Fields of interest

Circuits and Systems; Computer-Aided Engineering (CAD, CAE) and Design

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XIV, 223 p. 109 illus. Hardcover

$119.00
ISBN 978-1-4419-6777-0

Software Engineering Research, Management and Applications 2011

R. Lee, Central Michigan University, Mt. Pleasant, MI, USA (Ed.)

Software Engineering Research, Management and Applications 2011

The purpose of the 9th International Conference on Software Engineering Research, Management and Applications (SEERA 2011) held on August 10-12, 2011 in Baltimore, Maryland was to bring together scientists, engineers, computer users, and students to share their experiences and exchange new ideas and research results about all aspects (theory, applications and tools) of computer and information sciences, and to discuss the practical challenges encountered along the way and the solutions adopted to solve them. The conference organizers selected 12 outstanding papers from SEERA 2011, all of which you will find in this volume of Springer’s Studies in Computational Intelligence.

Features

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Contents


Fields of interest

Computational Intelligence; Artificial Intelligence (incl. Robotics); Software Engineering

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XXI, 131 p. 89 illus. (Analog Circuits and Signal Processing) Hardcover

$129.00
ISBN 978-1-4614-0112-4

Software Radio

Sampling Rate Selection, Design and Synchronization

E. Venosa, San Diego State University, San Diego, CA, USA; F.J. Harris, San Diego State University, San Diego, CA, USA; F.A.N. Palmieri, Seconda Università di Napoli, Aversa, Italy

Software Radio

Sampling Rate Selection, Design and Synchronization

This book describes the design of Software Radio (SWR). Rather than providing an overview of digital signal processing and communications, this book focuses on topics which are crucial in the design and development of a SWR, explaining them in a very simple, yet precise manner, giving simulation results that confirm the effectiveness of the proposed design. Readers will gain in-depth knowledge of key issues so they can actually implement a SWR.

Features

Software Radio represents the future of communication devices. By moving a radio’s hardware functionalities into software, SWR promises to change the communication devices creating radios that, built on DSP based hardware platforms, are multistandard, multiband, reconfigurable and reprogrammable. This book describes the design of Software Radio (SWR). Rather than providing an overview of digital [...].

Contents


Fields of interest

Circuits and Systems; Electronics and Microelectronics; Instrumentation; Signal, Image and Speech Processing

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XXI, 131 p. 89 illus. (Analog Circuits and Signal Processing) Hardcover

$129.00
ISBN 978-1-4614-0112-4

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Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XXI, 131 p. 89 illus. (Analog Circuits and Signal Processing) Hardcover

$129.00
ISBN 978-1-4614-0112-4
Speaker Authentication

This book focuses on use of voice as a biometric measure for personal authentication. In particular, "Speaker Recognition" covers two approaches in speaker authentication: speaker verification (SV) and verbal information verification (VIV). The SV approach attempts to verify a speaker’s identity based on his/her voice characteristics while the VIV approach validates a speaker’s identity through verification of the content of his/her utterance(s). SV and VIV can be combined for new applications. This is still a new research topic with significant potential applications. The book provides with a broad overview of the recent advances in speaker authentication while giving enough attention to advanced and useful algorithms and techniques. It also provides a step by step introduction to the current state of the speaker authentication technology, from the fundamental concepts to advanced algorithms. We will also present major design methodologies and share our experience in developing real and successful [...]![...]

Contents

What is speaker authentication?. - Statistical approaches to detection, identification and verification. - Representations of speaker characteristics for authentication purposes. - Robust endpoint detection and feature extraction. - Statistical models for dynamic pattern recognition. - Fundamental approaches to speaker verification and identification. - Discriminative training. - Relation among discriminative training objectives. - Fast discriminative training algorithms for real application. - Fast and detection-based decoding for a large group of users. - Verbal information verification. - [...]

Fields of interest

Signal, Image and Speech Processing; Pattern Recognition; Biomedical Engineering

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XXV, 237 p. 83 illus., 19 in color. (Signals and Communication Technology) Hardcover

$129.00
ISBN 978-3-642-23730-0

G. Gougi, Clermont University, IFMA, Clermont-Ferrand, France

Structural Synthesis of Parallel Robots

Part 4: Other Topologies with Two and Three Degrees of Freedom

This book represents the fourth part of a larger work dedicated to the structural synthesis of parallel robots. Part 1 (Gougi 2008a) presented the methodology of structural synthesis and the systematisation of structural solutions of simple and complex limbs with two to six degrees of freedom systematically generated by the structural synthesis approach. Part 2 (Gougi 2009a) presented structural solutions of translational parallel robotic manipulators with two and three degrees of mobility. Part 3 (Gougi 2010a) focused on structural solutions of parallel robotic manipulators with planar motion of the moving platform. This book offers other topologies of parallel robotic manipulators with two and three degrees of freedom systematically generated by using the structural synthesis approach proposed in Part 1. The originality of this work resides in the fact that it combines the new formulae for mobility connectivity, redundancy and overconstraints, and the evolutionary morphology in a unified [...]![...]

Contents

Preface. - Acknowledgements. - List of abbreviations. - 1 Introduction. - 1.1 Terminology. - 1.1 Links, joints and kinematic chains. - 1.2 Serial, parallel and hybrid robots. - 1.2.1 Methodology of structural synthesis. - 1.2.1.1 New formulae for mobility, connectivity, redundancy and overconstraint of parallel robots. - 1.2.2 Evolutionary morphology approach. - 1.2.3 Types of parallel robots with respect to motion coupling. - 2 Parallel mechanisms with cylindrical motion of the moving platform. - 2.1 TIR1-type parallel mechanisms with coupled cylindrical motion. - 2.1.1.1 [...]

Fields of interest

Theoretical and Applied Mechanics; Control, Robotics, Mechatronics; Mechanics; Engineering Design; Mechanical Engineering

Type of publication

Monograph

Usually dispatched within 3 to 5 business days


$229.00
ISBN 978-94-007-2674-1

L. Wang, RMIT University, Melbourne, VIC, Australia; H. Garnier, CRAN, Nancy, France (Eds.)

System Identification, Environmental Modelling, and Control System Design

This book is dedicated to Prof. Peter Young on his 70th birthday. Professor Young has been a pioneer in systems and control, and over the past 45 years he has influenced many developments in this field. This volume comprises a collection of contributions by leading experts in system identification, time-series analysis, environmetric modelling and control system design – modern research in topics that reflect important areas of interest in Professor Young’s research career. Recent theoretical developments in and relevant applications of these areas are explored treating the various subjects broadly and in depth. The authoritative and up-to-date research presented here will be of interest to academic researchers in control and disciplines related to environmental research, particularly those to with water systems. The tutorial style in which many of the contributions are composed also makes the book suitable as a source of study material for graduate students in those areas.

Contents


Fields of interest

Control; Monitoring / Environmental Analysis; Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences; Circuits and Systems; Simulation and Modeling; Systems Theory, Control

Type of publication

Graduate

Usually dispatched within 3 to 5 business days


$229.00
ISBN 978-0-85729-973-4
The Art of Hardware Architecture
Design Methods and Techniques for Digital Circuits

This book highlights the complex issues, tasks and skills that must be mastered by an IP designer, in order to design an optimized and robust digital circuit to solve a problem. The techniques and methodologies described can serve as a bridge between specifications that are known to the designer and RTL code that is final outcome, reducing significantly the time it takes to convert initial ideas and concepts into right-first-time silicon.

Coverage focuses on real problems rather than theoretical concepts, with an emphasis on design techniques across various aspects of chip-design.

Features
This book highlights the complex issues, tasks and skills that must be mastered by an IP designer, in order to design an optimized and robust digital circuit to solve a problem. The techniques and methodologies described can serve as a bridge between specifications that are known to the designer and RTL code that is final outcome, reducing significantly the time it takes to convert initial ideas and concepts [..]

Contents

Fields of interest
Circuits and Systems; Electronics and Microelectronics; Instrumentation; Processor Architectures

Target groups
Research

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012, XV, 221 p. 205 illus. Hardcover
$129.00

The MPEG Representation of Digital Media

More and more information, audio and video but also a range of other information type, is generated, processed and used by machines today, even though the end user may be a human. The result over the past 15 years has been a substantial increase in the type of information and change in the way humans generate, classify, store, search, access and consume information. Conversion of information to digital form is a prerequisite for this enhanced machine role, but must be done having in mind requirements such as compactness, fidelity, interpretability etc. This book presents new ways of dealing with digital information and new types of digital information underpinning the evolution of society and business.

Features
More and more information, audio and video but also a range of other information type, is generated, processed and used by machines today, even though the end user may be a human. The result over the past 15 years has been a substantial increase in the type of information and change in the way humans generate, classify, store, search, access and consume information. Conversion of information to digital form [..]

Contents

Fields of interest
Signal, Image and Speech Processing; Circuits and Systems; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012, VI, 268 p. 121 illus., 48 in color. Hardcover
$119.00

Type-2 Fuzzy Logic in Intelligent Control Applications

We describe in this book, hybrid intelligent systems based mainly on type-2 fuzzy logic for intelligent control. Hybrid intelligent systems combine several intelligent computing paradigms, including fuzzy logic, and bio-inspired optimization algorithms, which can be used to produce powerful automatic control systems. The book is organized in three main parts, which contain a group of chapters around a similar subject. The first part consists of chapters with the main theme of theory and design algorithms, which are basically chapters that propose new models and concepts, which can be the basis for achieving intelligent control with interval type-2 fuzzy logic.

Features
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Contents

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

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

$129.00
ISBN 978-3-642-24662-3
Ultra High-Speed CMOS Circuits

Beyond 100 GHz

The book covers the CMOS-based millimeter wave circuits and devices and presents methods and design techniques to use CMOS technology for circuits operating beyond 100 GHz. Coverage includes a detailed description of both active and passive devices, including modeling techniques and performance optimization. Various mm-wave circuit blocks are discussed, emphasizing their design distinctions from low-frequency design methodologies. This book also covers a device-oriented circuit design technique that is essential for ultra high speed circuits and gives some examples of device/circuit co-design that can be used for mm-wave technology.

Features
The book covers the CMOS-based millimeter wave circuits and devices and presents methods and design techniques to use CMOS technology for circuits operating beyond 100 GHz. Coverage includes a detailed description of both active and passive devices, including modeling techniques and performance optimization. Various mm-wave circuit blocks are discussed, emphasizing their design distinctions from low-frequency design methodologies.

Contents
Introduction.- mm-wave Device Modeling.- mm-wave Device Optimization.- mm-wave CMOS Noise Analysis.- Unilateralization.- Terahertz CMOS Devices, Circuits and Systems.- Imaging Applications.

Fields of interest
Circuits and Systems; Computer-Aided Engineering (CAD, CAE) and Design

Target groups
Research

Type of publication
Monograph

Yearbook on Space Policy 2009/2010

Space for Society

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

Features
The Yearbook on Space Policy is the reference publication analysing space policy developments. Each year it presents issues and trends in space policy and the space sector as a whole. Its scope is global and its perspective is European. The Yearbook also links space policy with other policy areas. It highlights specific events and issues, and provides useful insights, data and information on space activities.

Contents
Part I.- Chapter 1: European space activities in the global context (Spyros Pagkratis): Global political and economic trends.- Worldwide space policies and strategies.- Worldwide space budgets and revenues.- The security dimension.- Chapter 2: Developments in space policies, programmes and technologies throughout the world and in Europe (Spyros Pagkratis): Space policies and programmes.- Space transportation.- Space sciences and exploration.- Satellite applications.- Technology developments.- Part II.- Views and Insights: Space in the financial and economic crisis (Christophe Venet).- [...]
Air Pollution Modeling and its Application XXI

Recent developments in air pollution modeling and its application are explored here in contributions by researchers at the forefront of their field. The book is focused on local, urban, regional and intercontinental modeling; data assimilation and air quality forecasting; model assessment and evaluation; aerosol transformation; the relationship between air quality and human health and the effects of climate change on air quality. The work will provide useful reference material for students and professors interested in air pollution modeling at the graduate level as well as researchers and professionals involved in developing and utilizing air pollution models.

Features
Recent developments in air pollution modeling and its application are explored here in contributions by researchers at the forefront of their field. The book is focused on local, urban, regional and intercontinental modeling; data assimilation and air quality forecasting; model assessment and evaluation; aerosol transformation; the relationship between air quality and human health and the effects of climate change.

Contents

Fields of interest
Atmospheric Protection / Air Quality Control / Air Pollution; Monitoring / Environmental Analysis

Target groups
Graduate

Type of publication
Proceedings

Chemistry of Phytopotentials: Health, Energy and Environmental Perspectives

Since the beginning of human civilization, plants have been our true companions. Plants contribute not only to our existence but also serve us through discovery, design and the treatment of various diseases where there is no satisfactory cure in modern medicine. This has focused Natural Product Chemists to unravel plants therapeutic potential in the light of modern analytical and pharmacological understandings. Presence of multiple active phytochemicals in medicinal plants offers exciting opportunity for the development of novel therapeutics, providing scientific justification for their use in traditional medicines. Non-food plants have been recognized as biofactories for the production of eco-friendly value added materials including agricultural, food products, enzymes, nutraceuticals etc. They have also been widely explored for personal care, industrial products and sources of energy generation. The proven efficacy of botanicals has been appreciated by the scientific community and strengthened.

Contents

Fields of interest
Sustainable Development; Organic Chemistry; Plant Biochemistry

Target groups
Research

Energy, Environment and Sustainable Development

New information and strategies for managing the energy crisis from the perspective of growing economies are presented. Numerous case studies illustrate the particular challenges that developing countries, many of which are faced with insufficient resources, encounter. As a result, many unique strategies to the problems of energy management are conservation, environmental engineering, clean technologies, biological and chemical waste treatment and waste management have been developed.

Features
New information and strategies for managing the energy crisis from the perspective of growing economies are presented. Numerous case studies illustrate the particular challenges that developing countries, many of which are faced with insufficient resources, encounter. As a result, many unique strategies to the problems of energy management are conservation, environmental engineering, clean technologies, (..)

Contents

Fields of interest
Sustainable Development; Environmental Economics; Renewable and Green Energy

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. 400 p. 70 illus. Hardcover

$179.00
ISBN 978-3-642-23393-7
Environmental Security in Watersheds: The Sea of Azov

Watersheds, supplying crucial ecosystem services to humans, seem to be a logical territorial unit to integrate societal benefits and environmental needs in order to evaluate the sustainability of natural resource use patterns. Based on this belief the book is an attempt to initiate a comprehensive environmental security assessment in the basin of the Azov Sea, shared by Russia and Ukraine. Though the region provides a variety of essential services and plays a strategic role in national and international development plans, it has been excluded from most regional environmental discussions. At the same time there is an alarming degradation rate of basin freshwater ecosystems that has occurred due to overutilization of certain prioritized services (e.g. transportation). The collapse of neglected services (e.g. fishery and freshwater supply) poses serious threats to the national economies as well as the local population, and to mitigate these threats priority in water management should be given to[...]

Features
Watersheds, supplying crucial ecosystem services to humans, seem to be a logical territorial unit to integrate societal benefits and environmental needs in order to evaluate the sustainability of natural resource use patterns. Based on this belief the book is an attempt to initiate a comprehensive environmental security assessment in the basin of the Azov Sea, shared by Russia and Ukraine. Though the region has a balance of observation, theory and development in ISV research since the publication of the second edition of this classic book on the subject, the authors have updated the original chapters, where appropriate, and added a new chapter that includes short subjects representing substantial new development in ISV research since the publication of the[...]

Features
This updated multi-author, comprehensive and authoritative review of intra-seasonal variability (ISV), has a balance of observation, theory and modeling and provides a single source of reference for all those interested in this important, multi-faceted natural phenomenon and its relation to major short-term climatic variations. All the original chapters are updated, where [...]

Contents

Fields of interest
Climate Change; Monitoring / Environmental Analysis; Atmospheric Protection / Air Quality Control / Air Pollution; Physics (general)

Type of publication
Research

Usually dispatched within 3 to 5 business days

2012. XVI, 253 p. 58 illus. (NATO Science for Peace and Security Series C: Environmental Security) Hardcover

$179.00
ISBN 978-3-642-13913-0
Microbial Degradation of Xenobiotics

Our interest in the microbial biodegradation of xenobiotics has increased many folds in recent years to find out sustainable ways for environmental cleanup. Bioremediation and biotransformation processes harness the naturally occurring ability of microbes to degrade, transform or accumulate a wide range of organic pollutants. Major methodological breakthroughs in recent years through detailed genomic, metagenomic, proteomic, bioinformatic and other high-throughput analyses of environmentally relevant microorganisms have provided us unprecedented insights into key biodegradative pathways and the ability of organisms to adapt to changing environmental conditions. The degradation of a wide spectrum of organic pollutants and wastes discharged into the environment by anthropogenic activities is an emerging need today to promote sustainable development of our society with low environmental impact. Microbial processes play a major role in the removal of recalcitrant compounds taking advantage of the...[...]

Features
Our interest in the microbial biodegradation of xenobiotics has increased many folds in recent years to find out sustainable ways for environmental cleanup. Bioremediation and biotransformation processes harness the naturally occurring ability of microbes to degrade, transform or accumulate a wide range of organic pollutants. Major methodological breakthroughs in recent years through detailed genomic, metagenomic, proteomic, bioinformatic and other high-throughput analyses of environmentally relevant microorganisms have provided us unprecedented insights into key biodegradative pathways and the ability of organisms to adapt to changing environmental conditions. The degradation of a wide spectrum of organic pollutants and wastes discharged into the environment by anthropogenic activities is an emerging need today to promote sustainable development of our society with low environmental impact. Microbial processes play a major role in the removal of recalcitrant compounds taking advantage of the...[...]

Contents
- Biodegradation of Aromatic Pollutants by Ligninolytic Fungal Strains
- Microbial Degradation of Polychlorophenols
- Biodegradation of the Explosives TNT, RDX and HMX
- Biodegradation of Military Explosives Rdx and Hmx

Fields of interest
- Geocology / Natural Processes; Environmental Chemistry; Microbial Ecology

Target groups
- Research

Type of publication
- Monograph

Usually dispatched within 3 to 5 business days

Perspectives on Environmental Management and Technology in Asian River Basins

Asian river basins are undergoing rapid transformation. This volume considers the implications of the environmental change-development nexus for water management, river health and hazard awareness. As Basu and Tortajada (2011) have recently commented, water management in Asia will likely change more in the next twenty years than in the last 2000 years. Critical environmental trends include decreasing flows of water and sediment due to dam construction and increased water extraction, land use change (especially forest removal), encroachment and degradation of floodplain and wetland environments, increased water demand and concerns about water security, urban expansion and associated pollution of rivers and contamination of groundwater reserves. These challenges are being reframed by new approaches to water management which represent a transition from engineering-dominated approaches towards integrated water management, from technology transfer to adaptive technologies. The volume comprises an...[...]

Features
None

Contents
- Environmental Management and Technology in Asian River Basins
- Environmental Science and Management in a Changing World
- River Hardware and Software: Perspectives on National Interest and Water Governance in the Mekong River Basin
- Evolutionary Technologies in Knowledge-Based Management of Water Resources: Perspectives from South Asian Case Studies
- Surface Runoff and Sediment Yields from Tropical Volcanic Upland Watersheds as Influenced by Climatic, Geographical and Land-use Factors
- Ecological Protection and Restoration in Sanjiangyuan Natural Reserve

Fields of interest
- Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution
- Nature Conservation; Physical Geography

Target groups
- Research

Type of publication
- Brief

Usually dispatched within 3 to 5 business days

Radiobiology and Environmental Security

This volume – like the NATO Advanced Research Workshop on which it is based – addresses the fundamental science that contributes to our understanding of the potential risks from ecological terrorism, i.e. dirty bombs, atomic explosions, intentional release of radionuclides into water or air. Both effects on human health (DNA and systemic effects) and on ecosystems are detailed, with particular focus on environmentally relevant low-dose ranges. The state-of-the-art contributions to the book are authored by leading experts; they tackle the relevant questions from the perspectives of radiation genetics, radiobiology, radiocology, radiation epidemiology and risk assessment.

Features
- Hypermutability Associated With Double-Strand Break Repair; D.A. Gordenin
- A Test Of Kimura’s Mutation-Rate Conjecture; J.W. Drake
- Micro-Algae As A Model System For Studying Of Genotype-Mutation-Rate Conjecture; E.K. Kileshina et al.

Contents
- Health and Hazard Awareness: The Role of Epigenetic Changes In Radiation-Induced Genome Instability; O. Kovalchuk
- Mutation-Rate Conjecture; J.W. Drake
- Micro-Algae As A Model System For Studying Of Genotype-Mutation-Rate Conjecture; E.K. Kileshina et al.

Fields of interest
- Effects of Radiation / Radiation Protection; Biophysics and Biological Physics; Ecotoxicology; Pharmacology / Toxicology; Environmental Economics

Target groups
- Graduate

Type of publication
- Proceedings

Usually dispatched within 3 to 5 business days
**Radiobiology and Environmental Security**

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**Contents**

Hypermutability Associated With Double-Strand Break Repair; D.A. Gordenin.- A Test Of Kimura’s Mutation-Rate Conjecture; J.W. Drake.- Micro-Algae As A Model System For Studying Of Genotype Resistance To Oxidative Stress And Adaptive Response; S.G. Chankova, N. Yurina.- Flavonoid Biosynthesis Genes In Wheat And Wheat-Alien Hybrids: Studies Into Gene Regulation In Plants With Complex; E.K. Khlestkina et al.- Implication for Human and Environmental Health of Low Doses of Radiation; C. Mothersill, C. Seymour.- Role of Epigenetic Changes In Radiation-Induced Genome Instability; O. Kovalchuk.[..]

**Fields of interest**

Effects of Radiation / Radiation Protection; Biophysics and Biological Physics; Ecotoxicology; Pharmacology / Toxicology; Environmental Economics

**Target groups**

Graduate

**Type of publication**

Proceedings

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


$119.00
The Earth's Cryosphere and Sea Level Change

This book gives a comprehensive overview of our present understanding of the Earth’s cryosphere, its changes and their consequences for mean sea level changes. Since the middle of the 19th century there has been an increase of sea level height by 20-25 cm. Some 8-10 cm of this is due to net losses from glaciers, the remainder being due to mass losses from land ice and thermal expansion of the oceans. The mean sea level rise is slowly accelerating; at present it is some 3 mm/year. Recent space observations made by the GRACE satellite combined with ocean temperature and volume measurements have enabled the separate contributions to sea level rise from melting ice and from thermal expansion to be better estimated. The estimation of mean sea level change is complicated by changes in land level due to tectonic effects and to ongoing changes following the latest major glaciation. The book gives an up-to-date survey of our present knowledge of this crucial subject.

Features
This book gives a comprehensive overview of our present understanding of the Earth’s cryosphere, its changes and their consequences for mean sea level changes. Since the middle of the 19th century there has been an increase of sea level height by 20-25 cm. Some 10 cm of this is due to net losses from glaciers, the remainder being due to mass losses from land ice and thermal expansion of the oceans. The mean [..].

Contents

Fields of interest
Climate Change; Hydrogeology; Oceanography; Geophysics / Geodesy; Marine & Freshwater Sciences

Target groups
Research

Type of publication
Monograph

Due: November 28, 2011

HEAVY!
The Surprising Reasons America Is the Land of the Free—And the Home of the Fat

America’s emerging “fat war” threatens to pit a shrinking population of trim Americans against an expanding population of heavy Americans in raging policy debates over “fat taxes” and “fat bans.” These “fat policies” would be designed to constrain what people eat and drink – and theoretically crimp the growth in Americans’ waistlines and in the country’s healthcare costs. Richard McKenzie’s HEAVY! The Surprising Reasons America Is the Land of the Free—And the Home of the Fat offers new insight into the economic causes and consequences of America’s dramatic weight gain over the past half century. It also uncovers the follies of seeking to remedy the country’s weight problems with government intrusions into people’s excess eating, arguing that controlling people’s eating habits is fundamentally different from controlling people’s smoking habits. McKenzie controversially links America’s weight gain to a variety of causes: the growth in world trade freedom, the downfall of communism, the spread of[..]

Features
In HEAVY! Professor McKenzie addresses ‘the coming fat (policy) war’ over proposed fat taxes and bans, making the case for heavy people bearing the full burden of their weight-related costs. America has become the heaviest country in the world. This book lays out the unheralded, mainly economic reasons for the country’s weight gain, which include – believe it or not – the growth in world trade [..]

Contents
Chapter 1 – Crowding Out. - Chapter 2 – Fat Facts. - Chapter 3 – Fat Gene. - Chapter 4 – Fat Economics. - Chapter 5 – Fat Addiction. - Chapter 6 – Fat Consequences. - Chapter 7 – Smoking War. - Chapter 8 – Fat Taxes, Bans, and Discrimination. - Chapter 9 – Dieting for Dollars. - Chapter 10 – Fat Freedom.

Fields of interest
Science; Business & Economics (general); Medicine (general); Psychology (general); Law (general); Literacy

Target groups
Popular/general

Type of publication
Popular science

Usually dispatched within 3 to 5 business days

2012. XVI, 325 p. Softcover

$27.95
ISBN 978-3-642-20134-9
Development of the Settlement Network in the Central European Countries

Past, Present, and Future

This volume intends to summarize the most important changes in the Central European countries and their settlement network emphasizing the last 20 years since the collapse of the Iron Curtain.

Features

This volume intends to summarize the most important changes in the Central European countries and their settlement network emphasizing the last 20 years since the collapse of the Iron Curtain.

Contents

Development of the Settlement Network in the Central European Countries.- Sociology of Settlements, Urban Regeneration.- Urban Geography, Urbanization.

Fields of interest

Landscape, Regional and Urban Planning; Statistics for Social Science, Behavioral Science, Education, Public Policy, and Law; Human Geography

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days

November 28, 2011

2012, IX, 314 p. 93 illus., 28 in color. Hardcover

$259.00
ISBN 978-3-642-20313-8

Dynamic land use/cover change modelling

Geosimulation and multiagent-based modelling

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

Features

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

Contents

General Introduction.- Literature Review.- Study Area Description.- Data Preparation and Processing.- Implementation of Traditional Techniques.- Designing and Implementing Multi Agent Geosimulation.- Analysis of Results.- Conclusions and Recommendations.

Fields of interest

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

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XVII, 139 p. 52 illus. (Springer Theses) Hardcover

$129.00
ISBN 978-3-642-23704-1

Biotech Innovations and Fundamental Rights

Biotechnology is a recognized research area that has increasingly advanced into new technologies and modern practices raising several legal, ethical and regulatory issues. The revolutionary speed of biotech innovations has had a significant impact on the protection of the rights of the individual. Fundamental rights provide a framework within which the justification of limitations and restrictions to biotechnology innovations and research results have to be assessed. The legal regulation of scientific research and scientific investigations impact more and more directly on the freedom of research and therapies as well as on the broad diffusion of knowledge. Closely related is also the debated question of the technological manipulation of life and the boundary of scientific knowledge with regard to the topical question of genetic invention patents and their side effects on access to scientific information and health care opportunities.

Drawing on expertise from different disciplines, the volume [...]
Deficits in EU and US Mandatory Environmental Information Disclosure

Legal, Comparative Legal and Economic Facets of Pollutant Release Inventories

It is the publicity about the Pollutant Release Inventory’s data which creates an incentive for firms to achieve emission reductions. Accordingly, public access to environmental information constitutes a core characteristic of the aforementioned inventory. Here, in essence, two facets arise. First, with regard to the collection, it is disputed whether such information, which may comprise confidential commercial and industrial information in the EU as well as trade secrets in the US, can be protected under fundamental and constitutional property rights respectively. Second, in the context of dissemination and utilisation, it is arguable whether the information indeed impacts polluters and produces an outcome that secures a certain level of environmental protection. The author responds to the first issue by taking the EU and US jurisdictions into account and strives to analyse how this novel form of Internet disclosure liberates market mechanisms in the quest for effective and efficient emission reductions.

Features
It is the publicity about the Pollutant Release Inventory’s data which creates an incentive for firms to achieve emission reductions. Accordingly, public access to environmental information constitutes a core characteristic of the aforementioned inventory. Here, in essence, two facets arise. First, with regard to the collection, it is disputed whether such information, which may comprise confidential [...] Contents

Fields of interest
International Environmental Law; Public International Law; Environmental Law / Policy / Ecojustice; Private International Law, International & Foreign Law; Comparative Law; Atmospheric Protection / Air Quality Control / Air Pollution; Industrial Pollution Prevention

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXIX, 487 p. Hardcover

$239.00
ISBN 978-3-642-22756-1

Financial Identity Theft

Context, Challenges and Countermeasures

The existence of financial identity theft in the United States, and its (gradual) spread to other areas of the world, increases the need to understand how identity theft occurs and how perpetrators of the crime manage to take advantage of developments within contemporary society. This book aims to provide such an understanding through an in-depth comparative analysis which illustrates how states, financial service providers, consumers, and others facilitate the occurrence of financial identity theft in the United States and the Netherlands.

Features
When identity theft first emerged as a problem of public policy in the United States, during the last decade of the twentieth century, the rest of the world was still fast asleep. This changed several years later as other countries awakened to similar problems and a sense of potential urgency surrounding the topic of identity theft began to spread. Identity theft, especially as a result of developments in [...] Contents

Fields of interest
International IT and Media Law, Intellectual Property Law; Legal Aspects of Computing

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$109.00

Insurance Systems in Times of Climate Change

Insurance of Buildings Against Natural Hazards

Natural disasters such as large-scale flooding are on the increase. Climate change directly affects our basis of existence. This includes residential buildings, and commercial and industrial properties. The author highlights the requirements that will have to be met by a protection system for buildings in the future. Insurance against natural hazards lies at the heart of such a system. The insurance systems of Germany, France, Spain, Switzerland and the USA are presented. The author explains what type of insurance system is best suited to meet the challenge of climate change. The starting point of the legal section is statutory insurance with a monopoly. The question of whether such insurance is compatible with Swiss and EU law is examined. Keywords in this respect are economic freedom, competition, services of general interest and universal service.

Features
Natural disasters such as large-scale flooding are on the increase. Climate change directly affects our basis of existence. This includes residential buildings, and commercial and industrial properties. The author highlights the requirements that will have to be met by a protection system for buildings in the future. Insurance against natural hazards lies at the heart of such a system. The insurance systems of [...] Contents

Challenge: Climate Change as the Starting Situation.- Global Climate Change.- Climate Change in Switzerland.- Consequences for Insurance Against Natural Hazards.- Insurance Systems Today.- Types of Insurance Systems.- Germany.- France.- Spain.- Switzerland.- USA.- Interim Conclusion - Suitable Protection System Against Natural Hazards in Response to Climate Change.- Overview of Requirements.- The Appropriate Response to Climate Change.- Legitimacy of Statutory Insurance Against Natural Hazards.- Admissibility Under Swiss Law.- EU Compatibility of the KGV Statutory Insurance System.

Fields of interest
Private International Law, International & Foreign Law, Comparative Law; Public International Law

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXVI, 154 p. 15 illus. in color. Hardcover

$119.00
ISBN 978-3-642-22434-8
Sports Marketing Agreements: Legal, Fiscal and Practical Aspects

Sports marketing is not only a global phenomenon, but also a major industry in its own right. This book breaks new ground in that it combines the theory and the practice of sports marketing agreements, which are at the heart of the commercialisation and marketing of sport. A particular feature of this book is the wide-ranging collection of precedents of sports marketing agreements, including, inter alia, sponsorship, merchandising, TV rights and new media, sports image rights and endorsements, event management and corporate hospitality, that are included and are explained and commented on in the text of the book. The book also covers the EU aspects, which are particularly important in this context, especially collective selling, of Sports TV rights and the drafting of the corresponding agreements; as well as the fiscal aspects of sports marketing agreements in general and sports image rights agreements in particular, which need to be taken into account in order to reduce the tax burden on them.

Features
With a Foreword by Prof. Paul Anderson, Associate Director, National Sports Law Institute, Marquette University Law School, Milwaukee, USA. Sports marketing is not only a global phenomenon, but also a major industry in its own right. This book breaks new ground in that it combines the theory and the practice of sports marketing agreements, which are at the heart of the book.

Fields of interest
International Sports Law; Marketing

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 516 p. 4 illus. (ASSER International Sports Law Series) Hardcover

$239.00
ISBN 978-90-6704-792-0

The European Union after Lisbon
Constitutional Basis, Economic Order and External Action

The book contains 24 contributions from European law scholars and practitioners analysing the constitutional basis of the European Union and the normative orientation of the Common Foreign and Security Policy (CFSP) as well as the central economic and monetary provisions (TFEU) after the Reform Treaty of Lisbon. Presenting the findings of a European research team, which is composed of authors from eight Member States, the publication underlines the aspiration of the editors to thoroughly analyse the constitutional law of the European Union currently in force.

Features
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Contents
From the contents: Constitutional Basic.- The Economic and Monetary Constitution of the Union.- The Common Foreign and Security Policy.

Fields of interest
Public International Law; Constitutional Law

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XIX, 582 p. Hardcover

$139.00
ISBN 978-3-642-19506-8

Adaption of Microbial Life to Environmental Extremes
Novel Research Results and Application

Once considered exceptional rarities, extremophiles have become attractive objects for basic and applied research ranging from nanotechnology to biodiversity to the origins of life and even to the search for extraterrestrial life. Several novel aspects of extremophiles are covered in this book; the focus is firstly on unusual and less explored ecosystems such as marine hypersaline deeps, extreme cold, desert sands, and man-made clean rooms for spacecraft assembly. Secondly, the increasingly complex field of applications from extremophile research is treated and examples such as novel psychrophilic enzymes, compounds from halophiles, and detection strategies for potential extraterrestrial life forms are presented.

Features
Once considered exceptional rarities, extremophiles have become attractive objects for basic and applied research ranging from nanotechnology to biodiversity to the origins of life and even to the search for extraterrestrial life. Several novel aspects of extremophiles are covered in this book; the focus is firstly on unusual and less explored ecosystems such as marine hypersaline deeps, extreme cold, etc.

Contents

Fields of interest
Microbial Ecology; Microbiology; Biodiversity

Target groups
Research

Type of publication
Professional book

Due: October 31, 2011

2012. XII, 282 p. 27 illus. in color. Hardcover

$179.00
ISBN 978-3-211-99690-4
Agroecology and Strategies for Climate Change

Sustainable agriculture is a rapidly growing field aiming at producing food and energy in a sustainable way for our children. This discipline addresses current issues such as climate change, increasing food and fuel prices, starvation, obesity, water pollution, soil erosion, fertility loss, pest control and biodiversity depletion. Novel solutions are proposed based on integrated knowledge from agronomy, soil science, molecular biology, chemistry, toxicology, ecology, economy, philosophy and social sciences.

As actual society issues are now intertwined, sustainable agriculture will bring solutions to build a safer world. This book series analyzes current agricultural issues and proposes alternative solutions, consequently helping all scientists, decision-makers, professors, farmers and politicians wishing to build safe agriculture, energy and food systems for future generations.

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

Reviews and Protocols

Chemical genomics technology has been steadily improving, delivering new biological probes and drugs, and the explicit use of the term ‘chemical proteomics’ has increased with it, as proteins have always been at the heart of this technology. In Chemical Genomics and Proteomics: Reviews and Protocols, experts in the field present updated reviews of the chemistry of small molecules and their interaction with protein targets as well as detailed protocols that cover different types of ligands, carbohydrates, and lipids. For example, the generation of their protein targets and methods for measuring their interactions is covered. Written in the highly successful Methods in Molecular Biology™ series format, methodology chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Thorough and up to date, Chemical Genomics and Proteomics: Reviews will be a valuable resource for professionals and students.

Continuous Cover Forestry

Although the majority of the world’s forest ecosystems are dominated by uneven-aged multi-species stands, forest management practice and theory has focused on the development of plantation monocultures to maximize the supply of timber at low cost. Societal expectations are changing, however, and uneven-aged multi-species ecosystems, selectively managed as Continuous Cover Forestry (CCF), are often believed to be superior to monocultures in addressing a wide range of expectations. This book presents methods which are relevant to CCF management and planning: analysing forest structures, silvicultural planning and management, economic evaluation, based on examples in Europe, Asia, Africa and North and South America.

Features
Although the majority of the world’s forest ecosystems are dominated by uneven-aged multi-species stands, forest management practice and theory has focused on the development of plantation monocultures to maximize the supply of timber at low cost. Societal expectations are changing, however, and uneven-aged multi-species ecosystems, selectively managed as Continuous Cover Forestry (CCF), are [...]

Contents
1 Historical Emergence and Current Application of CCF: - 2 Forest Structure and Diversity: - 3 Continuous Cover Forestry in Finland: - 4 Research Results: - 5 Regulation of Timber Yield Sustainability for Tropical and Subtropical Moist Forests: - 6 Ecosilvicultural Paradigms and Economic Constraints: - 7 The Economics of Continuous Cover Forestry: - 8 Optimizing Continuous Cover Forest Management: - 9 Modelling Continuous Cover Forests: - 9 Bootstrap simulation, Markov decision process models, and role of discounting in the valuation of ecological criteria in uneven-aged forest management: - 10 Synthesising knowledge: -

Fields of interest
Forestry; Forestry Management; Environmental Management; Nature Conservation; Environmental Economics; Operation Research / Decision Theory

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. VIII, 296 p. 91 illus., 44 in color. (Managing Forest Ecosystems, Vol. 23) Hardcover

$209.00
ISBN 978-94-007-2201-9

Evolutionary Dynamics of Forests under Climate Change

Focusing on the example of the Lost Pines forest of Texas, this book contextualises the present-day conservation of the Lost Pines within its wealth of historical and geological records. This in turn presents a realistic example for examining evolutionary dynamics models and how they can guide management of temperate pine forests under the uncertainty of future climate change. Synthesising knowledge from many scholarly disciplines, and presenting the latest knowledge on how temperate forests respond to climate change, the book provides insight into how resource professionals actually solve complex multi-layered problems. A useful aid for forest management professionals and for advanced students and professionals in ecology, the book is a valuable resource for researchers and professionals, which can also be used as a classroom exercise for spatial imaging, testing virtual simulations and developing field-based research questions.

Features
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Contents

Fields of interest
Forestry Management; Climate Change; Conservation Biology / Ecology; Environmental Management; Plant Genetics and Genomics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIX, 181 p. 30 illus., 17 in color. Hardcover

$189.00
ISBN 978-94-007-1935-4
Growing from Seed
An Introduction to Social forestry

Social forestry and its most well-known variant, Community Forestry, have been practiced almost as long as people have used forests. During this time, forests have provided people with countless goods and services, including wood, medicine, food, clean water and recreation. In making use of forest resources, people throughout history have frequently organized themselves and established both formal and informal rules. However, as just the discipline of Forestry had previously limited and concentrated the function of forests to the timber it provides, the popular understanding of Social Forestry has restricted it to a Forestry sub-topic that deals with welfare, without any connection to income-generation, and is practiced only in developing countries. This volume introduces the concepts of Social Forestry to the student, gives examples of its practice around the world and attempts to anticipate developments in its future. It aims to widen the concept of Social Forestry from a sub-practice within...

Contents
1. Introduction: Basic concepts of social forestry. - 2. People and Forests: The relationship between society and natural resources. - 3. Communities in Tropical Forests: Examples of cultures and societies that depend on the forests for their livelihood and sustenance. - 4. Participation: The methodology of social forestry. - 5. Tailoring forest management to fit local needs. - 6. Incorporating expert knowledge in...
Measuring Roots
An Updated Approach

Roots represent half of the plant body – and arguably the more interesting half. Despite its obvious importance for the whole plant, until recently our knowledge of the root apparatus was very limited, mostly due to the inadequacy of the techniques available. Recent advances in the visualization and measurement of roots have resulted in significant progress in our understanding of root architecture, growth and behaviour. In this book international experts highlight the most advanced techniques, both lab and field methods, and discuss them in detail. Measuring Roots combines academic and practical aspects of this topic, making it a universal handbook for all researchers and others interested in root-measuring methods.

Contents
Higher Plants: Structural Diversity of Roots.- Electrical Impedance Spectroscopy and Roots.- Multi Electrode Arrays (MEAs) and the Electrical Network of the Roots.- The Vibrating Probe Technique in the Study of Root Physiology Under Stress.- The Use of Planar Optodes in Root Studies for Quantitative Imaging.- Applications of Confocal Microscopy in the Study of Root Apparatus.- High-Throughput Quantification of Root Growth.- Flat Optical Scanner Method and Root Dynamics.- 3D Reconstruction and Dynamic Modeling of Root Architecture in situ.- Geophysical Imaging Techniques.- Multi electrode[...]

Fields of interest
Plant Physiology; Biological Techniques; Agriculture; Forestry; Ecology

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XIII, 382 p. 149 illus., 76 in color. Hardcover

$209.00
ISBN 978-3-642-22066-1

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Modeling Fragile X Syndrome

Introduction.- Probing Astrocyte Function in Fragile X Syndrome.- Neural Stem Cells.- Fragile X Mental Retardation Protein (FMRP) and the Spinal Sensory System.- The Role of the Postsynaptic Density in the Pathology of the Fragile X Syndrome.- Behavior in a Drosophila model of Fragile X.- Molecular and Genetic Analysis of the Drosophila Model of Fragile X Syndrome.- Fragile X Mental Retardation Protein and Stem Cells.- Manipulating the Fragile X Mental Retardation Proteins in the Frog.- Exploring the Zebra finch Taeniopygia guttata as a Novel Animal Model for the Speech-language Deficit of Fragile X Syndrome.- Neuroendocrine Alterations in the Fragile X Mouse.- Taking STEPs forward to understanding Fragile X Syndrome.- Fmr-1 as an Offspring Genetic and a Maternal Environmental Factor in Neurodevelopmental Disease.- Mouse Models of the Fragile X Premutation and the Fragile X Associated Tremor/Ataxia Syndrome.- Clinical Aspects of the Fragile X Syndrome.- Fragile X Syndrome: A Psychiatric Perspective.[...]

Features
The present book is an in-depth synopsis of recent advances in the fragile X field. The fragile X syndrome (FXS) is the most common form of inherited mental retardation, and the molecular-genetic basis of this syndrome has been the subject of extensive experimental scrutiny over the last two decades. This book covers the spectrum of current FXS research, ranging from Drosophila model systems via mouse models[...]

Contents
Introduction: Reminiscing on Models and Modeling.- Probing Astrocyte Function in Fragile X Syndrome.- Neural Stem Cells.- Fragile X Mental Retardation Protein (FMRP) and the Spinal Sensory System.- The role of the postsynaptic density in the pathology of the fragile X syndrome.- Behavior in a Drosophila model of Fragile X.- Molecular and Genetic Analysis of the Drosophila Model of Fragile X Syndrome.- Fragile X Mental Retardation Protein and Stem Cells.- Manipulating the Fragile X Mental Retardation Proteins in the frog.- Exploring the zebra finch Taeniopygia guttata as a novel animal[...]

Fields of interest
Cell Biology; Human Genetics; Molecular Medicine; Neurobiology; Stem Cells; Gene Therapy

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XI, 390 p. 48 illus., 38 in color. (Results and Problems in Cell Differentiation, Vol. 54) Hardcover

$209.00
ISBN 978-3-642-21648-0
Myogenesis

Methods and Protocols

Our understanding of the molecular and cellular mechanisms that control skeletal muscle development, regeneration, and adaptive responses to activity has increased dramatically in recent years, fostered by innovative techniques and approaches that are either specifically designed or adapted for research in skeletal muscle biology. Myogenesis: Methods and Protocols presents detailed, step-by-step methods in the study of the molecular and cellular biology of skeletal muscle cells. Protocols from different model systems including mammalian, avian, zebrafish, and invertebrate skeletal muscle are included in this volume. Highlighted topics cover a wide range of interests and expertise including myogenic and stem cell isolation, investigation of models of exercise and disuse, viral vector delivery systems, calcium imaging, cell profiling, as well as protein-DNA and protein-protein interactions. Written in the highly successful Methods in "Molecular Biology" series format, chapters include introductions.[...]

Features
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Contents
Isolation and Characterization of Human Fetal Myoblasts.- Skeletal Muscle Satellite Cells: Background and Methods for Isolation and Analysis in a Primary Culture System.- Isolation of Muscle Stem Cells by Fluorescence Activated Cell Sorting (FACS) Cytometry.- Mouse and Human Mesangioblasts: Isolation and Characterization from Adult Skeletal Muscles.- Direct Electrical Stimulation of Myogenic Cultures for Analysis of Muscle Fiber Type Control.- Single Muscle Fiber Isolation and Culture for Cellular, Molecular, Pharmacological, and Evolutionary Studies.- Somite Unit Chronometry to Analyze[...]

Fields of interest
Cell Biology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XII, 558 p. 86 illus., 15 in color. (Methods in Molecular Biology, Vol. 798) Hardcover

$159.00
ISBN 978-1-61779-342-4

J.M. Méritonn, University of Bordeaux 2, Villenave d’Ornon, France; K.G. Ramawat, M. L. Sukhiatna University, Udaipur, India (Eds.)

Plants in Alpine Regions

Cell Physiology of Adaption and Survival Strategies

This book brings together experts from different fields, who used a broad spectrum of methods to investigate the physiological and cellular adaptation of alpine plants from the tree line to the upper limits. Some articles link alpine plant physiology with physiological adaptations observed in polar plants. Tolerance against often high light intensities (including UV), cold or freezing temperatures, in addition to the need for fast tissue development, flowering, and propagation that is managed by alpine plants are to some extent underrepresented in recent research. This volume considers ice formation and winter conditions in alpine plants; the fate of cryophilic algae and microorganisms; cell structural adaptations; sexual reproduction in high altitudes; the physiology of photosynthesis, antioxidants, metabolites, carbon and nitrogen; and the influences of microclimate (temperatures at the plant level, heat tolerance), UV light, weather and ozone. Further information on life processes in alpine[...]

Features
Preface.- 1 Rain and snow at high elevation: The interaction of water, energy and trace substances.- 2 Solar radiation of the High Alps.- 3 Biclimatic temperatures in the High Alps.- 4 Physiological and ultrastructural changes in alpine plants exposed to high UV and to high ozone.- 5 Cell organelle structures and functions in alpine and polar plants are influenced by growth conditions and climate.- 6 Dynamic of tissue heat tolerance and thermotolerance of PS II in alpine plants.- 7 Photosynthesis and antioxidant protection in alpine herbs.- 8 Specificities of metabolite profiles in[...]

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Fields of interest
Plant Physiology; Plant Sciences; Plant Ecology; Cell Physiology; Ecosystems; Oxidative Stress

Target groups
Research

Type of publication
Contributed volume

Due: November 17, 2011

2012. XII, 202 p. 150 illus., 50 in color. Hardcover

$189.00
ISBN 978-3-7091-0135-3

C. Lütz, Institut für Botanik, Innsbruck, Austria (Ed.)
Pollination Biology
Biodiversity Conservation and Agricultural Production

This book has a wider approach not strictly focused on crop production compared to other books that are strictly oriented towards bees, but has a generalist approach to pollination biology. It also highlights relationships between introduced and wild pollinators and consequences of such introductions on communities of wild pollinating insects. The chapters on biochemical basis of plant-pollination interaction, pollination energetics, climate change and pollinators and pollinators as bioindicators of ecosystem functioning provide a base for future insights into pollination biology. The role of honeybees and wild bees on crop pollination, value of bee pollination, planned honeybee pollination, non-bee pollinators, safety of pollinators, pollination in cages, pollination for hybrid seed production, the problem of diseases, genetically modified plants and bees, the role of bees in improving food security and livelihoods, capacity building and awareness for pollinators are also discussed.

Features
This book discusses the interplay between pollinators, agriculture, and the environment. The book is an unique blend of pure and applied science placed in the broader human social context. It deals with basic and applied aspects of pollination biology. The chapters on pollination energetics, climate change, pollinator decline, biochemical basis of plant-pollination interaction, pollinators as bioindicators. [...]

Contents

Fields of interest
Entomology; Agriculture; Conservation Biology / Ecology; Nature Conservation; Plant Breeding / Biotechnology; Biodiversity

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXIX, 792 p. 23 illus., 18 in color. Hardcover

$209.00

Protein Expression in Mammalian Cells
Methods and Protocols

Through all of the recent progress provided by high throughput DNA sequencing technologies, it has become clearer and clearer that the study of proteins and protein organelles will be the key to unlocking our ability to manipulate cells and intervene in human disease. In Protein Expression in Mammalian Cells: Methods and Protocols, expert researchers in the field present a compendium of vital techniques to further our knowledge of mammalian protein expression. 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 tips for troubleshooting and avoiding known pitfalls. Authoritative and concise, Protein Expression in Mammalian Cells: Methods and Protocols will aid scientists seeking to delve deeper into our own biology through the medium of other mammalian cells and proteins.

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Contents
Why Proteins in Mammalian Cells?.- Large Scale Transfection of Mammalian Cells.- Selection of High Expressing Mammalian Cells by Surface Display of Reporter.- Expression of a Secreted Protein in Mammalian Cells Using Baculovirus Particles.- Transfection of Difficult- to-Transfect Primary Mammalian Cells.- Stable Protein Expression in Mammalian Cells Using Baculoviruses.- Using Matrix Attachment Regions to Improve Recombinant Protein Production.- Controlling Apoptosis to Optimize Yields of Proteins from Mammalian Cells.- Post-Transcriptional Regulatory Elements for Enhancing Transient[...]

Fields of interest
Protein Science

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$119.00
ISBN 978-1-61779-351-6

Quantifying Functional Biodiversity

This book synthesizes current methods used to quantify functional diversity, providing step-by-step examples for defining functional groups and estimating functional indices. The authors show how to compare communities, and how to analyze changes of diversity along environmental gradients, using real-life examples throughout. One section of the book demonstrates the selection of traits, and the standardization and characterization of ecosystem data. Another section presents methods used to quantify functional diversity, shows how to relate functional diversity with environmental variables and how to connect these to ecosystem services. The concluding section introduces FDiversity, a free program developed by the authors. The reader is guided through every step from software installation and basic functions, to sample and database design, to graphical projection methods, employing case study data to illustrate key concepts.

Features
Functional diversity (FD) – the value, range, and abundance of functional traits in a given community or ecosystem – is increasingly accepted as a synthetic ecological concept that sheds light on ecosystem functioning. Standard tools for comparing FD across different ecosystems and for different ecosystem processes would be invaluable for supporting a better, more general understanding of the functional [...]
Regulatory RNAs in Prokaryotes

This book provides a comprehensive and up-to-date collection of review articles focusing on RNA-mediated regulation in prokaryotes. The various modes of action include the direct interaction with proteins, direct sensing of metabolites or of physical parameters, and the interaction with RNAs to stimulate or prevent binding of ribosomes or to stimulate degradation. Written by leading experts in the field, the book covers small RNA functions, RNA thermometers, riboswitches, the diversity of small RNA-guided CRISPR-Cas defense systems and selected RNA chaperons in both prokaryotic domains, bacteria and archaea. Recent advances towards the computational identification of regulatory RNAs and their targets are included and particular attention is paid to small RNA in pathogenic bacteria. This volume is the only one exclusively covering regulatory RNAs in the prokaryotic domains to date, making it essential literature for anyone interested in RNA function and gene regulation and a valuable resource for [...]

Features
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The Pollination Biology of North American Orchids: Volume 1
North of Florida and Mexico

Recent studies have revealed remarkable complexity and diversity in orchid-pollinator relationships. These studies comprise a vast literature currently scattered in numerous, often obscure, journals and books. The Pollination Biology of North American Orchids brings together, for the first time, a comprehensive treatment of this information for all native and introduced North American orchids found north of Mexico and Florida. It provides detailed information on genetic compatibility, breeding systems, pollinators, pollination mechanisms, fruiting success, and limiting factors for each species. Distribution, habitat, and floral morphology are also summarized. In addition, detailed line drawings emphasize orchid reproductive organs and their adaptation to known pollinators. This, the first of two volumes, furnishes a brief introduction to the general morphology of the orchid flower and the terminology used to describe orchid breeding systems and reproductive strategies. It treats the lady’s-slippers.[...]

Features
Recent studies have revealed remarkable complexity and diversity in orchid-pollinator relationships. These studies comprise a vast literature currently scattered in numerous, often obscure, journals and books. The Pollination Biology of North American Orchids brings together, for the first time, a comprehensive treatment of this information for all native and introduced North American orchids found.[...]

Contents

Plant Breeding / Biotechnology; Plant Sciences; Plant Genetics and Genomics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 228 p. 42 illus. Hardcover
$189.00

The Sirex Woodwasp and its Fungal Symbiont:
Research and Management of a Worldwide Invasive Pest

The Sirex woodwasp, Sirex noctilio, is the most important invasive alien insect pest of Pinus plantations in the Southern Hemisphere. It now also threatens pines in North America. This book brings together the worldwide knowledge of researchers from Universities and Government institutions, as well as forest industry practitioners that have worked on the pest. Importantly, it is the first comprehensive treatment of the subject since S. noctilio was discovered outside its native range around 1900. The book covers all aspects of the biology and management of S. noctilio, including aspects of the insects’ taxonomy, general life history, host-plant relationships, population dynamics, chemical ecology and symbiosis with the fungus Amylostereum areolatum. The book also contains a comprehensive synthesis of the history and current status of the pest and worldwide efforts to control it, including biological control, silviculture and quarantine.

Features
The Sirex woodwasp, Sirex noctilio, is the most important invasive alien insect pest in Pinus plantations across the Southern Hemisphere, and it now threatens pines in North America. Sirex noctilio is native to Eurasia, where it causes little damage and is better known for its fascinating biology, including an obligate mutualism with the fungus Amylostereum areolatum. The wasp [...]

Contents

Fields of interest
Forestry; Forestry Management; Entomology; Fungus Genetics; Applied Ecology; Biotechnology

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 301 p. 71 illus., 52 in color. Hardcover
$209.00
ISBN 978-94-007-1959-0
Traditional Forest-Related Knowledge
Sustaining Communities, Ecosystems and Biocultural Diversity

Exploring a topic of vital and ongoing importance, Traditional Forest Knowledge examines the history, current status and trends in the development and application of traditional forest knowledge by local and indigenous communities worldwide. It considers the interplay between traditional beliefs and practices and formal forest science and interrogates the often uneasy relationship between these different knowledge systems. The contents also highlight efforts to conserve and promote traditional forest management practices that balance the environmental, economic and social objectives of forest management. It places these efforts in the context of recent trends towards the devolution of forest management authority in many parts of the world. The book includes regional chapters covering North America, South America, Africa, Europe, Asia and the Australia-Pacific region. As well as relating the general factors mentioned above to these specific areas, these chapters cover issues of special regional...[1]

Features
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Contents

Fields of interest
Ecology; Environment (general); Social Sciences (general); Forestry; Nature Conservation; Philosophy of Nature

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$239.00

Unnatural Amino Acids
Methods and Protocols

Even though they are present in nature, non-proteinogenic amino acids are usually defined as unnatural or non-natural. Beside their structural diversity, interest in these compounds is due to their occurrence in nature, their biological properties, the analytical aspects, their use as probes, and their incorporation into peptides and proteins, among other reasons. Divided into five convenient sections, Unnatural Amino Acids: Methods and Protocols deals with enzymatic methods used to produce non-natural amino acids, aspects concerning the presence of unnatural amino acids in peptides with antimicrobial properties, genetic incorporation of unnatural amino acids into proteins (yeast and mammalian cells), and detection and quantification of D-amino acids and related enzymes. Written in the highly successful Methods in Molecular Biology™ series format, chapters contain introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory...[1]

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Contents

Fields of interest
Biochemistry; Enzymology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$139.00

Case, Word Order and Prominence
Interacting Cues in Language Production and Comprehension

Language users have access to several sources of information during the build up of a meaningful construction. These include grammatical rules, situational knowledge, and general world knowledge. A central role in this process is played by the argument structure of verbs, which establishes the syntactic and semantic relationships between arguments. This book provides an overview of recent psycholinguistic and theoretical investigations on the interplay between structural syntactic relations and role semantics. The focus herein lies on the interaction of case marking and word order with semantic prominence features, such as animacy and definiteness. The interaction of these different sorts of information is addressed from theoretical, time-insensitive, and incremental perspectives, or a combination of these. Taking a broad cross-linguistic perspective, this book bridges the gap between theoretical and psycholinguistic approaches to argument structure.

Features
Language users access an array of information during the construction and interpretation of utterances, including grammatical rules and situational knowledge. The argument structure of verbs, which establishes the syntactic and semantic relationships between arguments, plays a key role in this process. This book reviews recent psycholinguistic and theoretical investigations into the interplay between...[1]

Contents

Fields of interest
Linguistics (general); Psycholinguistics; Theoretical Linguistics

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$139.00
Interpreting Imperatives

Imperative clauses are recognized as one of the major clause types alongside those known as declarative and interrogative. Nevertheless, they are still an enigma in the study of meaning, which relies largely on either the concept of truth conditions or the concept of information growth—neither of which is easily applied to imperatives. This book puts forward a fresh perspective. It analyzes imperatives in terms of modalized propositions, and identifies an additional, presuppositional, meaning component that makes an assertive interpretation inappropriate. The author shows how these two elements can help explain the varied effects imperatives have, depending on their usage context. Imperatives have been viewed as elusives components of language because they have a range of functions that makes them difficult to unify theoretically. This fresh view of the semantics-pragmatics interface allows for a uniform semantic analysis while accounting for the pragmatic versatility of imperatives.

Features
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Contents

Fields of interest
Semantics; Philosophy of Language

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$139.00

Phraseological Dictionary English - German

General Vocabulary in Technical and Scientific Texts

The dictionary lists the general vocabulary - nouns, verbs, adverbs, adjectives - which occurs in practically all technical texts. This vocabulary should be mastered by all those who actively or passively work with technical texts since it provides the structures into which the technical terms of various fields of technology are embedded. The keywords are provided with numerous model sentences illustrating their usage and offering the user a variety of suggestions for his / her own formulations.

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Fields of interest
Translation; Science; Engineering (general); Language Education

Type of publication
Dictionary

Usually dispatched within 3 to 5 business days


$249.00
ISBN 978-3-642-22281-8

Adhesion and Friction in Biological Systems

This book is a collection of experimental studies demonstrating structure-function relationships in various biological systems having particular surface specialization to increase/decrease friction and adhesion. Studies on snake skin, adhesive pads, wing-interlocking devices and sticky mouthparts of insects as well as anti-adhesive and adhesive surfaces of plants are included in the volume containing four main subsections: (1) adhesion, (2) friction, (3) attachment-devices, (4) attachment-related behavior. Numerous experimental methods for characterizing tribological properties of biological surfaces at macro-, micro-, and nanoscale levels are demonstrated. This book is an excellent collection of publications on biotribology for both engineers and physicists working with biological systems as well as for biologists studying friction and adhesion. Inspirations from biology reported here may be also potentially interesting for biomimetics.

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Fields of interest
Adhesion and Friction in Biological Systems.- Introduction.- 1. Adhesion.- Chapter 1. Pollen grains adhere to the moist mouthparts in the flower visiting beetles.- Chapter 2. Material structure, stiffness, and adhesion: why attachment pads of the grasshopper (Tettigonia viridissima) adhere more strongly than those of the locust (Locusta migratoria) (Insecta: Orthoptera).- Chapter 3. Attachment force of the beetle Cryptozona montrouzieri (Coleoptera, Coccinellidae) on leaflet surfaces of mutants of the pea Pisum sativum (Fabaceae) with regular and reduced wax coverage.- Chapter 4. […]

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Fields of interest
Characterization and Evaluation of Materials; Tribology, Corrosion and Coatings; Surfaces and Interfaces, Thin Films; Biophysics and Biological Physics; Animal Anatomy / Morphology / Histology; Plant Anatomy / Development

Type of publication
Contribution volume

Usually dispatched within 3 to 5 business days


$209.00
ISBN 978-94-007-1444-1
Heat and Mass Transfer in Porous Media

This book, "Heat and Mass Transfer in Porous Media", presents a set of new developments in the field of basic and applied research work on heat and mass transfer phenomena in a porous medium domain, as well as related material properties and their measurements. The book contents include both theoretical and experimental developments, providing a self-contained major reference that is appealing to both the scientists and the engineers. At the same time, these topics will encounter a variety of scientific and engineering disciplines, such as chemical, civil, agricultural, mechanical engineering, etc. The book is divided in several chapters that intend to be a short monograph in which the authors summarize the current state of knowledge for benefit of professionals.

Features
This book, "Heat and Mass Transfer in Porous Media", presents a set of new developments in the field of basic and applied research work on the physical and chemical aspects of heat and mass transfer phenomena in a porous medium domain, as well as related material properties and their measurements. The book contents include both theoretical and experimental developments, providing a self-contained major.[...]

Contents

Fields of interest
Characterization and Evaluation of Materials; Engineering Thermodynamics, Heat and Mass Transfer

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$129.00
ISBN 978-3-642-21965-8

Heterogeneous Ferroelectric Solid Solutions

Phases and Domain States

The book deals with perovskite-type ferroelectric solid solutions for modern materials science and applications, solving problems of complicated heterophase/domain structures near the morphotropic phase boundary and applications to various systems with morphotropic phases. In this book domain state–interface diagrams are presented for the interpretation of heterophase states in ferroelectric solid solutions (ii) the general interpretation of heterophase and domain structures at changing temperature, composition or electric field (iii) the complete analysis of interconnection domain structures, unit-cell parameters changes, heterophase structures and stress.[...]

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Contents

Phases and Domain States

Preface.- Crystallographic Aspects of Interfaces in Ferroelectrics and Related Materials.- Two-Phase States.- Phase Coexistence under an Electric Field E. Three-Phase States.- Overlapping Structures and Transition Regions.- Conclusions.

Fields of interest
Structural Materials; Magnetism, Magnetic Materials; Electrochemistry; Applied and Technical Physics; Metallic Materials; Physical Chemistry

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

December 28, 2011


$129.00
ISBN 978-3-642-22468-9

Kelvin Probe Force Microscopy

Measuring and Compensating Electrostatic Forces

Over the nearly 20 years of Kelvin probe force microscopy, an increasing interest in the technique and its applications has developed. This book gives a concise introduction into the method and describes various experimental techniques. Surface potential studies on semiconductor materials, nanostructures and devices are described, as well as application to molecular and organic materials. The current state of surface potential at the atomic scale is also considered. This book presents an excellent introduction for the newcomer to this field, as much as a valuable resource for the expert.

Features
In the nearly 20 years of Kelvin probe force microscopy an increasing interest in the technique and its applications has developed. This book gives a concise introduction into the method and describes various experimental techniques. Surface potential studies on semiconductor materials, nanostructures and devices are described, as well as application to molecular and organic materials. The current state of [...]
Mathematics

W.D. Wallis, Southern Illinois University, Carbondale, IL, USA

A Beginner's Guide to Discrete Mathematics

Wallis's book on discrete mathematics is a resource for an introductory course in a subject fundamental to both mathematics and computer science, a course that is expected not only to cover specific topics but also to introduce students to important modes of thought specific to each discipline . . .

Contents

Foreword · Introduction · Status of heterojunction solar cell R&D · Basic features of Heterojunctions illustrated by selected experimental methods and results · Deposition methods of thin film silicon · Electronic properties of ultrathin a-Si:H layers and the a-Si:H/c-Si interface · Degradation of (bulk and thin film) a-Si and interface passivation · Photoluminescence and electroluminescence for a Si:H/c-Si device and interface characterization · Deposition and properties of transparent conductive oxides · Metalization and formation of contacts · Electrical and optical characterization ·

Fields of interest

Optical and Electronic Materials; Applied Optics; Optoelectronics; Optical Devices; Surfaces and Interfaces; Thin Films

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012, XIII, 427 p. 219 illus. Hardcover

$74.95


A Royal Road to Algebraic Geometry

This book is about modern algebraic geometry. The title A Royal Road to Algebraic Geometry is inspired by the famous anecdote about the king asking Euclid if there really existed no simpler way for learning geometry, than to read all of his work. Euclid is said to have answered: “There is no royal road to geometry!” The book starts by explaining this enigmatic answer, the aim of the book being to argue that, indeed, in some sense there is a royal road to algebraic geometry. From a point of departure in algebraic curves, the exposition moves on to the present shape of the field, culminating with Alexander Grothendieck’s theory of schemes. Contemporary homological tools are explained. The reader will follow a directed path leading up to the main elements of modern algebraic geometry. When the road is completed, the reader is empowered to start navigating in this immense field, and to open up the door to a wonderful field of research. The greatest scientific experience of a lifetime?

Contents

Part I Curves: 1 Affine and Projective Space · 2 Curves in A2 k and in P2 · 3 Higher Geometry in the Projective Plane · 4 Plane Curves and Algebra · 5 Projective Varieties in P N k · Part II Introduction to Grothendieck’s Theory of Schemes: 6 Categories and Functors · 7 Constructions and Representable Functors · 8 Abelian Categories · 9 The Concept of Spec(A) · 10 The Category of Schemes · 11 Properties of Morphisms of Schemes · 12 Modules, Algebras and Bundles on a Scheme · 13 More Properties of Morphisms, Scheme Theoretic Image and the “Sorite” · 14 Projective Schemes and Bundles ·

Fields of interest

Algebraic Geometry; Category Theory; Homological Algebra; Geometry; Algebraic Topology; Commutative Rings and Algebras; History of Mathematics

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012, XIII, 364 p. 27 Illus. Hardcover

$74.95

ISBN 978-3-642-19224-1
Curves and Surfaces

The book provides an introduction to Differential Geometry of Curves and Surfaces. The theory of curves starts with a discussion of possible definitions of the concept of curve, proving in particular the classification of 1-dimensional manifolds. We then present the classical local theory of parametrized plane and space curves (curves in n-dimensional space are discussed in the complementary material): curvature, torsion, Frénet’s formulas and the fundamental theorem of the local theory of curves. Then, after a self-contained presentation of degree theory for continuous self-maps of the circumference, we study the global theory of plane curves, introducing winding and rotation numbers, and proving the Jordan curve theorem for curves of class C^2, and Hopf theorem on the rotation number of closed simple curves. The local theory of surfaces begins with a comparison of the concept of parametrized (i.e., immersed) surface with the concept of regular (i.e., embedded) surface. We then develop the basic [...] Features

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Discretization of Processes

In applications, and especially in mathematical finance, random time-dependent events are often modeled as stochastic processes. Assumptions are made about the structure of these processes, and serious researchers will want to justify these assumptions through the use of data. As statisticians are wont to say, "In God we trust; all others must bring data." This book establishes the theory of how to go about estimating not just scalar parameters about a proposed model, but also the underlying structure of the model itself. Classic statistical tools are used: the law of large numbers, and the central limit theorem. Researchers have recently developed creative and original methods to use these tools in sophisticated (but highly technical) ways to reveal new details about the underlying structure. For the first time in book form, the authors present these latest techniques, based on research from the last 10 years. They include new findings. This book will be of special interest to researchers, [...]

Features

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Frames and Locales

Topology without points

Until the mid-twentieth century, topological studies were focused on the theory of suitable structures on sets of points. The concept of open set exploited since the twenties offered an expression of the geometric intuition of a “realistic” place (spot, grain) of non-trivial extent. Imitating the behaviour of open sets and their relations led to a new approach to topology flourishing since the end of the fifties. It has proved to be beneficial in many respects. Neglecting points, only little information was lost, while deeper insights have been gained; moreover, many results previously dependent on choice principles became constructive. The result is often a smoother, rather than a more entangled, theory. No monograph of this nature has appeared since Johnstone’s celebrated Stone Spaces in 1983. The present book is intended as a bridge from that time to the present. Most of the material appears here in book form for the first time or is presented from new points of view. Two appendices provide an [...] Features

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Hyperbolic conservation laws are central in the theory of nonlinear partial differential equations and in science and technology. The reader is given a self-contained presentation using front tracking, which is also a numerical method. The multidimensional scalar case and the case of systems on the line are treated in detail. A chapter on finite differences is included. From the reviews: “It is already one of the few best digests on this topic. The present book is an excellent compromise between theory and practice. Students will appreciate the lively and accurate style.” D. Serre, MathSciNet “I have read the book with great pleasure, and I can recommend it to experts as well as students. It can also be used for reliable and very exciting basis for a one-semester graduate course.” S. Noelle, Book review, German Math. Soc. "Making it an ideal first book for the theory of nonlinear partial differential equations... an excellent reference for a graduate course on nonlinear conservation laws.” M. Laforest, [...] Features

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Applications of Mathematics; Numerical Analysis; Theoretical, Mathematical and Computational Physics; Appl. Mathematics / Computational Methods of Engineering

Target groups

Graduate

Type of publication

Graduate/advanced undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XII, 380 p. 21 illus. Hardcover
$74.95 ISBN 978-0-8176-8300-9

Fundamentals of Group Theory

An Advanced Approach

Fundamentals of Group Theory provides an advanced look at the basic theory of groups. Standard topics in the field are covered, such as an historical look at how Galois viewed groups, a discussion of commutator and Sylow subgroups, and a presentation of Birkhoff’s theorem. Written in a clear and accessible style, the work presents a solid introduction for students wishing to learn more about this widely applicable subject area. This book will be suitable for graduate courses in group theory and abstract algebra, and will also have appeal to advanced undergraduates. In addition it will serve as a valuable resource for those pursuing independent study. Group Theory is a timely and fundamental addition to literature in the study of groups. [...] Features

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Group Theory and Generalizations; Algebra; Order, Lattices, Ordered Algebraic Structures

Target groups

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2012. XII, 380 p. 21 illus. Hardcover
$74.95 ISBN 978-0-8176-8300-9
**Group Testing Theory in Network Security**

*An Advanced Solution*

Group Testing Theory in Network Security explores a new branch of group testing theory with an application which enhances research results in network security. This brief presents new solutions on several advanced network security problems and mathematical frameworks based on the group testing theory, specifically denial-of-service and jamming attacks. A new application of group testing, illustrated in this text, requires additional theories, such as size constraint group testing and connected group testing. Included in this text is a chapter devoted to discussing open problems and suggesting new solutions for various network security problems. This text also exemplifies the connection between mathematical approaches and practical applications to group testing theory in network security. This work will appeal to a multidisciplinary audience with interests in computer communication networks, optimization, and engineering.

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**Contents**

- 4. Randomized Fault...

**Highlights in Lie Algebraic Methods**

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**Features**

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**Contents**


**Fields of interest**

- Topological Groups, Lie Groups; Category Theory, Homological Algebra; General Algebraic Systems; Algebra; Linear and Multilinear Algebras, Matrix Theory

**Target groups**

- Research

**Type of publication**

- Contributed volume

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


$99.00
ISBN 978-3-0348-0571-8

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**Type of publication**

- Contributed volume

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


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ISBN 978-3-0348-0571-8

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Mathematical and Statistical Methods for Actuarial Sciences and Finance

The book develops the capabilities arising from the cooperation between mathematicians and statisticians working in insurance and finance fields. It gathers some of the papers presented at the conference MAF2010, held in Ravello (Amalfi coast), and successively, after a reviewing process, worked out to this aim.

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Contents

Fields of interest
Quantitative Finance; Statistics (general); Business & Management Science; Insurance; Game Theory / Mathematical Methods; Financial Economics

Target groups
Research

Type of publication
Contributed volume

Due: October 25, 2011

2012. XII, 408 p. 99 illus., 1 in color. Hardcover

$149.00

Mathematics of Complexity and Dynamical Systems

Mathematics of Complexity and Dynamical Systems is an authoritative reference to the basic tools and concepts of complexity, systems theory, and dynamical systems from the perspective of pure and applied mathematics. Complex systems are systems that comprise many interacting parts with the ability to generate a new quality of collective behavior through self-organization, e.g. the spontaneous formation of temporal, spatial or functional structures. These systems are often characterized by extreme sensitivity to initial conditions as well as emergent behavior that are not readily predictable or even completely deterministic. The more than 100 entries in this wide-ranging, single source work provide a comprehensive exposition of the theory and applications of mathematical complexity, covering ergodic theory, fractals and multifractals, dynamical systems, perturbation theory, solitons, systems and control theory, and related topics. Mathematics of Complexity and Dynamical Systems is an essential[…]

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Contents

Fields of interest
Complex Systems; Simulation and Modeling; Dynamical Systems and Ergodic Theory; Statistical Physics, Dynamical Systems and Complexity; Systems Theory; Control; Ordinary Differential Equations

Target groups
Research

Type of publication
Encyclopaedia

Usually dispatched within 3 to 5 business days

2011. XXXI, 1858 p. 489 illus., 140 in color. In 3 volumes, not available separately. Hardcover

$600.00
ISBN 978-1-4614-1805-4

Mathematics of Complexity and Dynamical Systems

Mathematics of Complexity and Dynamical Systems is an authoritative reference to the basic tools and concepts of complexity, systems theory, and dynamical systems from the perspective of pure and applied mathematics. Complex systems are systems that comprise many interacting parts with the ability to generate a new quality of collective behavior through self-organization, e.g. the spontaneous formation of temporal, spatial or functional structures. These systems are often characterized by extreme sensitivity to initial conditions as well as emergent behavior that are not readily predictable or even completely deterministic. The more than 100 entries in this wide-ranging, single source work provide a comprehensive exposition of the theory and applications of mathematical complexity, covering ergodic theory, fractals and multifractals, dynamical systems, perturbation theory, solitons, systems and control theory, and related topics. Mathematics of Complexity and Dynamical Systems is an essential[…]

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Fields of interest
Complex Systems; Simulation and Modeling; Dynamical Systems and Ergodic Theory; Statistical Physics, Dynamical Systems and Complexity; Systems Theory; Control; Ordinary Differential Equations

Target groups
Research

Type of publication
Encyclopaedia

Online orders shipping within 2-3 days

2011. XXXI, 1858 p. 489 illus., 140 in color. eReference. In 3 volumes, not available separately.

$600.00
ISBN 978-1-4614-1806-1
Methods of Geometric Analysis in Extension and Trace Problems

Volume 1

The book presents a comprehensive exposition of extension results for maps between different geometric objects and of extension-trace results for smooth functions on subsets with no a priori differential structure (Whitney problems). The account covers development of the area from the initial classical works of the first half of the 20th century to the flourishing period of the last decade. Seemingly very specific these problems have been from the very beginning a powerful source of ideas, concepts and methods that essentially influenced and in some cases even transformed considerable areas of analysis. Aside from the material linked by the aforementioned problems the book also is unified by geometric analysis approach used in the proofs of basic results. This requires a variety of geometric tools from convex and combinatorial geometry to geometry of metric space theory to Riemannian and coarse geometry and more. The necessary facts are presented mostly with detailed proofs to make the book.[...]

Contents

Fields of interest
Functional Analysis

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

$129.00
ISBN 978-3-0348-0208-6

Methods of Geometric Analysis in Extension and Trace Problems

Volume 2

The book presents a comprehensive exposition of extension results for maps between different geometric objects and of extension-trace results for smooth functions on subsets with no a priori differential structure (Whitney problems). The account covers development of the area from the initial classical works of the first half of the 20th century to the flourishing period of the last decade. Seemingly very specific these problems have been from the very beginning a powerful source of ideas, concepts and methods that essentially influenced and in some cases even transformed considerable areas of analysis. Aside from the material linked by the aforementioned problems the book also is unified by geometric analysis approach used in the proofs of basic results. This requires a variety of geometric tools from convex and combinatorial geometry to geometry of metric space theory to Riemannian and coarse geometry and more. The necessary facts are presented mostly with detailed proofs to make the book.[...]

Contents

Fields of interest
Functional Analysis

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIX, 414 p. 6 illus., 1 in color. (Monographs in Mathematics, Vol. 103) Hardcover
$124.00
ISBN 978-3-0348-0211-6

Nonlinear PDEs

Mathematical Models in Biology, Chemistry and Population Genetics

The emphasis throughout the present volume is on the practical application of theoretical mathematical models helping to unravel the underlying mechanisms involved in processes from mathematical physics and biosciences. It has been conceived as a unique collection of abstract methods dealing especially with nonlinear partial differential equations (either stationary or evolutionary) that are applied to understand concrete processes involving some important applications related to phenomena such as: boundary layer phenomena for viscous fluids, population dynamics, dead core phenomena, etc. It addresses researchers and post-graduate students working at the interplay between mathematics and other fields of science and technology and is a comprehensive introduction to the theory of nonlinear partial differential equations and its main principles also presents their real-life applications in various contexts: mathematical physics, chemistry, mathematical biology, and population genetics. Based on the[...]

Features
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Contents
Viorel Barbu: Foreword.- 1. Overview of methods applied to[...]

Fields of interest
Partial Differential Equations; Calculus of Variations and Optimal Control; Optimization; Mathematical Applications in the Physical Sciences; Global Analysis and Analysis on Manifolds; Dynamical Systems and Ergodic Theory

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XVIII, 391 p. 10 illus. (Springer Monographs in Mathematics) Hardcover
$124.00
ISBN 978-3-642-22663-2
Nonlinear Partial Differential Equations for Scientists and Engineers

The revised and enlarged third edition of this successful book presents a comprehensive and systematic treatment of linear and nonlinear partial differential equations and their varied and updated applications. In an effort to make the book more useful for a diverse readership, updated modern examples of applications are chosen from areas of fluid dynamics, gas dynamics, plasma physics, nonlinear dynamics, quantum mechanics, nonlinear optics, acoustics, and wave propagation. Nonlinear Partial Differential Equations for Scientists and Engineers, Third Edition, improves on an already highly complete and accessible resource for graduate students and professionals in mathematics, physics, science, and engineering. It may be used to great effect as a course textbook, research reference, or self-study guide.

Features

An exceptionally complete overview of the latest developments in the field of PDEs. There are numerous examples and the emphasis is on applications to almost all areas of science and engineering. There is truly something for everyone here. — Applied Mechanics Review (Review of First Edition) Overall, it is a useful book for teaching, a rich source of examples, and I am happy to have it [...]
Optimal Control Problems for Partial Differential Equations on Reticulated Domains

Approximation and Asymptotic Analysis

Optimal control of partial differential equations (PDEs) is a well-established discipline in mathematics with many interfaces to science and engineering. During the development of this area, the complexity of the systems to be controlled has also increased significantly; however, the numerical realization of these complex systems has become an issue in scientific computing, as the number of variables involved may easily exceed a couple of million. In order to carry out model-reduction on these systems, the authors of this work have developed a method based on asymptotic analysis. They aim at combining techniques of homogenization and approximation in order to cover optimal control problems defined on reticulated domains, networked systems such as lattice, honeycomb, or hierarchical structures. Because of these structures’ complicated geometry, the asymptotic analysis is even more important, as a direct numerical computation of solutions would be extremely difficult. The work’s first part can be used [...]
Sustainable Environmental Design in Architecture

Impacts on Health

Over the last few decades, there have been dramatic improvements in the understanding and research of environmental design. Numerous methods have been developed to enhance architectural design in order for it to be more energy efficient, sustainable and health enhancing. This book presents several theories and techniques that can be used to improve how buildings are engineered and designed in order to utilize more sustainable construction methods while promoting the health of the building’s occupants. Contributions to the study of environmental design have come from a diversity of fields including applied mathematics, optimization, computer science, medical research, psychology, management science, architecture, and engineering. The techniques developed in these areas of research can be used to increase building performance, occupant satisfaction, productivity, and well being, and reducing the incidence of health conditions and chronic diseases related to the use of a designed space. This book [...] Features

The chapters in this book, written by international experts from different fields of architecture and engineering, are devoted to recent interdisciplinary works in a variety of subjects related to sustainable architecture and engineering, environmental modeling, behavioral science and public health. The invited contributions focus on new ideas, concepts and research work with multidisciplinary [...] Contents


Operations Research, Mathematical Programming; Engineering Design; Environmental Health; Applications of Mathematics; Sustainable Development; Civil Engineering

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XVIII, 336 p. 120 illus., 69 in color. (Springer Optimization and Its Applications, Vol. 56) Hardcover

$149.00
ISBN 978-1-4419-0744-8

The Mathematical Experience, Study Edition

When first published in the early 1980s, The Mathematical Experience presented a highly insightful overview of mathematics that effectively conveyed its power and beauty to a large audience of mathematicians and non-mathematicians alike. Following about a decade later, the study edition of the work supplemented the original material of the book with exercises to provide a self-contained treatment usable for the classroom. This softcover version reproduces the study edition and includes epilogues by the three original authors to reflect on the book’s content 15 years after its publication, and to demonstrate its continued applicability to the classroom. Moreover, The Companion Guide to the Mathematical Experience—originally published and sold separately—is freely available online to instructors who use the work, further enhancing its pedagogical value and making it an exceptionally useful and accessible resource for a wide range of lower-level courses in mathematics and mathematics education. A wealth [...] Features

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Fields of interest

Mathematics (general); Education (general); Physics (general); Popular Science; Science

Target groups

Popular/general

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XIII, 138 p. 35 illus. Softcover

$19.95
ISBN 978-3-642-22103-3

The Beauty of Everyday Mathematics

Imagine that you’ve finally found a parking space after a long and harrowing search, but are now encountering some difficulty in trying to enter this space. Wouldn’t it be great if you knew a formula that allowed you to enter the space without difficulty? Are you annoyed because your soda can doesn’t remain upright during a picnic? Would you like to know why a mirror swaps right and left, but not top and bottom? Are you looking for a mathematical speech to toast your mother-in-law’s 85th birthday? Or do you want to give your heart away mathematically? Dr. Norbert Herrmann provides amusing and entertaining solutions to these and many other problems that we encounter in everyday situations. “A book for teachers, students of mathematics, and anybody who likes unusual and amusing calculations.”

Features

Imagine that you’ve finally found a parking space after a long and harrowing search, but are now encountering some difficulty in trying to enter this space. Wouldn’t it be great if you knew a formula that allowed you to enter the space without difficulty? Are you annoyed because your soda can doesn’t remain upright during a picnic? Would you like to know why a mirror swaps right and left, but not top and [...] Contents


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Fields of interest

Mathematics (general); Mathematics Education; History of Mathematics; Mathematical Logic and Foundations; Philosophy of Science; Philosophy of Education

Target groups

Lower undergraduate

Type of publication

Undergraduate textbook

Usually dispatched within 3 to 5 business days

2012. XXV, 500 p. 139 illus. (Modern Birkhäuser Classics) Softcover

$49.95
ISBN 978-0-8176-8294-1
Topics in Noncommutative Algebra

The Theorem of Campbell, Baker, Hausdorff and Dynkin

Motivated by the importance of the Campbell, Baker, Hausdorff, Dynkin Theorem in many different branches of Mathematics and Physics (Lie group-Lie algebra theory, linear PDEs, Quantum and Statistical Mechanics, Numerical Analysis, Theoretical Physics, Control Theory, sub-Riemannian Geometry), this monograph is intended to: fully enable readers (graduates or specialists, mathematicians, physicists or applied scientists, acquainted with Algebra or not) to understand and apply the statements and numerous corollaries of the main result, provide a wide spectrum of proofs from the modern literature, comparing different techniques and furnishing a unifying point of view and notation, provide a thorough historical background of the results, together with unknown facts about the effective early contributions by Schur, Poincaré, Pascal, Campbell, Baker, Hausdorff and Dynkin, give an outlook on the applications, especially in Differential Geometry (Lie group theory) and Analysis (PDEs of subelliptic type).

Features
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Contents
1 Historical Overview. Part I Algebraic Proofs of the CBHD Theorem. 2 Background Algebra. 3 The Main Proof of the CBHD Theorem. 4 Some ‘Short’ Proofs of the CBHD Theorem. 5 Convergence and Associativity for the CBHD Theorem. 6 CBHD, PBW and the Free Lie Algebras. Part II Proofs of the Algebraic Prerequisites. 7 Proofs of the Algebraic Prerequisites. 8 Construction of Free Lie Algebras. 9 Formal Power Series in One Indeterminate. 10 Symmetric Algebra.

Fields of interest
Topological Groups, Lie Groups; History of Mathematics; Non-associative Rings and Algebras; Differential Geometry

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXII, 539 p. 5 illus. (Lecture Notes in Mathematics, Vol. 2034) Softcover

$119.00
ISBN 978-3-642-22596-3

Transcending Tradition: Jewish Mathematicians in German-Speaking Academic Culture

A companion publication to the international exhibition ‘Transcending Tradition: Jewish Mathematicians in German-Speaking Academic Culture’, the catalogue explores the working lives and activities of Jewish mathematicians in German-speaking countries during the period between the legal and political emancipation of the Jews in the 19th century and their persecution in Nazi Germany. It highlights the important role Jewish mathematicians played in all areas of mathematical culture during the Wilhelmine Empire and the Weimar Republic, and recalls their emigration, flight or death after 1933.

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Fields of interest
History of Mathematics; History; History of Science

Target groups
Research

Type of publication
Monograph

Due: February 28, 2012

2012. XI, 270 p. 226 illus., 164 in color. Hardcover

$49.95
ISBN 978-3-642-22463-8

Viability of Hybrid Systems

A Controllability Operator Approach

The problem of viability of hybrid systems is considered in this work. A model for a hybrid system is developed including a means of including three forms of uncertainty: transition dynamics, structural uncertainty, and parametric uncertainty. A computational basis for viability of hybrid systems is developed and applied to three control law classes. An approach is developed for robust viability based on two extensions of the controllability operator. The three-tank example is examined for both the viability problem and robust viability problem. The theory is applied through simulation to an active magnetic bearing system and to a batch polymerization process showing that viability can be satisfied in practice. The problem of viable attainability is examined based on the controllability operator approach introduced by Nerode and colleagues. Lastly, properties of the controllability operator are presented.

Features
The problem of viability of hybrid systems is considered in this work. A model for a hybrid system is developed including a means of including three forms of uncertainty: transition dynamics, structural uncertainty, and parametric uncertainty. A computational basis for viability of hybrid systems is developed and applied to three control law classes. An approach is developed for robust viability based on [..]

Contents
1 Introduction. 1.1 Motivation and History. 1.2 Summary and Organization. 1.3 Summary. 2 Literature Review. 2.1 Nerode et al Approach to Viability of Hybrid Systems [50],[71]. 2.2 Aubin et al Approach to Viability of Hybrid Systems [15]. 2.3 Deshpande [Varaiya Approach to Viability of Hybrid Systems] [35]. 2.4 Related Literature. 2.5 Conclusion. 3 Hybrid Model. 3.1 Hybrid Phenomena and Hybrid Model. 3.2 Hybrid Trajectories and their Ordering. 3.3 Continuity, Fixed Points, and Correct Finite Control Automaton. 3.4 Uncertainty in Hybrid Systems. 3.5 The[..]

Fields of interest
Systems Theory, Control; Robotics and Automation; Vibration, Dynamical Systems, Control

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$129.00
ISBN 978-94-007-2520-1
10th International Symposium on Therapeutic Ultrasound (ISTU 2010)

The readership of these proceedings may be quite broad from faculty and students in academia to research and development professionals in industry. The proceedings offer a comprehensive view of the state-of-the-art of Therapeutic Ultrasound from the basic science to device technology to clinical practice. Papers describing new therapies of cancer and other tissue abnormalities using innovative device concepts are included. In particular, advanced transducer technologies for noninvasive or minimally invasive delivery of therapeutic ultrasound under image guidance are described by a significant number of papers within the proceedings. The proceedings also include papers on the use of ultrasound in enhancing drug delivery with and without the use of ultrasound contrast agents. In addition, standards and quality assurance issues are addressed by a number of papers. Finally, clinical and pre-clinical in vivo studies are also described.

Features
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Fields of interest
Ultrasound

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days


$191.00
ISBN 978-0-7354-0917-0

99mTc-Sestamibi

Clinical Applications

99mTc-sestamibi is a single-photon emission computed tomography (SPECT) radiotracer that is widely used for the imaging of myocardial perfusion, as well as a variety of malignant and benign diseases. 99mTc-Sestamibi – Clinical Applications provides a detailed and informative overview of almost all the oncologic and non-oncologic applications of 99mTc-sestamibi SPECT, including several relatively rare indications. Different disease-related protocols for 99mTc-sestamibi SPECT are presented, and for each disease a comprehensive summary of the relevant pathology and epidemiology is provided. Throughout, there is a strong emphasis on the practical aspects of use of this popular tracer, including instructions for the preparation of several commercially available tracer kits. Clinical practitioners will find this book to be an invaluable guide to the application and benefits of 99mTc-sestamibi SPECT in both the inpatient and the outpatient setting.

Features

99mTc-sestamibi is a single-photon emission computed tomography (SPECT) radiotracer that was introduced into clinical routine for myocardial perfusion imaging more than two decades ago. Although today the main application of 99mTc-sestamibi SPECT remains the imaging of myocardial perfusion, it is also an accepted and well-proven imaging technique for a variety of oncologic and non-oncologic applications. [...]"
Adeno-Associated Virus

Methods and Protocols

Today, progress in rAAV-mediated gene transfer is so robust that long-term, efficient, and regulatable transgene expression is reproducibly achieved in large animal models. The complexity of gene transfer agents in the context of their clinical use requires investigators from a wide variety of backgrounds to have an understanding — or at least an appreciation of — the regulatory environment and constraints that affect vector design, manufacturing, pre-clinical testing, and clinical use, with an emphasis on patient protection. In Adeno-Associated Virus: Methods and Protocols, experts from the United States and Europe have contributed current knowledge of this multi-dimensional field relating to the biology of AAV, rAAV vector design, vector manufacturing and product testing, performance of rAAV vectors in major organs, rAAV-related immunological issues, design of animal and clinical studies, and clinical experience. Written in the successful Methods in Molecular Biology series format, chapters[...] are comprehensive reviews on specific disease topics including chronic obstructive lung disease, lung cancer, atypicals[...]

Features

Today, progress in rAAV-mediated gene transfer is so robust that long-term, efficient, and regulatable transgene expression is reproducibly achieved in large animal models. The complexity of gene transfer agents in the context of their clinical use requires investigators from a wide variety of backgrounds to have an understanding — or at least an appreciation of — the regulatory environment and constraints [...] are comprehensive reviews on specific disease topics including chronic obstructive lung disease, lung cancer, atypicals[...]

Contents


Fields of interest

Infectious Diseases; Gene Therapy

Target groups

Professional/practitioner

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days


$139.00

ISBN 978-1-61779-369-1

Advanced Surgical Facial Rejuvenation

Art and Clinical Practice

This richly illustrated book covers all aspects of aesthetic facial surgery, from anatomy to the variety of procedures employed in facial surgery, including ancillary techniques such as chemical peel, laser, and facial fillers. Both newer techniques and variations on older approaches are carefully presented and discussed. In addition, preoperative care is analyzed, and detailed attention is devoted to problems related to HIV infection, anesthesia, complications, and psychological aspects. The contributors are all internationally acclaimed experts in the field. [...] are comprehensive reviews on specific disease topics including chronic obstructive lung disease, lung cancer, atypicals[...]

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Contents


Fields of interest

Plastic Surgery; Otorhinolaryngology; Dermatology; Oral and Maxillofacial Surgery; Ophthalmology

Target groups

Professional/practitioner

Type of publication

Professional book

Due: November 28, 2011

2012. XIV, 740 p. 635 illus., 620 in color. Hardcover

$279.00

ISBN 978-3-642-17837-5

Aging and Lung Disease

A Clinical Guide

People age 65 and older are the fastest growing segment of the U.S. population. In the 2010 census 16% of the population, 50 million people, were age 65 and older. That number is projected to increase to 66 million by the year 2050. Life expectancy has also increased, with recent CDC reports indicating life expectancy at 77.9 years. Age-adjusted death rates have decreased significantly with the largest changes occurring in older patients. Despite these trends, the 10 leading causes of death include several pulmonary etiologies including lung cancer, chronic respiratory diseases, influenza and pneumonia. Aging and Lung Disease: A Clinical Guide is devoted to understanding the impact of respiratory diseases in older patients. It includes reviews of physiology of the aging lung, allergy and immunology of the aging, as well as sleep changes over the life cycle. There are also comprehensive reviews on specific disease topics including chronic obstructive lung disease, lung cancer, atypicals[...]

Features

Physiologic Changes in the Aging Lung. - Allergy and Immunology of the Aging Lung. - Physiologic Changes in Sleep with Aging. - Chronic obstructive pulmonary disease (COPD) in Older Patients. - Lung Cancer in Older Patients. - Pulmonary Hypertension in Older Patients. - Pulmonary Embolism in Older Patients. - Obstructive Sleep Apnea in Older Patients. - Sleep Disorders in Older Patients. - Non-tuberculous Mycobacterial Infection in Older Patients. - Intermittent Lung Disease in Older Patients with HIV. - Special Considerations in Lung Transplantation in Older[...]

Contents

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Fields of interest

Pneumology/Respiratory System; Internal Medicine; Primary Care Medicine

Target groups

Professional/practitioner

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2012. XI, 314 p. 28 illus., 20 in color. (Respiratory Medicine) Hardcover

$219.00

ISBN 978-1-60761-726-6
## Attention Deficit Hyperactivity Disorder Handbook

**A Physician’s Guide to ADHD**

An expanded, updated, and revised edition, the ADHD Handbook, second edition covers recent advances in causes and management of ADHD, and includes more than 400 scientific references to peer-reviewed articles. It provides answers to the numerous questions that surround ADHD, including how is it diagnosed? What causes ADHD? What are the risks of associated learning and behavior disorders, tics, seizures, and headaches? What treatments are available? What are the choices of medications and the risks of side effects? How can adverse effects be avoided? What are the alternatives to medication? Do children outgrow ADHD, and how long is treatment required? ADHD Handbook is written for neurologists, pediatricians, practicing physicians, residents, fellows and students of medicine, psychologists, educators, occupational and speech therapists, nurse practitioners and other healthcare providers. It also offers parents a readable, but uniquely well documented and objective account of ADHD symptoms, diagnosis,[…]

### Contents

- Definition Of ADHD.
- Causative Factors.
- Symptoms And Signs.
- Diagnosis And Laboratory Tests.
- Comorbid Disorders.
- Learning And Language Disorders.
- Tics, Seizures, And Headaches.
- Methods Of Management.
- Medications For ADHD.
- Dietary And Alternative Therapies.
- Prognosis And Prevention.
- Management Roles.

### Fields of interest

Neurology; Pediatrics; General Practice / Family Medicine; Psychiatry

### Target groups

Professional/practitioner

### Type of publication

Professional book

**Usually dispatched within 3 to 5 business days January 2012**

2011. XXVII, 182 p. 2 illus. Softcover

$39.95

ISBN 978-1-4614-2021-7

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## Challenging Cases in Pulmonology

**Clinical Examination in Orthopedics**

### Challenging Cases in Pulmonology

From acute respiratory diseases to chronic lung conditions, pulmonology is a vital area of clinical medicine. Due to a wide array of respiratory diseases, clinical presentation of pulmonary conditions can be complex and oftentimes challenging. In addition to recognizing common characteristics of lung diseases, identifying unusual clinical presentation of pulmonary conditions remains an important educational experience. This concise and easy-to-read title provides that experience in practical context, using a case-based system of learning where a unique case is presented and discussed and questions are provided to challenge the learner and reinforce the transmission of knowledge. Challenging Cases in Pulmonology is not an exhaustive review but rather focuses on common and important problems, with emphasis on evaluation and treatment. The book offers 16 chapters consisting of two or more cases followed by five to ten multiple choice questions. A valuable resource for pulmonologists, allergists,[…]

### Features

From acute respiratory diseases to chronic lung conditions, pulmonology is a vital area of clinical medicine. Due to a wide array of respiratory diseases, clinical presentation of pulmonary conditions can be complex and oftentimes challenging. In addition to recognizing common characteristics of lung diseases, identifying unusual clinical presentation of pulmonary conditions remains an important educational.[…]

### Contents

- Allergic Asthma.
- Allergic Bronchopulmonary Aspergillosis.
- Hyperreactivity pneumonitis.
- Pulmonary Eosinophilic Conundrums.
- Occupational Asthma To Low and High Molecular Weight Agents.
- Malignant Pleural Mesothelioma.
- Pneumonia.
- Tuberculosis in Immunocompromised Hosts.
- Asthma.
- Chronic Obstructive Pulmonary Diseases Conundrums.
- Pulmonary Hypertension.
- Pulmonary Embolism.
- Pulmonary Vasculitis Conundrums.
- Diffuse Parenchymal Lung Diseases.
- Pulmonary manifestations of Systemic Diseases.
- Sarcoidosis.
- Cystic fibrosis.

### Fields of interest

Pneumology/Respiratory System; Primary Care Medicine; Internal Medicine

### Target groups

Professional/practitioner

### Type of publication

Monograph

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

2012. XIV, 142 p. 69 illus., 38 in color. Hardcover

$139.00


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## Clinical Examination in Orthopedics

This book has been written step wise by enumerating various aspects of the importance of clinical examination derived by laying one’s hands on the affected part. By a thorough clinical examination, it can help an individual to arrive at a tentative differential diagnosis of the condition and hence help in investigating the same by numerous tests which are relevant to the given condition. The manner in which a given case is handled in this way is far more important than the diagnosis of the condition and this feature comes with practicing the same many times. It is a must for anyone embarking in life on Orthopedics as a career.

### Features

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### Contents

- Examination of diseases of bone.
- Examination of the Shoulder.
- Examination of the Elbow.
- Examination of the Wrist and Fingers.
- Examination of the Hip and the pelvis.
- Examination of the knee.
- Examination of the Ankle and foot.
- Examination of the Cervical Spine.
- Examination of the Lumbar Spine.
- Examination of the Temporomandibular joint.
- Examination of Gait.

### Fields of interest

Orthopedics; Surgical Orthopedics; Conservative Orthopedics

### Target groups

Professional/practitioner

### Type of publication

Monograph

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

2012. XIV, 142 p. 69 illus., 38 in color. Hardcover

$139.00

Computer Medical Databases
The First Six Decades (1950–2010)

Chapter 1 offers an overview of the basic computer technology. Each succeeding chapter, describes the problems in medicine, followed by a review in chronological sequence of why and how computers were applied to try to meet these problems. Only the technical aspects of computer hardware, software, and communications are discussed as they are necessary to explain how the technology was applied. This approach generally led to defining the objectives for applications of medical informatics. At the end of each chapter, the author summarizes his personal views and interpretations of the chapter contents. Although the concurrent evolution of medical informatics in Canada, Europe, and Japan certainly influenced workers in the United States, the scope of this historical review is limited to the development of medical informatics within the United States. Furthermore, this review is limited to electronic digital computers; it excludes mechanical, analog, and hybrid computers.

Features
We have witnessed the evolution of medical informatics over the past six decades as we have moved into the new information era. It is clear that computers have had and continue to have a major influence on all of medicine. Computer Medical Databases: The First Six Decades (1950–2010) has been created by Dr Collen, the “Father of Medical Informatics”, to detail the journey from the very [...]

Contents
Chapter 1 Prologue: The Evolution of Computer Databases. - Chapter 2 The Development of Medical Databases. - Chapter 3 Processing Text in Medical Databases. - Chapter 4 Primary Medical Record Databases. - Chapter 5 Specialized Medical Databases. - Chapter 6 Secondary Medical Research Databases. - Chapter 7 Bio-Surveillance & Claims Databases. - Chapter 8 Medical Knowledge Databases. - Chapter 9 Medical Bibliographic Databases. - Chapter 10 Epilogue.

Fields of interest
Health Informatics

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. XIX, 288 p. (Health Informatics) Hardcover

$89.95
ISBN 978-0-85729-961-1

Contemporary Treatment of Erectile Dysfunction
A Clinical Guide

Erectile dysfunction can affect all age groups. Numerous physical and emotional risk factors may contribute to the problem. These risk factors can range from chronic diseases and medications to psychological factors. In the U.S. alone, it has been estimated that 18 to 30 million men suffer from erectile dysfunction. This number has increased significantly as awareness of the disorder has heightened. Researchers and health care professionals now have a better understanding of what causes erectile dysfunction and the effective medications and non-medications treatments used to treat the condition. Comprehensive and state-of-the-art, Contemporary Treatment of Erectile Dysfunction: A Clinical Guide synthesizes the literature and covers all aspects of treating erectile dysfunction and other related male sexual dysfunctions. This invaluable title offers all physicians, residents, and fellows -- and even medical students and other health professionals such as nurse practitioners and physician assistants -- [...] Features
Erectile dysfunction can affect all age groups. Numerous physical and emotional risk factors may contribute to the problem. These risk factors can range from chronic diseases and medications to psychological factors. In the U.S. alone, it has been estimated that 18 to 30 million men suffer from erectile dysfunction. This number has increased significantly as awareness of the disorder has heightened. [...] Contents
Internal Medicine; General Practice / Family Medicine; Endocrinology; Cardiology; Primary Care Medicine; Urology / Andrology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days

2011. XII, 287 p. 63 illus., 29 in color. (Contemporary Endocrinology) Softcover

$69.95
ISBN 978-1-61779-553-4

Diagnostic Pathology of Ovarian Tumors

Diagnostic Pathology of Ovarian Tumors offers a focus on the pathology of ovarian neoplasia with detailed clinically relevant information for practicing pathologists not found in other more general volumes of gynecologic pathology. This important work focuses almost entirely on strategies for accurate diagnosis and histologic subclassification, and the clinical correlates of these diagnoses. It provides evolving guidelines for detecting early ovarian cancer in prostatic specimens; cutting-edge information on enhancing the reproducible and clinically meaningful subclassification of ovarian carcinoma as well as new proposals for ovarian carcinoma grading. Richly illustrated, containing abundant tables and figures as well as bulleted points of information, Diagnostic Pathology of Ovarian Tumors is the first text offering chapters written by practicing gynecologists on how clinical data can enhance pathologic diagnostic accuracy, how pathologists can efficiently convey their diagnostic opinions to [...] Features
Diagnostic Pathology of Ovarian Tumors offers a focus on the pathology of ovarian neoplasia with detailed clinically relevant information for practicing pathologists not found in other more general volumes of gynecologic pathology. This important work focuses almost entirely on strategies for accurate diagnosis and histologic subclassification, and the clinical correlates of these diagnoses. It [...] Contents
Pathology; Gynecology; Oncology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Online orders shipping within 2-3 days

2011. XII, 312 p. 385 illus., 383 in color. Hardcover

$219.00
ISBN 978-1-4419-9750-0
Family and HIV/AIDS

Cultural and Contextual Issues in Prevention and Treatment

Three decades into the HIV pandemic, the goals remain clear: reduce the number of infections, improve the health outcomes of those who are infected, and eliminate disparities in care. And one observation continues to gain credence: families are a powerful resource in preventing, adapting to, and coping with HIV. Recognizing their complex role as educators, mentors, and caregivers, Family and HIV/AIDS assembles a wealth of findings from successful prevention and intervention strategies and provides models for translating evidence into effective real-world practice. Chapters spotlight the differing roles of mothers and fathers in prevention efforts, clarify the need for family/community collaborations, and examine core issues of culture, ethnicity, gender, and diagnosis (e.g., minority families, adolescents with psychological disorders). Throughout, risk reduction and health promotion are shown as a viable public health strategy A reference with considerable utility across the health, mental[...]

Features

Three decades into the HIV pandemic, the goals remain clear: reduce the number of infections, improve the health outcomes of those who are infected, and eliminate disparities in care. And one observation continues to gain credence: families are a powerful resource in preventing, adapting to, and coping with HIV. Recognizing their complex role as educators, mentors, and caregivers, Family and HIV/AIDS[...]

Contents


Fields of interest

Maternal and Child Health; Social Work; Psychotherapy and Counseling

Target groups

Professional/practitioner

Type of publication

Monograph

Due: November 2, 2011

2012. 280 p. 60 illus., 20 in color. Hardcover

$59.95

ISBN 978-3-642-24714-9


One of the time-honored foundations of the practice of pediatric medicine is the understanding and application of the principles of fluid, electrolyte and acid-base disorders. Presented in a new softcover format, Fluid and Electrolytes in Pediatrics: A Comprehensive Handbook brings together a select group of authors who share a passion and an appreciation of the contributions of pioneers in pediatric medicine and an expertise for their respective areas in a new softcover edition. The volume provides in-depth discussions of the basic functioning of the kidneys, skin and the lungs. Each chapter describes the etiology and demographics, biological mechanisms, patient presentation characteristics, therapy options and consequences of optimal treatment as well as delayed treatment. Fluid and Electrolytes in Pediatrics: A Comprehensive Handbook provides health professionals in many areas of research and practice with the most up-to-date, accessible, and well referenced volume on the importance of the[...]

Features

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Contents


Fields of interest

Clinical Nutrition; Pediatrics; Primary Care Medicine; Intensive / Critical Care Medicine; Pediatric Surgery; Nephrology

Target groups

Professional/practitioner

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

2011. XVIII, 411 p. (Nutrition and Health) Softcover

$49.95

ISBN 978-1-61779-410-0
Frozen Section Library: Breast

The Frozen Section Library series provides concise, user-friendly, site specific handbooks that are well illustrated and highlight the pitfalls, artifacts and differential diagnosis issues that arise in the hurried frozen section scenario. Frozen Section Library: Breast provides an easy reference and pocket book about the nuances of adequately handling breast specimens in a format that meets the increasingly complex environment of breast pathology. The pros and cons of frozen section versus use of touch print as well as related quality assurance requirements are addressed. Other less common uses of intraoperative evaluation, such as diagnosis and margin evaluation are described. The volume includes recommended guidelines for evaluation and documentation of specific gross pathologic features, in conjunction with radiological imaging. Techniques and protocols for such examinations are illustrated. The volume closes with an overview of the newly published guidelines for handling a variety of breast...[]

Features

The Frozen Section Library series provides concise, user-friendly, site specific handbooks that are well illustrated and highlight the pitfalls, artifacts and differential diagnosis issues that arise in the hurried frozen section scenario. Frozen Section Library: Breast provides an easy reference and pocket book about the nuances of adequately handling breast specimens in a format that meets the...[]

Contents

Preface.- Sentinel Lymph Nodes.- Assessment of the Surgical Margins.- Diagnostic Evaluation of a Breast Mass.- Handling of Specimens with a Non-Palpable Lesion.- Core Needle Biopsies.- Regulatory Requirements for Breast Specimens.- Suggesting Reading

Fields of interest

Pathology

Target groups

Professional/practitioner

Type of publication

Professional book

Online orders shipping within 2-3 days

2012. XI, 112 p. 125 illus., 116 in color. (Frozen Section Library, Vol. 9) Softcover

$139.00
ISBN 978-1-4614-0717-1

Hand Bone Age

A Digital Atlas of Skeletal Maturity

In the past, determination of bone maturity relied on visual evaluation of skeletal development in the hand and wrist, most commonly using the Greulich and Pyle atlas. The Gilsanz and Ratib digital atlas takes advantage of digital imaging and provides a more effective and objective approach to assessment of skeletal maturity. The atlas integrates the key morphological features of ossification in the bones of the hand and wrist and provides idealized, sex- and age-specific images of skeletal development. New to this revised second edition is a description and user manual for Bone Age for iPad®, iPhone® and iPod touch®, which can be purchased and used separately from this book. The App can be easily employed to calculate the deviation of the patient’s age from the normal range and to predict a possible growth delay. This easy-to-use atlas and the related App will be invaluable for radiologists, endocrinologists, and pediatricians and also relevant to forensic physicians.

Features

In the past, determination of bone maturity relied on visual evaluation of skeletal development in the hand and wrist, most commonly using the Greulich and Pyle atlas. The Gilsanz and Ratib digital atlas takes advantage of digital imaging and provides a more effective and objective approach to assessment of skeletal maturity. The atlas integrates the key morphological features of ossification in the bones...[]

Contents


Fields of interest

Imaging / Radiology; Diagnostic Radiology; Endocrinology; Pediatrics

Target groups

Professional/practitioner

Type of publication

Professional book

Usually dispatched within 3 to 5 business days

2012. VII, 96 p. 77 illus. Softcover

$49.95
ISBN 978-3-642-23761-4

Functional Neuroradiology

Principles and Clinical Applications

Functional Neuroradiology: Principles and Clinical Applications, is a follow-up to Faro and Mohamed’s groundbreaking work, Functional (BOLD) MRI: Basic Principles and Clinical Applications. This new 49 chapter textbook is comprehensive and offers a complete introduction to the state-of-the-art functional imaging in Neuroradiology, including the physical principles and clinical applications of Diffusion, Perfusion, Permeability, MR spectroscopy, Positron Emission Tomography, BOLD fMRI and Diffusion Tensor Imaging. With chapters written by internationally distinguished neuroradiologists, neurologists, psychiatrists, cognitive neuroscientists, and physicists, Functional Neuroradiology is divided into 9 major sections, including: Physical principles of all key functional techniques, Lesion characterization using Diffusion, Perfusion, Permeability, MR spectroscopy, and Positron Emission Tomography, an overview of BOLD fMRI physical principles and key concepts, including scanning methodologies...[]

Features

Functional Neuroradiology: Principles and Clinical Applications, is a follow-up to Faro and Mohamed’s groundbreaking work, Functional (BOLD) MRI: Basic Principles and Clinical Applications. This new 49 chapter textbook is comprehensive and offers a complete introduction to the state-of-the-art functional imaging in Neuroradiology, including the physical principles and clinical applications...[]

Contents


Fields of interest

Imaging / Radiology; Diagnostic Radiology; Neurosciences

Target groups

Professional/practitioner

Type of publication

Professional book

Title available online only.

2012. XXI, 1029 p. 897 illus., 476 in color. With online files/update. Hardcover

$249.00
Handbook of Headache

Practical Management

Headache disorders are among the most common disorders of the nervous system. They are pandemic and, in many cases, they are recurrent and can accompany the patient for the whole life. These disorders impose a substantial burden on headache sufferers, on their families and on society: the individual impact is measured by the frequency and severity of attacks, while the societal burden is measured in terms of loss of activity at work and school as well as of costs for the health system. As a matter of facts, headaches are ranked in the top ten, and maybe the top five, causes of disability worldwide: they are therefore extraordinarily common. Population-based studies have mostly focused on migraine, which, even if it is the most frequently studied headache disorder, is not the most common. Other types of headache, such as the more prevalent TTH and sub-types of the more disabling chronic daily headache, have so far received less attention and need to be better investigated. This book will provide a[...]

Features

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Contents


Fields of interest

Medicine (general); Emergency Medicine; Internal Medicine; Neurosciences

Target groups

Professional/practitioner

Type of publication

Handbook

Usually dispatched within 3 to 5 business days

2011. XXVI, 760 p. 26 illus. Hardcover

$279.00

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Practical Management

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Contents


Fields of interest

Medicine (general); Emergency Medicine; Internal Medicine; Neurosciences

Target groups

Professional/practitioner

Type of publication

Handbook

Online orders shipping within 2-3 days


$279.00

Handbook of Headache

Practical Management

This book describes the current status of the very rapidly developing field of high-field MR and examines the possibilities, challenges, and limitations of this fascinating technology. In the initial chapters, the basic technological background is explained in a non-technical way so as to promote understanding of the issues and concepts and avoid overwhelming the reader with excessive detail. Safety issues, methods, and contrast are then carefully considered. The final part of the book examines the diverse applications of high-field MR imaging in radiology, neuroscience, oncology, and other fields, with the aid of numerous high-quality illustrations. All chapters are written by leading experts who have taken great care to illustrate the potential and progress of the field in an informative and accessible manner. The book will appeal to all with a potential interest in the application of high-field MR imaging, including radiologists, neuroscientists, and oncologists.

Features

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Contents


Fields of interest

Imaging / Radiology; Diagnostic Radiology; Oncology

Target groups

Professional/practitioner

Type of publication

Contributed volume

Due: October 28, 2011

2012. X, 262 p. 179 illus., 99 in color. (Diagnostic Imaging) Hardcover

$239.00
ISBN 978-3-540-85087-8
Hypermobility of Joints

Hypermobility of Joints 4th Edition follows the same format as its successful predecessors. The aim of which was to provide an overview of hyperlaxity of joints and this edition follows that aim by describing the most recent research and new developments in biochemistry, as well as providing practical advice on clinical features and management. Hypermobility of Joints 4th Edition provides illustrative case histories, a review of hypermobility in the performing arts and sports and an outline of heritable hypermobility syndromes. This book is a valuable reference tool for a wide number of specialties, although it will particularly be of interest to rheumatologists, orthopedic surgeons and medical geneticists.

Features

Hypermobility of Joints 4th Edition follows the same format as its successful predecessors. The aim of which was to provide an overview of hyperlaxity of joints and this edition follows that aim by describing the most recent research and new developments in biochemistry, as well as providing practical advice on clinical features and management. Hypermobility of Joints 4th Edition provides illustrative case [...]
Neisseria meningitidis

Advanced Methods and Protocols

Neisseria meningitidis is a major causative agent, worldwide, of potentially life-threatening meningitis and septicemia, which carry with them a high mortality rate and permanent physical and neurological issues for survivors. Neisseria meningitidis: Advanced Methods and Protocols offers a collection of methods and protocols that reflect the development and refinement of several new technologies applied to the meningococcus as presented by expert researchers. Several of the chapters in this book describe methods that rely on the collection of complete sets of biological data, for example, using the genome to generate transcriptionomes, proteomes, and metabolomes. 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 tips on troubleshooting and avoiding known pitfalls. Authoritative and cutting-edge, Neisseria...[

Features

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Operative Dictations in General and Vascular Surgery

Operative Dictations in General and Vascular Surgery, Second Edition is intended to teach residents the principles of succinct and precise operative dictations for a wide spectrum of surgical procedures. Designed as a portable resource, the book provides typical dictations to guide the reader. Comprised of 226 procedures, this new edition comprises the majority of procedures commonly performed by general and vascular surgeons. For each procedure, a list of common indications is given. This list covers 95% of the situations in which a particular procedure will be used. A list of essential steps follows. These can be used to mentally rehearse the procedure before it is performed. The next heading, Note these technical variations, introduces a list that is intended to prompt the surgeon for particular things to note and dictate within the template. A list of possible complications that are typically associated with that particular surgical procedure follows. Finally, a template operative dictation [...]
Penetrating Trauma
A Practical Guide on Operative Technique and Peri-Operative Management

Surgery needs skill. Skill needs knowledge. Knowledge of tricks, moves, and tools. This book is about such knowledge. Expert authors have contributed technical pearls, gained by years of experience. The short “how-I-do-it” chapters offer the reader a quick and effective guide that will be invaluable when addressing any penetrating injury. The book is not intended to serve as a comprehensive volume of pathophysiology and management in trauma; rather the goal is to provide practical solutions on how to treat injuries surgically. It describes the steps that you must take when, in the middle of the night, confronted with devastating bleeding, you will have only one chance to save a life!

Contents
Prehospital care, diagnostic tools and resuscitation strategies.- Surgical strategies in Penetrating Trauma to Head, Face, and Neck.- Surgical Strategies in Penetrating Trauma to the Abdomen and Pelvis.- Surgical strategies in Penetrating Trauma and Orthopedic Injuries.- Peripheral Arterial Injuries.- Other topics.

Fields of interest
Traumatic Surgery; Plastic Surgery; Surgical Orthopedics; General Surgery; Emergency Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Due: November 28, 2011

100 Cases
As arrhythmias may be transient in nature and not seen during the shorter recording times of the standard ECG, ECG Holter monitoring allows the physician to make better informed decisions for the cardiac patient. The devices are worn by patients on an outpatient basis for days or weeks and can also be implanted subcutaneously. ECG Holter recordings are especially useful since they can be programmed individually for activation and specific tracing analysis. Designed for rapid study, this book contains 100 illustrative cases in ECG Holter monitoring. Each case consists of a tracing followed by a brief explanation of the findings. 100 Cases in ECG Holter is the perfect resource for busy physicians looking to optimize their skills at interpreting ECG Holter readings.

Contents
Case studies.- Conclusion.

Fields of interest
Cardiology; Internal Medicine

Target groups
Professional/practitioner

Type of publication
Professional book

Usually dispatched within 3 to 5 business days

2012. XVIII, 232 p. 80 illus. Softcover
$49.95

Perioperative Addiction
Clinical Management of the Addicted Patient

Perioperative Addiction addresses an issue that every anesthesiologist will encounter many times during the course of his or her career: the patient who arrives for operative care under the influence of legal or illegal drugs. The editors and contributors provide expert guidance on how to identify and manage the addicted patient, approaching the subject from the vantage points of the specific drug and of special patient populations. Features:

- Guidance for spotting and managing addicted patients.- All common and important drugs of addiction, from opioids, cocaine, club drugs, and alcohol, to tobacco, marijuana, nitrous oxide, inhalants, and propofol.- Special populations, including pregnant women, pain patients, adolescents, older patients, and healthcare professionals.- Fascinating overview of the long history of addiction.- Genetic basis of addiction, and the range of pharmacological treatments for addiction

Features
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Contents

Fields of interest
Anesthesiology; Surgery; Internal Medicine

Target groups
Professional/practitioner

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days

2012. XIV, 290 p. 53 illus., 25 in color. Hardcover
$99.00
ISBN 978-1-4614-0169-8
Prostate Biopsy Interpretation: An Illustrated Guide

This book covers all the practical issues related to the interpretation of prostatic biopsies in day-to-day practice, including: biopsy sampling and processing; the diagnosis of limited cancer; differentiation of prostate cancers from benign lesions and recognition of histologic variants; the recognition and clinical significance of “atypical” diagnoses and HGPIN; the identification of recently described entities; the contemporary approach to Gleason grading; the utility of immunohistochemical markers and emerging molecular markers; and the reporting of prostate biopsies. Algorithms, flow charts, and tables are used throughout to simulate the thought and decision-making process upon encountering common clinical scenarios during sign-out of prostate biopsy. The book is richly illustrated with carefully selected, high-quality color images and will appeal especially to practicing surgical pathologists as well as pathology residents and fellows in training.

Features
Prostate needle biopsy specimens account for an important portion of a surgical pathologist’s daily work. There is, however, a significant error rate when diagnosing prostate cancer in needle biopsies. Furthermore, the modified Gleason grading scheme is being only slowly adopted, and there is considerable variation in reporting. This book covers all the practical issues related to the interpretation [...] Contents
Anatomy and Normal Histology of the Prostate Pertinent to Biopsy Practice. - Prostate Needle Biopsy Sampling Techniques: Impact on Pathological Diagnosis. - Diagnosis of Limited Cancer in Prostate Biopsy. - Immunohistochemistry in Prostate Biopsy Evaluation. - Contemporary Approach to Gleason Grading of Prostate Cancer. - Histologic Variants of Prostate Carcinoma. - Benign Mimics of Prostate Carcinoma. - Atypical Cribriform Lesions in Prostate Biopsy: Relationship to Prostate Carcinoma, Differential Diagnosis, and Emerging Concepts of Intraductal Carcinoma of the Prostate. - High-Grade Prostatic [...] Fields of interest
Pathology; Urology / Andrology

Target groups
Professional/practitioner

Type of publication
Atlas

Due: November 28, 2011

2012. XVI, 185 p. 199 illus., in color. Hardcover

$139.00
ISBN 978-3-642-21368-7

Review of Rheumatology

Review of Rheumatology is a synopsis of key areas of interest, making for an indispensable quick reference work. The material included reviews basic musculoskeletal anatomy, immunology, genetics, major rheumatic diseases and their pathophysiology, and major rheumatic therapeutics, as well as a unique chapter on the emerging autoinflammatory diseases. Review of Rheumatology is a clear and concise review book written in an outline format. This book is a quick and easily accessible reference not only for those preparing for the rheumatology board exams, but it also serves as a succinct reference for all health care workers interested in the field of rheumatology.

Features
Review of Rheumatology is a synopsis of key areas of interest, making for an indispensable quick reference work. The material included reviews basic musculoskeletal anatomy, immunology, genetics, major rheumatic diseases and their pathophysiology, and major rheumatic therapeutics, as well as a unique chapter on the emerging autoinflammatory diseases. Review of Rheumatology is a clear and [...] Contents
Rheumatology; Internal Medicine; Physiotherapy; Rehabilitation Medicine

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIII, 729 p. 180 illus., 104 in color. Hardcover

$89.95
ISBN 978-1-84882-092-0

Rheumatoid Arthritis and Proteus

Rheumatoid Arthritis and Proteus explores the idea that Rheumatoid arthritis is caused by a urinary tract infection as a result of Proteus bacteria. Rheumatoid arthritis is a severe, painful and crippling disease affecting millions of people throughout the world, especially women. Genetic studies over the last 30 years have shown that individuals who possess the white cell blood groups HLA-DR1/4 carry a susceptibility sequence and are more likely to develop the disease. This book uses the methods of Sir Karl Popper, the philosopher of science, to present 12 “Popper sequences” which have been identified to indicate that Proteus is the causative agent of Rheumatoid Arthritis. Rheumatoid Arthritis and Proteus proposes that Anti-Proteus therapies should be followed as early as possible to prevent the crippling and irreversible joint deformities that occur in Rheumatoid Arthritis.

Features
Rheumatoid Arthritis and Proteus explores the idea that Rheumatoid arthritis is caused by a urinary tract infection as a result of Proteus bacteria. Rheumatoid arthritis is a severe, painful and crippling disease affecting millions of people throughout the world, especially women. Genetic studies over the last 30 years have shown that individuals who possess the white cell blood groups HLA-DR1/4 carry [...] Contents
Scope and Distribution of the RA Problem. - History of the Attempts to Find the Cause of RA. - HLA-DR1/4 and Antibodies to Proteus in London. - Antibodies to Proteus in Irish patients with rheumatoid arthritis. - Antibodies to Proteus in rheumatoid arthritis patients from Bermuda and from Hertfordshire in England. - Antibodies to Proteus in Irish patients with rheumatoid arthritis. - Antibodies to Proteus in rheumatoid arthritis patients from Bermuda and from Hertfordshire in England. - Antibodies to Proteus in Irish patients with rheumatoid arthritis. - Antibodies to Proteus in rheumatoid arthritis patients from Bermuda and from Hertfordshire in England. - Antibodies to Proteus and Proteus in rheumatoid arthritis patients following a lactovegetarian diet. - Antibodies to [...] Fields of interest
Rheumatology

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. X, 233 p. 53 illus., 2 in color. Softcover

$139.00
Scrotal Pathology

Scrotal Pathology is a comprehensive practical guide to the management of patients who present with scrotal disorders. Introductory chapters consider imaging instrumentation, clinical evaluation, and clinical and imaging anatomy. The full range of disorders is then discussed in individual chapters organized according to clinical presentation. All clinical and imaging aspects are covered in depth, with full description of symptoms and explanation of the value of different clinical tests and imaging modalities. In addition, underlying histopathological features are presented and correlated with imaging features in order to clarify their pathological basis. For each disorder, therapeutic strategies are discussed and appraised. Adults and children are considered separately whenever necessary, bearing in mind that they often present essentially different scrotal pathology. The many images are all of high quality and were obtained using high-end equipment.

Features
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Stress and Cardiovascular Disease

The main aim of this book is to evaluate the concept of stress and provide tools for physicians to identify patients who might benefit from stress management. This will incorporate a detailed description of the physiological and pathophysiological consequences of acute and chronic stress that might lead to cardiovascular disease. The book will aim to critically evaluate interventional research (behavioural and other therapies) and provide evidence based recommendations on how to manage stress in the cardiovascular patient. Our intentions are to define and highlight stress as an etiological factor for cardiovascular disease, and to describe an evidence-based "tool box" that physicians may use to identify and manage patients in whom stress may be an important contributing factor for their disease and their risk of suffering cardiovascular complications.

Features
There is a growing trend for the incorporation of stress management into cardiac rehabilitation programs and into preventive cardiology. However, stress is multifaceted, often misunderstood, and requires as much scientific scrutiny as other pathological processes relevant to cardiology. The quality of research into stress management is variable, and care is required in identifying effective evidence-based [...]"
Textbook of Clinical Pediatrics

The second edition of the textbook is planned to become a MRW-textbook. It will be written by 389 eminent pediatricians and scientists from leading university hospitals and health centers in North America, Europe, Asia and Australia. Written with more than 425 chapters, the book will encompass virtually all pediatric subspecialties, covering every pediatric disease and organ system. It’s strong clinical focus with a problem based approach will help practicing pediatricians, residents, medical students as well as family practitioners to manage sick children in a practical way, based on scientific evidence. Thus, it will become a valuable reference and resource for all health care practitioners dealing with pediatric patients.

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Contents
Pediatrics; Internal Medicine; Nephrology; Surgery; Medicine (general); Nursing

Target groups
Professional/practitioner

Type of publication
Handbook

Usually dispatched within 3 to 5 business days
November 24, 2011

2012, 4600 p. 990 illus. In 6 volumes, not available separately. Hardcover

$549.00
ISBN 978-3-642-02201-2

Totally Implantable Venous Access Devices

Since their first application in 1982, Totally Implantable Venous Access Devices (TIVADs) have become increasingly important in the clinical practice, as more intensive chemotherapy and parenteral treatments have come into use. At this time, there is objective evidence that TIVADs are a safe, effective strategy for long-term venous access; they play a significant role throughout the management of the oncology patient, as they are needed in the initial phases for active treatments as well as in the last stages for palliative measures, making possible repeated administration of chemotherapy vesicant agents, nutrients, antibiotics, analgesics, and blood products. According to a number of prospective studies, use of TIVADs is associated with a significant complication rate (10% to 25% of all patients). Evidence-based data support that most complications are directly related to inappropriate technique of placement and/or nursing care, sometimes leading to TIVAD loss, significant morbidity, increased [...] Features
Since their first application in 1982, Totally Implantable Venous Access Devices (TIVADs) have become increasingly important in the clinical practice, as more intensive chemotherapy and parenteral treatments have come into use. At this time, there is objective evidence that TIVADs are a safe, effective strategy for long-term venous access; they play a significant role throughout the management of the [...] Contents
Surgery; Internal Medicine; Imaging / Radiology

Target groups
Professional/practitioner

Type of publication
Contributed volume

Due: January 28, 2012

2012. 260 p. 30 illus. in color. Hardcover

$189.00

Transfusion Medicine

Case Studies and Clinical Management

The purpose of this clinical transfusion medicine handbook is to take the reader through a variety of clinical problems, each one likely to be encountered in a busy teaching hospital. The reader follows the stream of clinical and laboratory data, developing the ability for critical thinking which leads him/her to diagnosis and appropriate management. The book is a lively illustration of various clinical problems in transfusion medicine, including immune complications, microbiological problems, blood component use, apheresis techniques, and management of complex situations such as multiple trauma, sickle cell crisis, and organ transplantation. Each case is carefully chosen and presented, with incorporated questions, leading the reader towards solution of the problem in a logical and didactic manner.

Features
Transfusion Medicine: Case Studies and Clinical Management is an excellent way to illustrate current thinking about how to manage common transfusion medicine problems. The case studies and their accompanying commentaries provide a practical and enjoyable way to learn. Transfusion medicine emerged as a clinical discipline in its own right comparatively recently, having historically been a laboratory-based [...] Contents
Errare humanum est.- Send another sample, please.- Mosquito in the bag.- An enigmatic haploptote.- An unwanted passenger.- Persistent anemia after haemopoietic cell Transplantation.- Acute reaction to red cells: what lies beneath?- Dial M for haeMolysis.- Rash and hypotension during transfusion.- Breathless.- Regular transfusions, iron, and teenage pregnancy.- Woman with slurred speech and thrombo-cytopenia.- Strong tea or Coca Cola.- With a little help from friends.- Rare blood.- Who’s the donor?- The matchmaker.- The bruised newborn.- Learning from refusal.- The apheresis donor.- [...] Fields of interest
Hematology; Blood Transfusion Medicine; Medicine (general)

Target groups
Professional/practitioner

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XIX, 111 p. 29 illus., 25 in color. Softcover

$39.95
ISBN 978-1-4471-2181-7
Challenges and Opportunities in Agrometeorology

The global food security and sustainable agriculture are the key challenges before the scientific community in the present era of enhanced climate variability, rapidly rising population and dwindling resources. No part of the world is immune from meteorological extremes of one sort or another posing threat to the food security. Agrometeorology has to make most efficient use of the opportunities available in achieving the objectives of enhancing productivity and maintenance of sustainability. Increased awareness and technological advancement have provided opportunities to develop efficient agrometeorological services that can help cope with risks. These include improvements in weather forecasting, better understanding of the monsoon variability and crop-weather relationships, advances in operational agrometeorology and agrometeorological information systems, adaptation strategies to climate change and improved risk evaluation and management. This book based on an International Workshop held in New...
Emilie du Châtelet between Leibniz and Newton

Emilie du Châtelet was one of the most influential woman philosophers of the Enlightenment. Her writings on natural philosophy, physics, and mechanics had a decisive impact on important scientific debates of the 18th century. Particularly, she took an innovative and outstanding position in the controversy between Newton and Leibniz, one of the fundamental scientific discourses of that time. The contributions in this volume focus on this "Leibnizian turn". They analyze the nature and motivation of Emilie du Châtelet's synthesis of Newtonian and Leibnizian philosophy. Apart from the Institutions Physiques they deal with Emilie du Châtelet's annotated translation of Isaac Newton's Principia. The chapters presented here collectively demonstrate that her work was an essential contribution to the mediation between empiricist and rationalist positions in the history of science.

Features
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Contents

Fields of interest
History of Philosophy; History and Philosophical Foundations of Physics; Cultural Heritage

Target groups
Research

Type of publication
Contributed volume

Encyclopedia of Global Justice

The multi-volume Encyclopedia of Global Justice, to be published by Springer, along with Springer's book series, Studies in Global Justice, is a major publication venture toward a comprehensive coverage of this timely topic. The Encyclopedia is an international, interdisciplinary, and collaborative project, spanning all the relevant areas of scholarship related to issues of global justice, and edited and advised by leading scholars from around the world. The wide-ranging entries present the latest ideas on this complex subject by authors who are at the cutting edge of inquiry. The Encyclopedia will set the tone and direction of this increasingly important area of scholarship for years to come. The entries will number around a thousand and will consist of essays of 300 to 3000 words. The inclusion and length of entries are based on their significance to the topic of global justice, regardless of their importance in other areas.

Features
The multi-volume Encyclopedia of Global Justice, to be published by Springer, along with Springer's book series, Studies in Global Justice, is a major publication venture toward a comprehensive coverage of this timely topic. The Encyclopedia is an international, interdisciplinary, and collaborative project, spanning all the relevant areas of scholarship related to issues of global justice, [...] 

Contents

Fields of interest
Political Philosophy; Development Economics; Philosophy of Law; Ethics; Political Science, general

Target groups
Research

Type of publication
Encyclopaedia

Usually dispatched within 3 to 5 business days

2011. 1200 p. In 2 volumes, not available separately. Hardcover

$679.00

Evolution 2.0

Implications of Darwinism in Philosophy and the Social and Natural Sciences

These essays by leading philosophers and scientists focus on recent ideas at the forefront of modern Darwinism, showcasing and exploring the challenges they raise as well as open problems. This interdisciplinary volume is unique in that it addresses the key notions of evolutionary theory in approaches to the mind, in the philosophy of biology, in the social sciences and humanities; furthermore it considers recent challenges to, and extensions of, Neo-Darwinism. The essays demonstrate that Darwinism is an evolving paradigm, with a sphere of influence far greater than even Darwin is likely to have imagined when he published 'On the Origin of Species' in 1859.

Features
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Contents

Fields of interest
Philosophy of Biology; Evolutionary Biology; Sociology, general; Biological Psychology

Target groups
Lower undergraduate

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII, 261 p. 17 illus. (The Frontiers Collection) Hardcover

$69.95
ISBN 978-3-642-20495-1
Founding Psychoanalysis Phenomenologically
Phenomenological Theory of Subjectivity and the Psychoanalytic Experience

The present anthology seeks to give an overview of the different approaches to establish a relation between phenomenology and psychoanalysis, primarily from the viewpoint of current phenomenological research. Already during the lifetimes of the two disciplines’ founders, Edmund Husserl (1859–1938) and Sigmund Freud (1856–1939), phenomenological and phenomenologically inspired authors were advancing psychoanalytic theses. For both traditions, the Second World War presented a painful and devastating disruption of their development and mutual exchange. During the postwar period, phenomenologists, especially in France, revisited psychoanalytic topics. Thus, in the so-called second generation of phenomenology there developed an intensive reception of the psychoanalytic tradition, one that finds its expression even today in current hermeneutic, postmodern and poststructuralist conceptions. But also in more recent phenomenological research we find projects concentrated systematically on psychoanalysis.

Features
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Contents

Fields of interest
Philosophy (general); Psychology (general)

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$189.00
ISBN 978-94-007-2362-7

Groundwork in the Theory of Argumentation
Selected Papers of J. Anthony Blair

J. Anthony Blair is a prominent international figure in argumentation studies. He is among the originators of informal logic, an author of textbooks on the informal logic approach to argument analysis and evaluation and on critical thinking, and a founder and editor of the journal Informal Logic. Blair is widely recognized among the leaders in the field for contributing formative ideas to the argumentation literature of the last few decades. This selection of key works provides insights into the history of the field of argumentation theory and various related disciplines. It illuminates the central debates and presents core ideas in four main areas: Critical Thinking, Informal Logic, Argument Theory and Logic, Dialectic and Rhetoric.

Features
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Contents

Fields of interest
Logic; Comparative Linguistics; Literacy

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XXI, 355 p. 23 illus. (Studies in German Idealism, Vol. 21) Hardcover

$189.00
ISBN 978-94-007-2450-1

Moses Mendelssohn’s Metaphysics and Aesthetics

This book presents an extended dialogue in essay form between specialists in the work of Moses Mendelssohn, and experts in important trends in related late-seventeenth and eighteenth century thought. The first group of contributors explores themes in Mendelssohn’s metaphysics and aesthetics, presenting both their internal argumentative coherence and their historical context. The second outlines the context of Mendelssohn’s views on specific topics, and describes his contribution to the discussion of them. The essays are organized in four sections. The first pairs two essays on Mendelssohn’s theory of language and writing. The second section offers three essays addressing a number of topics in Mathematics and philosophy in Mendelssohn. A group of eight essays follows, dealing with Metaphysics in a historical context. The fourth section presents five essays discussing Mendelssohn’s Aesthetics in a historical context. Moses Mendelssohn’s Metaphysics and Aesthetics arises from a conference held in...

Features
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Contents

Fields of interest
History of Philosophy; Languages and Literature; Aesthetics; Metaphysics; Philosophy of Language

Target groups
Research

Type of publication
Contributed volume

Usually dispatched within 3 to 5 business days


$189.00
ISBN 978-94-007-2450-1
Philosophical Dimensions of Human Rights

Some Contemporary Views

This book presents a unique collection of the most relevant perspectives in contemporary human rights philosophy. Different intellectual traditions are brought together to explore some of the core postmodern issues challenging standard justifications. Widely accessible also to non experts, contributions aim at opening new perspectives on the state of the art of the philosophy of human rights. This makes this book particularly suitable to human rights experts as well as master and doctoral students. Further, while conceived in a uniform and homogeneous way, the book is internally organized around three central themes: an introduction to theories of rights and their relation to values; a set of contributions presenting some of the most influential contemporary strategies; and finally a number of articles evaluating those empirical challenges springing from the implementation of human rights. This specific set-up of the book provides readers with a stimulating presentation of a growing field.

Features

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  - Chapter II Philosophy and Human Rights: Contemporary Perspectives, David Reidy
  - Chapter III Reconsidering Realism on Rights, William E. Scheuerman
- PART II The Validity (es) of Human Rights
  - Chapter IV The Concept of Human Dignity and the Realistic Utopia of Human Rights: Jürgen Habermas
  - Chapter V The Justification of Human Rights and...

Fields of interest

- Philosophy of Law
- Political Science
- General Public International Law
- Political Philosophy
- Ethics

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days

December 28, 2011

2012, XXIX, 319 p. 1 illus. Hardcover

$189.00
ISBN 978-94-007-2375-7

Philosophy of Behavioral Biology

This volume provides a broad overview of issues in the philosophy of behavioral biology, covering four main themes: genetic, developmental, evolutionary, and neurobiological explanations of behavior. It is both interdisciplinary and empirically informed in its approach, addressing philosophical issues that arise from recent scientific findings in biological research on human and non-human animal behavior. Accordingly, it includes papers by professional philosophers and philosophers of science, as well as practicing scientists. Much of the work in this volume builds on presentations given at the international conference, "Biological Explanations of Behavior: Philosophical Perspectives", held in 2008 at the Leibniz Universität Hannover in Germany. The volume is intended to be of interest to a broad range of audiences, which includes philosophers (e.g., philosophers of mind, philosophers of biology, and metaethicists), as well as practicing scientists, such as biologists or psychologists whose

Features

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      - Th A.C. Reydon, Leibniz Universität Hannover, Germany
    - Part II: Genetic Explanations of Behavior
      - 2. Knowledge for What? Monist, Pluralist, Pragmatist Approaches to the Sciences of Behavior, Helen Longino
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      - 4. Genetic Traits and Causal Explanation, Robert Northcott
    - Part IV: Evolutionary Explanations of Behavior
      - 5. From Cell-Surface Receptors to Higher Learning: A Whole World of Experience, Karola Stotz and Colin Allen
      - 6. ...

Fields of interest

- Philosophy of Biology
- Philosophy of Science
- Philosophy of Social Science
- Philosophy of Human Rights
- Philosophy of Psychology


Online orders shipping within 2-3 days


$140.00

25th Texas Symposium on Relativistic Astrophysics (Texas 2010)

The proceedings will be of interest to scientists, researchers, and graduate students in several areas of Relativistic Astrophysics, including Cosmology, Astroparticle Physics, High Energy Astrophysics and Gravitational Wave Physics. Started in 1963 in Dallas, the Texas Symposia on Relativistic Astrophysics have become one of the leading international conference series in the field of Relativity, Cosmology and Gravitation. These Proceedings contain invited review talks given by leading experts on the occasion of the 25th Texas Symposium in Heidelberg, Germany, December 2010. Topics covered include Dark Energy, Tests of General Relativity, Gravitational Waves, Progress in High Energy Astrophysics, Cosmic Magnetic and Radiation Fields. The volume will be of particular interest for students and researchers in all fields connected to Relativistic Astrophysics.

Fields of interest

- Astronomy
- Astrophysics
- Cosmology
- Cosmology
- Astrophysics
- Astroparticle Physics
- High Energy Astrophysics
- Gravitational Wave Physics

Target groups

Professional/practitioner

Type of publication

Proceedings


$140.00
3rd International Workshop on Nucleon Structure at Large Bjorken X

These proceedings will be of interest to researchers in nuclear and high-energy physics and graduate students. This workshop focused on the latest developments in the study of the quark structure of the nucleon at large Bjorken x, usually called the valence region. Its main purpose was to bring together experts for an in-depth and critical review of recent advancements in this field of research. This was particularly important in view of the upcoming energy upgrade of Jefferson Lab whose research program will continue to further our understanding of the inner structure of the nucleon.

Features
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Bell’s Theorem and Quantum Realism
Reassessment in Light of the Schrödinger Paradox

Quantum theory presents a strange picture of the world, offering no real account of physical properties apart from observation. Niels Bohr felt that this reflected a core truth of nature: “There is no quantum world. There is only an abstract mathematical description.” Among the most significant developments since Bohr’s day has been the theorem of John S. Bell. It is important to consider whether Bell’s analysis supports such a denial of microrealism. In this book, we evaluate the situation in terms of an early work of Erwin Schrödinger. Doing so, we see how Bell’s theorem is conceptually related to the Conway and Kochen Free Will theorem and also to all the major anti-realism efforts. It is easy to show that none of these analyses imply the impossibility of objective realism. We find that Schrödinger’s work leads to the derivation of a new series of theoretical proofs and potential experiments, each involving “entanglement,” the link between particles in some quantum systems.

Features
Quantum theory presents a strange picture of the world, offering no real account of physical properties apart from observation. Niels Bohr felt that this reflected a core truth of nature: “There is no quantum world. There is only an abstract mathematical description.” Among the most significant developments since Bohr’s day has been the theorem of John S. Bell. It is important to consider whether Bell’s […]

Fields of interest
Quantum Physics; Atomic, Molecular, Optical and Plasma Physics; History and Philosophical Foundations of Physics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

Charm Production in Deep Inelastic Scattering
Mellin Moments of Heavy Flavor Contributions to F2(x,Q^2) at NNLO

The production of heavy quarks in high-energy experiments offers a rich field to study, both experimentally and theoretically. Due to the additional quark mass, the description of these processes in the framework of perturbative QCD is much more demanding than it is for those involving only massless partons. In the last two decades, a large amount of precision data has been collected by the deep inelastic HERA experiment. In order to make full use of these data, a more precise theoretical description of charm quark production in deep inelastic scattering is needed. This work deals with the first calculation of fixed moments of the NNLO heavy flavor corrections to the proton structure function F2 in the limit of a small charm-quark mass. The correct treatment of these terms will allow not only a more precise analysis of the HERA data, but starting from there also a more precise determination of the parton distribution functions and the strong coupling constant, which is an essential input for LHC[…]

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Contents
Deeply Inelastic Scattering. - Heavy Quark Production in DIS. - Renormalization of Composite Operator Matrix Elements. - Representation in Different Renormalization Schemes. - Calculation of the Massive Operator Matrix Elements up to O(αs^2 ε). - Calculation of Moments at O(αs^3). - Heavy Flavor Corrections to Polarized Deep-Inelastic Scattering. - Heavy Flavor Contributions to Transversity. - First Steps Towards a Calculation of Aij(3) for all Moments. - Conclusions. - Feynman Rules. - Special Functions. - Finite and Infinite Sums. - Moments of the Fermionic Contributions to the 3-Loop[…]

Fields of interest
Elementary Particles, Quantum Field Theory; Particle and Nuclear Physics; Mathematical Methods in Physics

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

Daylight Science and Daylighting Technology

Sunlight profoundly influences the Earth’s atmosphere and biosphere. Nature fuels the evolution of all living things, their visual systems, and the manner in which they adapt, accommodate, and habituate. Sunlight exposure and freedom from visual discomfort while undertaking visual tasks are now equally prioritized. Therefore, in order to assure optimal environmental quality, daylighting technology must[…]

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Contents
Preface. - Introduction. - Short historical review of daylight utilisation by living creatures. - Daylight photometry: history, principles and empirical development. - Propagation of light in the atmospheric environment. - Sky luminance characteristics. - Possibilities to simulate year-round changes of the local daylight climate. - Fundamental principles for daylight calculation methods. - Analytical calculation methods and tools for the design of un-glazed apertures. - Daylight methods and tools to design glazed windows and skylights. - Modelling daylight distribution in complex architectural[…]

Fields of interest
Applied Optics, Optoelectronics, Optical Devices; Renewable and Green Energy; Interior Architecture; Environmental Engineering / Biotechnology

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days

2012. XII. 241 p. 22 illus. (Springer Theses) Hardcover

$129.00
ISBN 978-3-642-23285-5

2012. XII. 341 p. 116 illus., 38 in color. Hardcover

$169.00
Dijet Angular Distributions in Proton-Proton Collisions

At $\sqrt{s} = 7$ TeV and $\sqrt{s} = 14$ TeV

This thesis is based on the first data from the Large Hadron Collider (LHC) at CERN. Its theme can be described as the classical Rutherford scattering experiment adapted to the LHC: measurement of scattering angles to search for new physics and substructure. At the LHC, colliding quarks and gluons exit the proton collisions as collimated particle showers, or jets. The thesis presents studies of the scattering angles of these jets. It includes a phenomenological study at the LHC design energy of 14 TeV, where a model of so-called large extra dimensions is used as a benchmark process for the sensitivity to new physics. The experimental result is the first measurement, made in 2010, by ATLAS, operating at the LHC start-up energy of 7 TeV. The result is compatible with the Standard Model and demonstrates how well the physics and the apparatus are understood. The first data is a tiny fraction of what will be accumulated in the coming years, and this study has set the stage for performing these[...]

Features
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**Fundamental Aspects of Plasma Chemical Physics**

Thermodynamics

Fundamental Aspects of Plasma Chemical Physics - Thermodynamics develops basic and advanced concepts of plasma thermodynamics from both classical and statistical points of view. After a refreshment of classical thermodynamics applied to the dissociation and ionization regimes, the book invites the reader to discover the role of electronic excitation in affecting the properties of plasmas, a topic often overlooked by the thermal plasma community. Particular attention is devoted to the problem of the divergence of the partition function of atomic species and the state-to-state approach for calculating the partition function of diatomic and polyatomic molecules. The limit of ideal gas approximation is also discussed, by introducing Debye-Hückel and virial corrections. Throughout the book, worked examples are given in order to clarify concepts and mathematical approaches. This book is a first of a series of three books to be published by the authors on fundamental aspects of plasma chemical physics. The [...]**

**Features**

Fundamental Aspects of Plasma Chemical Physics - Thermodynamics develops basic and advanced concepts of plasma thermodynamics from both classical and statistical points of view. After a refreshment of classical thermodynamics applied to the dissociation and ionization regimes, the book invites the reader to discover the role of electronic excitation in affecting the properties of plasmas, a [...]**

**Contents**


**Fields of interest**

Plasma Physics; Physical Chemistry; Thermodynamics; Statistical Physics, Dynamical Systems and Complexity

**Target groups**

Research

**Type of publication**

Monograph

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


$129.00


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**Fundamental Questions of Practical Cosmology**

**Exploring the Realm of Galaxies**

This book guides readers (astronomers, physicists, and university students) through central questions of Practical Cosmology, a term used by the late Allan Sandage to denote the modern scientific endeavor to find the cosmological model best describing the universe of galaxies, its geometry, size, age, and matter composition. The authors draw on their personal experience in astrophysics and cosmology to explain key concepts of cosmology, both observational and theoretical, and to highlight several items which give cosmology its special character. These highlighted items are: Ideosyncratic features of the "cosmic laboratory", Malmaquist bias in the determination of cosmic distances, Theory of gravitation as a cornerstone of cosmological models, Crucial tests for checking the reality of space expansion, Methods of analyzing the structures of the universe as mapped by galaxies, Usefulness of fractals as a model to describe the large-scale structure and new cosmological physics inherent in the Friedmann [...]

**Features**

This book guides readers (astronomers, physicists, and university students) through central questions of Practical Cosmology, a term used by the late Allan Sandage to denote the modern scientific endeavor to find the cosmological model best describing the universe of galaxies, its geometry, size, age, and matter composition. The authors draw on their personal experience in astrophysics and cosmology to [...]**

**Contents**

Chapter 1 The golden age of cosmological physics. - Chapter 2 Distance measurement and cosmography. - Chapter 3 Cosmic distances and selection biases. - Chapter 4 Cosmological redshift and the distance scale. - Chapter 5 Gravitational physics for cosmic scales. - Chapter 6 Predictions of gravity theories. - Chapter 7 The Friedmann model. - Chapter 8 Classical observational tests of world models. - Chapter 9 Constructing universes: a gallery of ideas. - Chapter 10 Large-scale structure: methods of analysis. - Chapter 11 The inhomogeneous galaxy universe: observational results. - Chapter 12 [...]

**Fields of interest**

Extraterrestrial Physics; Space Sciences; Popular Science in Astronomy; Aerospace Technology and Astronautics; Planetology

**Target groups**

Popular/general

**Type of publication**

Monograph

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

2012. XVI, 332 p. 46 illus. (Astronomers’ Universe) Softcover

$39.95


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**Grappling with Gravity**

**How Will Life Adapt to Living in Space?**

Grappling with Gravity explores the physiological changes that will occur in humans and the plants and animals that accompany humans as we move to new worlds, be it to a colony in the emptiness of space or settlements on the Moon, Mars, or other moons or planets. This book focuses on the biomedical aspects, while not ignoring other life-changing influences of space living. For example, what happens to people physiologically in the microgravity of space, where weight and the direction “up” become meaningless? Adapting to microgravity represents the greatest environmental challenge that life will have encountered since our ancestors moved from the seas to solid Earth. Away from Earth the human body will begin almost immediately to adapt and change, to be able to function in these strange environments. As a person adapts in space he or she will become less fit to live on Earth.

**Features**

Grappling with Gravity explores the physiological changes that will occur in humans and the plants and animals that accompany humans as we move to new worlds, whether it be to a colony in the emptiness of space or settlements on the moon, Mars, or other moons or planets. This book focuses on the biomedical aspects, while not ignoring other life-changing influences of space living. For example, what [...]**

**Contents**


**Fields of interest**

Extraterrestrial Physics; Space Sciences; Popular Science in Astronomy; Aerospace Technology and Astronautics; Planetology

**Target groups**

Popular/general

**Type of publication**

Popular science

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

2012. XI, 271 p. 113 illus., 102 in color. With online files/ update. (Astronomers’ Universe) Softcover

$39.95

Handbook of Particle Detection and Imaging

The handbook centers on detection techniques in the field of particle physics, medical imaging and related subjects. It is structured into three parts. The first one is dealing with basic ideas of particle detectors, followed by applications of these devices in high energy physics and other fields. In the last part the large field of medical imaging using similar detection techniques is described. The different chapters of the book are written by world experts in their field. Clear instructions on the detection techniques and principles in terms of relevant operation parameters for scientists and graduate students are given. Detailed tables and diagrams will make this a very useful handbook for the application of these techniques in many different fields like physics, medicine, biology and other areas of natural science.

Features
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Olfaction and Electronic Nose

Proceedings of the 14th International Symposium on Olfaction and Electronic Nose

This conference proceedings would be of interest to academia, industry, research labs, biotechnology, nanotechnology, sensors related industries. This conference brought together experts from various disciplines to discuss how to produce electronic olfaction systems that either mimic nature or rely on novel concepts to sensing chemicals in complex odor environments. Applications of these devices are found in medicine, safety and quality control.

Features

This conference proceedings would be of interest to academia, industry, research labs, biotechnology, nanotechnology, sensors related industries. This conference brought together experts from various disciplines to discuss how to produce electronic olfaction systems that either mimic nature or rely on novel concepts to sensing chemicals in complex odor environments. Applications of these devices are found in medicine, safety and quality control.

Fields of interest

Biophysics and Biological Physics; Medical and Radiation Physics; Nanotechnology; Monitoring / Environmental Analysis

Type of publication

Proceedings

Open Quantum Systems

An Introduction

In this volume the fundamental theory of open quantum systems is revised in the light of modern developments in the field. A unified approach to the quantum evolution of open systems is presented by merging concepts and methods traditionally employed by different communities, such as quantum optics, condensed matter, chemical physics and mathematical physics. The mathematical structure and the general properties of the dynamical maps underlying open system dynamics are explained in detail. The microscopic derivation of dynamical equations, including both Markovian and non-Markovian evolutions, is also discussed. Because of the step-by-step explanations, this work is a useful reference to novices in this field. However, experienced researches can also benefit from the presentation of recent results.

Features

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Fields of interest

Biophysics and Biological Physics; Medical and Radiation Physics; Nanotechnology; Monitoring / Environmental Analysis

Target groups

Research

Type of publication

Monograph

Optical Properties of Nanostructured Metallic Systems

Studied with the Finite-Difference Time-Domain Method

The common belief is that light is completely reflected by metals. In reality they also exhibit an amazing property that is not so widely known: under some conditions light flows along a metallic surface as if it were glued to it. Physical phenomena related to these light waves, which are called Surface Plasmon Polaritons (SPP), have given rise to the research field of plasmonics. This thesis explores four interesting topics within plasmonics: extraordinary optical transmission, negative refractive index metamaterials, plasmonic devices for controlling SPPs, and field enhancement phenomena near metal nanoparticles.

Features

This conference proceedings would be of interest to academia, industry, research labs, biotechnology, nanotechnology, sensors related industries. This conference brought together experts from various disciplines to discuss how to produce electronic olfaction systems that either mimic nature or rely on novel concepts to sensing chemicals in complex odor environments. Applications of these devices are found in medicine, safety and quality control.

Fields of interest

Biophysics and Biological Physics; Medical and Radiation Physics; Nanotechnology; Monitoring / Environmental Analysis

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XX, 163 p. 9 illus., 9 in color. (Springer Theses) Hardcover

$129.00
ISBN 978-3-642-23084-4

Enhancement on Arrays of Gold Nano-Particles.


Fields of interest

Applied Optics, Optoelectronics, Optical Devices; Optical and Electronic Materials; Surface and Interface Science, Thin Films

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. X, 97 p. 3 illus. (SpringerBriefs in Physics) Softcover

$49.95
ISBN 978-3-642-23353-1

Plasmon Polaritons (SPP), have given rise to the research field of plasmonics. This thesis explores four interesting topics within plasmonics: extraordinary optical transmission, negative refractive index metamaterials, plasmonic devices for controlling SPPs, and field enhancement phenomena near metal nanoparticles.

Features

This conference proceedings would be of interest to academia, industry, research labs, biotechnology, nanotechnology, sensors related industries. This conference brought together experts from various disciplines to discuss how to produce electronic olfaction systems that either mimic nature or rely on novel concepts to sensing chemicals in complex odor environments. Applications of these devices are found in medicine, safety and quality control.

Fields of interest

Biophysics and Biological Physics; Medical and Radiation Physics; Nanotechnology; Monitoring / Environmental Analysis

Target groups

Research

Type of publication

Proceedings

Nanostructured Metallic Systems

Optical Properties of

S.G. Rodrigo, CSIC-Universidad de Zaragoza, Spain
Partially Ionized Plasmas Throughout the Cosmos - Proceedings of the 2010 Huntsville Workshop

These proceedings will be of interest to scientists in the fields of space physics, theoretical and observational astrophysics, plasma physics, and turbulence theory. Most of the ordinary matter in the Universe exists in a partially ionized plasma state. Examples found in this book include solar flares, the heliosphere, interstellar clouds, supernova shock waves and relativistic jets. The papers discuss various plasma processes in astrophysics such as relativistic flows, instabilities, turbulence, generation of magnetic fields, charged particle acceleration, and cosmic radiation.

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Fields of interest
Astrophysics, Astronomy and Cosmology; Plasma Physics

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days


$138.00

Particle Accelerators, Colliders, and the Story of High Energy Physics
Charming the Cosmic Snake

The Nordic mythological Cosmic Serpent, Ouroboros, is said to be coiled in the depths of the sea, surrounding the Earth with its tail in its mouth. In physics, this snake is a metaphor for the Universe, where the head, symbolizing the largest entity – the Cosmos – is one with the tail, symbolizing the smallest – the fundamental particle. Particle accelerators, colliders and detectors are built by physicists and engineers to uncover the nature of the Universe while discovering its building blocks. "Charming the Cosmic Snake" takes the readers through the science behind these experimental machines: the physics principles that each stage of the development of particle accelerators helped to reveal, and the particles they helped to discover. This book culminates with a description of the Large Hadron Collider, one of the world's largest and most complex machines operating in a 27 km circumference tunnel near Geneva. That collider may prove or disprove many of our basic theories about the nature of...[–]

Contents
The Expanding Universe of Particles.- The spark that broke the atom.- Nature's own accelerator.- Cracking the Nucleus - The Sprial Path to Nirvana.- Then it rained particles.- Rings of Earth - The Synchrotron.- The Next Generation - Supersynchrotrons.- Linear Accelerators, the straight story.- The Lotus Posture, Symmetry, Gauge Theories and the Standard Model.- Collision course.- The Snake Charmer - The Large Hadron Collider.- Index.

Fields of interest
Particle Acceleration and Detection, Beam Physics; Electrical Engineering; Particle and Nuclear Physics; Cosmology; Popular Science

Target groups
Popular/general

Type of publication
Undergraduate textbook

Usually dispatched within 3 to 5 business days

December 28, 2011

2012. IX, 222 p. 103 illus., 2 color. Hardcover

$69.95
ISBN 978-3-642-22063-0

Recent Progresses in Fluid Dynamics Research:
Proceeding of the Sixth International Conference on Fluid Mechanics

This proceedings would be of interest to researchers in Fluid Mechanics. The current volume of ICFM Proceedings includes 179 articles, covering topics in almost every scope of Fluid Dynamics and focuses on novel theoretical, numerical and experimental advances in flow transition and turbulence, aerodynamics and gas dynamics, hydrodynamics, environmental and industrial fluid mechanics, multiphase flows and flows in porous media, plasma and chemical flows as well as bio-fluid mechanics and micro-scale flows. Eight outstanding scientists in fluid mechanics fields are invited to deliver plenary frontiers lectures on internal waves, fluid-structure coupling, separated bubble, high speed boundary layer, streak breakdown, reactive flows, multiphase flow computation and sediment transport. It can be seen that aerospace engineering, environment/energy engineering, coastal/ocean engineering and biomedical engineering and other emerging interdisciplinary studies continue to represent the main trends of...[–]

Features
This proceedings would be of interest to researchers in Fluid Mechanics. The current volume of ICFM Proceedings includes 179 articles, covering topics in almost every scope of Fluid Dynamics and focuses on novel theoretical, numerical and experimental advances in flow transition and turbulence, aerodynamics and gas dynamics, hydrodynamics, environmental and industrial fluid mechanics, multiphase flows and...[–]

Fields of interest
Mechanics; Engineering Fluid Dynamics

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days


$238.00
ISBN 978-0-7354-0936-1
Self-Assembly of Nanostructures
The INFN Lectures, Vol. III
This is the third volume in a series of books on selected topics in Nanoscience and Technology based on lectures given at the well-known Istituto Nazionale di Fisica Nucleare (INFN) schools of the same name. The present set of notes stems in particular from the participation and dedication of prestigious lecturers, such as Nunzio Motta, Fulvia Patella, Alexandr Toropov, and Anna Sgarlata. All lectures have been carefully edited and reworked, taking into account extensive follow-up discussions. A tutorial lecture by Motta et al. presents the analysis of the Poly(3- hexylthiophene) self assembly on carbon nanotubes and discusses how the interaction between the two materials forms a new hybrid nanomaterial, with potential application to future solar cells technology. In their contribution, Patella et al. review quantum dots of III-V compounds, which offer appealing perspectives for more sophisticated applications in new generation devices such as single-photon emitters for nano-photronics and […]

Features
This is the third volume in a series of books on selected topics in Nanoscience and Technology based on lectures given at the well-known Istituto Nazionale di Fisica Nucleare (INFN) schools of the same name. The present set of notes stems in particular from the participation and dedication of prestigious lecturers, such as Nunzio Motta, Fulvia Patella, Alexandr Toropov, and Anna Sgarlata. All […]

Contents
Polymer Self-Assembly on Carbon Nanotubes

Fields of interest
Nanoscience and Technology; Nanotechnology; Nanochemistry; Nanotechnology and Microengineering; Surface and Interface Science; Thin Films

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days


$129.00

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Part A, Part B

The symposium covered a wide range of solid state physics including phase transitions, magnetism, transport properties, superconductivity, semiconductor physics, structure, dynamics and experimental techniques. Papers presented in symposium covered contemporary experimental and theoretical research in, nanomaterials, superconductors, magnetism, spintronics, novel materials, etc. The Proceedings are expected to be a useful reference tool for academic and industrial researchers and graduate students in physics, chemistry and material science.

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Fields of interest
Phase Transitions and Multiphase Systems; Condensed Matter Physics; Materials Science (general); Strongly Correlated Systems, Superconductivity

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days

2011. 1460 p. in 2 volumes, not available separately. (Materials Physics and Applications, Vol. 1349)

$386.00

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Star Clusters in the Era of Large Surveys
Proceedings of Symposium 5 of JENAM 2010

The symposium "Star Clusters in the Era of Large Surveys" was held in Lisbon on Sep 9-10 during the JENAM 2010. It served as a platform for discussing what and how recent, on-going and planned large-area ground-based and space-based surveys can contribute to producing a major leap in this research field, which has a strong European history. Scientific topics addressed included: cluster searches, clustered vs. isolated star formation, large-scale star formation, enrichment of the field population, structure, populations and evolution of the Milky Way, cluster dynamics (internal and within the Milky Way), variability of stars in clusters (from time-resolved surveys), analysis techniques for large samples and archiving. This proceedings book provides a snapshot of the ongoing discussion on the role of large surveys in star cluster research, and serves as a reference volume for the state-of-the art in the field.

Features
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Contents
Part I Recent, on-going and planned surveys. Cluster searches. Technical challenges.- Optical digital Galactic Plane surveys and star-cluster science.- Census of Milky Way Star Clusters from Infrared Surveys.- Time-resolved surveys of stellar clusters.- SDSS-III/APOGEE Detailed Abundances of Galactic Star Clusters.- Processing Data from Large Infrared Surveys.- Properties of Star Clusters Found and Investigated by Data from Large Surveys.- Developments of the open cluster database WEBDA.- Inferring stellar properties using colours, parallaxes and an HRD prior.- Astromatic software in[…]

Fields of interest
Astronomy, Astrophysics and Cosmology

Target groups
Research

Type of publication
Proceedings

Usually dispatched within 3 to 5 business days

2012. XIII, 266 p. 139 illus., 1 in color. (Astrophysics and Space Science Proceedings) Hardcover

$199.00
ISBN 978-3-642-22112-5
The 10th International Conference on X-Ray Microscopy

This conference proceedings would be of interest to researchers and students in universities, national laboratories, synchrotron and x-ray laser facilities, and industries in the technical fields. Fields of interest include high-resolution x-ray microscopy and imaging, magnetism and magnetic materials, biological and biomedical sciences, and materials and condensed matter sciences. The 10th International Conference on X-ray Microscopy (XRM 2010) was held on August 15–20, 2010 in Chicago, Illinois, USA. The latest advances in x-ray microscopy instrumentation and methods and their applications to biology, environmental, magnetism, and materials science were presented at XRM 2010.

Features
This conference proceedings would be of interest to researchers and students in universities, national laboratories, synchrotron and x-ray laser facilities, and industries in the technical fields. Fields of interest include high-resolution x-ray microscopy and imaging, magnetism and magnetic materials, biological and biomedical sciences, and materials and condensed matter sciences. The 10th International [...]
The Casual Sky Observer’s Guide

Stargazing with Binoculars and Small Telescopes

The Casual Sky Observer’s Pocket Guide offers an observing program for occasional amateur astronomers looking for some quick, fun astronomy adventures under the stars. In the real world, where time for observing is limited, the weather is seldom perfect, and expensive equipment is not an option, amateur astronomy may not be seen as a worthwhile activity. However, portable and quick-to-set-up instruments are available. A pair of binoculars or a small telescope fills the bill. And the way to make the most of these instruments is described in the Casual Sky Observer’s Pocket Guide. Not only does the book feature the best and brightest showpieces of the heavens; it also provides a great deal of physical and environmental data as well as lots of fascinating information and beautiful illustrations that provide a unique perspective on the many treasures within and beyond our home galaxy, the Milky Way—stars, star clusters, other galaxies, and nebulae, all within reach of binoculars or a small telescope.

Features

Here is an invaluable guide for those stargazers who are just starting out on their fascinating journey. Don’t know what sights to look for? How to locate them? What seasons are best for viewing what stars? All that and more is included in these pages. Plus lots of tips for what equipment to use and good observing techniques. Take this with you to your viewing site, along with your equipment. [...]
The Physics of Invisibility
A Story of Light and Deception

The ability to see is fundamental to our very existence. How true our perceptions really are depends upon many factors, and not least is our understanding of what light is and how it interacts with matter. It was said that the camera, the icon of light recording instruments, never lies, and in the day of the glass plate and celluloid roll-film this might well have been true. But in this modern era, with electronic cameras and computer software, it is often safe to assume that the camera always lies. The advertising images that bombard our every waking moment are manipulated in shape, profile, color, and form. In this new era, light can be manipulated with metamaterials to make one object look like another or even cause that objects to vanish, literally before our eyes; not only can the image we see be manipulated, but so can the light itself.

Features
Arthur C. Clarke famously wrote that, “any sufficiently advanced technology is indistinguishable from magic.” These words most certainly ring true with respect to invisibility cloaking devices. At work is the magic of science, of course. The technology to make an object simply disappear from view is now a reality. There is both great fear and great desire in the thought of invisibility. Indeed, for [...] 

Contents
Introduction. - Chapter 1: Of All Things Visible and Invisible. - Chapter 2: A Very Brief History of Light. - Chapter 3: Mirror Tricks, the Art of Cloaking and Seeing the Impossible. - Chapter 4: Maxwell’s Marvelous Waves. - Chapter 5: The Metamaterial Revolution. - Afterword. - Appendices. - Index.

Fields of interest
Classical Electrodynamics, Wave Phenomena; Popular Science; Optical and Electronic Materials

Target groups
Popular/general

Type of publication
Popular science

Usually dispatched within 3 to 5 business days

2012. XVII, 206 p. 135 illus., 55 in color. Softcover
$29.95
ISBN 978-1-4614-0615-0

The Schrödinger-Virasoro Algebra
Mathematical structure and dynamical Schrödinger symmetries

This monograph provides the first up-to-date and self-contained presentation of a recently discovered mathematical structure—the Schrödinger-Virasoro algebra. Just as Poincaré invariance or conformal (Virasoro) invariance play a key role in understanding, respectively, elementary particles and two-dimensional equilibrium statistical physics, this algebra of non-relativistic conformal symmetries may be expected to apply itself naturally to the study of some models of non-equilibrium statistical physics, or more specifically in the context of recent developments related to the non-relativistic AdS/CFT correspondence. The study of the structure of this infinite-dimensional Lie algebra touches upon topics as various as statistical physics, vertex algebras, Poisson geometry, integrable systems and supergeometry as well as representation theory, the cohomology of infinite-dimensional Lie algebras, and the spectral theory of Schrödinger operators.

Features
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Contents

Fields of interest
Statistical Physics, Dynamical Systems and Complexity; Artificial Intelligence (incl. Robotics); Complexity; Theory of Computation; Neurobiology

Target groups
Research

Usually dispatched within 3 to 5 business days

2012. VIII, 108 p. 30 illus. in color. (SpringerBriefs in Complexity, 1) Softcover
$49.95
ISBN 978-3-642-23476-7

The Universe as Automaton
From Simplicity and Symmetry to Complexity

This Brief is an essay at the interface of philosophy and complexity research, trying to inspire the reader with new ideas and new conceptual developments of cellular automata. Going beyond the numerical experiments of Steven Wolfram, it is argued that cellular automata must be considered complex dynamical systems in their own right, requiring appropriate analytical models in order to find precise answers and predictions in the universe of cellular automata. Indeed, eventually we have to ask whether cellular automata can be considered models of the real world and, conversely, whether there are limits to our modern approach of attributing the world, and the universe for that matter, essentially a digital reality.

Features
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Contents

Fields of interest
Statistical Physics, Dynamical Systems and Complexity; Artificial Intelligence (incl. Robotics); Complexity; Theory of Computation; Neurobiology

Target groups
Research

Usually dispatched within 3 to 5 business days

2012. XLI, 302 p. 6 illus. (Theoretical and Mathematical Physics, O) Hardcover
$99.00
ISBN 978-3-642-22716-5
Treasures of the Southern Sky

This coffee-table book will appeal to astronomy enthusiasts, astrophotographers, photography enthusiasts, and serious amateur and professional astronomers. Many will have heard of the most famous treasures of the southern sky, such as the Large and Small Magellanic Clouds and the Tarantula Nebula, but a full photographic exploration of the southern sky has been lacking. Few photos exist of the more obscure yet equally stunning and intriguing objects such as the brilliant star cluster Pismis 24, the stunningly beautiful NGC 1532-1 (a pair of interacting galaxies), or the radiant Toby Jug Nebula (IC 2220). In addition to lesser known objects, very high resolution, large aperture images of well known objects such as the famous ‘Hourglass’ nebula or the ‘Helix’ nebula have been processed with the latest digital methods, revealing these ‘southern gems’ in ways never before seen.

Features
In these pages, the reader can follow the engaging saga of astronomical exploration in the southern hemisphere, in a modern merger of aesthetics, science, and a story of human endeavor. This book is truly a celebration of southern skies. Jerry Bonnell, science, and a story of human endeavor. This book is truly a celebration of southern skies.  

U.S. Spacesuits

Spacesuits are far more than garments. They are a personalized spacecraft that allows direct contact and interaction with everything beyond our world, and a last refuge for survival in a disaster. Creating safe, reliable, and comfortable spacesuits is an ongoing challenge that has spanned over four decades. “U. S. Spacesuits, 2nd Edition” by Kenneth S. Thomas and Harold J. McMann details the technical evolution of U. S. spacesuits from their roots in high altitude aviation and vacuum tube development to present day, with an additional look into the future. This primary source of spacesuit information explains the functions, historical development, and use of spacesuits from a worldwide perspective. In this new edition, the authors update the story of U.S. spacesuit development and efforts, from the design challenges modern engineers face to the latest roles of spacesuits in space exploration. The book also provides a close up look at NASA’s new Constellation Space Suit System as well as Apollo [...] 

Features
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Contents
Preface.- Introduction.- The Discovery of the Southern Sky.- The Southern Summer.- The Southern Fall.- The Southern Winter.- The Southern Spring.- Index.

Fields of interest
Astronomy, Observations and Techniques; Popular Science in Astronomy; Photography

Target groups
Popular/general

Type of publication
Popular science

UV Astronomy 2011

This book is a reprint of the topical issue “UV Astronomy 2011” published by the journal Astrophysics and Space Science. Papers included in that topical issue cover four main topics of UV astronomy: stellar physics and evolution, planets, Milky Way and other galaxies and finally, UV instrumentation with an update on the current status of the main missions and technologies. This builds on the remarkable progress made in the field since the earlier topical issue: “Space Astronomy: the UV window to the Universe” which appeared in 2008.

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Contents

Fields of interest
Astronomy, Observations and Techniques; Astrophysics and Artroparticles; Extraterrestrial Physics, Space Sciences

Target groups
Research

Type of publication
Monograph

Online orders shipping within 2-3 days

2012. 343 p. 116 illus. in color. Hardcover
$169.00 ISBN 978-94-007-2572-0

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Target groups
Research

Type of publication
Monograph

Online orders shipping within 2-3 days

2012. 343 p. 116 illus. in color. Hardcover
$169.00 ISBN 978-94-007-2572-0
XII Mexican Workshop on Particles and Fields

This proceedings would be of interest to Researchers, PhD Students in high energy physics. The conference was about high energy physics and the areas researched in Mexico, including contributions from experts in the fields of hadron unification, neutrino, oscillations, violations of Einstein's relativity, hadron physics and warped extra dimensions are covered.

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Fields of interest
Particle and Nuclear Physics; Nuclear Physics, Heavy Ions, Hadrons

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days
$163.00
ISBN 978-0-7354-0919-4

XV Special Courses at the National Observatory of Rio de Janeiro

These proceedings will be of interest to scientists, researchers, academics, and graduate students involved in astronomy. In particular, they contain modern reference review material in the areas of theory of star formation, nucleosynthesis of low mass stars, clusters of galaxies and mineralogy of asteroids. These proceedings contain four lectures presented at the XV Special Courses, the Graduate School in Astronomy of the Observatório Nacional in Brazil. These annual schools started in 1996 and provide graduate students and post-docs with a broad view of selected topics in astronomy and astrophysics. Each year four renowned specialists from different areas are invited to give a course of lectures in their field of research. This year, these courses cover the theory of star formation, clusters of galaxies, low mass star nucleosynthesis and mineralogy of asteroids.

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

Target groups
Research

Type of publication
Proceedings

Online orders shipping within 2-3 days
$135.00

Consumer-Run Mental Health

Consumer-run organizations and other types of mental health self-help are becoming increasingly popular in the public mental health system. These initiatives now outnumber traditional mental health organizations in the US (Goldstrom et al., 2006). This growth is due in large part to their low cost, devoted supporters, burgeoning evidence base, and increased acceptance by mental health professionals. International interest in these initiatives is also growing as self-help is flourishing in industrialized countries worldwide. I recently edited a special issue on mental health self-help for the American Journal of Community Psychology and we received submissions from five continents, with exciting work coming out of China, Australia, and Europe. The proposed book develops a rich theoretical model called the Role Framework, which explains how people engage in and benefit from mental health consumer-run organizations (CROs).

Features
Consumer-Run Mental Health: Framework for Recovery

Consumer-run Mental Health: Framework for Recovery L.D. Brown, The University of Texas, El Paso, TX, USA

Contents
Chapter 1 – Introduction. - Chapter 2 - Using existing theory to build a conceptual framework of consumer-run organizations. - Chapter 3 - Refining the preliminary framework to create the role framework. - Chapter 4 - Constructing journalistic life history narratives to explore the role of framework. - Chapter 5 – Life history narratives from the P.S. Club. - Chapter 6 - Using narratives to understand how people benefit from CROs. - Chapter 7 – How Organizations Influence Role Development. - Chapter 8 – Role development and recovery. - Chapter 9 – Conclusion.

Fields of interest
Community & Environmental Psychology; Social Work; Sociology, general

Target groups
Research

Type of publication
Monograph

Usually dispatched within 3 to 5 business days
2012. XV, 217 p. 58 illus. Hardcover
$129.00
ISBN 978-1-4614-0699-0
Delinquent Girls

Contexts, Relationships, and Adaptation

Traditionally, delinquent girls were considered an anomaly, a rare phenomenon attracting little scholarly notice. Today, more than one in four youth offenders is female, and researchers and practitioners alike are quickly turning their attention and resources to address this challenging situation. Delinquent Girls: Contexts, Relationships, and Adaptation synthesizes what is known about girls involved in delinquent behavior and their experiences at different points in the juvenile justice system. This breakthrough volume adds to the understanding of this population by offering empirical analysis not only of how these behaviors develop but also about what is being done to intervene. Employing multiple theoretical models, qualitative and quantitative data sources, law enforcement records, and insights across disciplines, leading scholars review causes and correlates; the roles of family and peers; psychological and legal issues; policy changes resulting in more arrests of young women; and evidence-based[...]

Features

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Handbook of Race and Development in Mental Health

This project is unique in the field for a number of reasons, both in structure and in content. Specifically, it will have leading experts on specific age groups (Childhood to Adolescence, Young Adulthood to Middle Age, and The Elderly) within the cultural groups of interest (European-Americans, African-Americans, Asian-Americans, Hispanic-Americans, and Native Americans) contribute a chapter covering current research on both positive and negative functioning for each population. Each chapter will present basic demographic information, strengths that contribute to resilience, and three significant challenges each group faces to maintaining mental health. Each chapter will then include an integrative section, where ideas are advanced about how the strengths of each group can be harnessed to address the challenges that group faces. To conclude, each chapter will propose future directions for research which addresses integrative approaches to mental health for each group, and the implications that such[...]

Features

Handbook of Race and Development in Mental Health Edward C. Chang and Christina A. Downey, editors The early decades of psychology were concerned with pathology: its causes, identification, and treatment. Eventually this foundation expanded to include positive aspects of human behavior, such as intelligence, creativity, and love. But even as positive psychology grew[...]

Contents


Fields of interest

Child and School Psychology; Social Work; Criminology & Criminal Justice; Developmental Psychology; Sociology, general

Target groups

Research

Type of publication

Monograph

Usually dispatched within 3 to 5 business days

2012. XVI, 204 p. 12 illus., 7 in color. Hardcover

$129.00

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Contents


Fields of interest

Clinical Psychology; Cross Cultural Psychology; Community & Environmental Psychology; Health Psychology

Target groups

Research

Type of publication

Handbook

Usually dispatched within 3 to 5 business days

2012. XXIV, 389 p. 4 illus. Hardcover

$209.00
ISBN 978-1-4614-0423-1

Internationalizing the Psychology Curriculum in the United States

The psychology community recognizes that cultivating an international worldview is crucial not only to professionals and researchers, but more importantly, for professors and students of psychology as well. It is critically necessary for psychologists to learn from their colleagues who are working in different cultural contexts in order to develop the type of knowledge and psychological understanding of human behavior that will be maximally useful to practitioners and researchers alike. This volume, Internationalizing the Psychology Curriculum in the United States, provides information and resources to help psychology faculty educate and train future generations of psychologists within a much more international mindset and global perspective. Recognizing that cultural context are central to a true and accurate psychology, the authors describes how cultural, economic, political, and social factors in different countries frame individual experience and affect the science and practice of psychology.[...]

Features

Not long ago, psychology held that its Western-based tenets were universal truths applicable throughout the world. From this early naive assumption, the discipline has evolved to realize the need for cross-cultural competence in both practice and research. Today, commitment to professional ethics and scientific advancement is driving the adaptation of theories, models, and therapies to create a more[...]

Contents


Fields of interest

Cross Cultural Psychology; Higher Education

Target groups

Research

Type of publication

Proceedings

Usually dispatched within 3 to 5 business days

2012. XIV, 340 p. 5 illus. (International and Cultural Psychology) Hardcover

$129.00
ISBN 978-1-4614-0072-1


**Reactive Attachment Disorder**

**A Case-Based Approach**

A child’s close bond with mother, father, or guardian usually provides a foundation for trust in all future attachments. Children deprived of early and healthy dependency—who do not form normal attachment with their caregivers—may later suffer from Reactive Attachment Disorder (RAD). This childhood disorder is characterized by a general failure in social relationships resulting from pathogenic care. Although first included in the third edition of the Diagnostic and Statistical Manual (DSM-III) in 1980, RAD is one of the more uncommon and understudied forms of psychopathology. Reactive Attachment Disorder: A Case-Based Approach adds to a now growing research base, providing scholars and clinicians with a well-rounded analysis of RAD and suggested treatments. The case-based approach used in this Brief follows the representative case of "Jorge," presented as unfolding over time and structured to illustrate challenges of diagnosis, to show examples of co-morbidity, and to provoke reflection on what.[…]

**Features**

A child’s close bond with mother, father, or guardian usually provides a foundation for trust in all future attachments. Children deprived of early and healthy dependency—who do not form normal attachment with their caregivers—may later suffer from Reactive Attachment Disorder (RAD). This childhood disorder is characterized by a general failure in social relationships resulting from pathogenic.[…]

**Contents**


**Fields of interest**

Child and School Psychology; Psychiatry; Social Work; Developmental Psychology; Psychotherapy; Family

**Target groups**

Research

**Type of publication**

Brief

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

2012. VIII, 85 p. (SpringerBriefs in Child Development) Softcover

$49.95


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**Small Group Research**

**Implications for Peace Psychology and Conflict Resolution**

Small group research is of particularly wide interest to people working in a fairly broad variety of areas concerned with understanding conflict, especially for practitioners and researchers concerned with conflict resolution, peace, and related areas. The editors will focus on six main topical areas of small group research, which include: - Cooperation, competition, and conflict resolution. - Coalitions, bargaining, and games. - Group dynamics and social cognition. - The group and organization. - Team performance. - Intergroup relations

**Features**

As a basic setting for negotiation, the small group can be a crucible of collaboration, or a recipe for hostility. As research interest in small groups has evolved into a salient aspect of social psychology with a robust literature, studies in leadership, power relationships, and teamwork have lent themselves to such diverse concerns as peace studies, diplomacy, and business. Small Group Research: […]

**Contents**

Cooperation, competition and conflict resolution. - Coalitions, bargaining, and games. - Group dynamics and social cognition. - The group and the organization. - Team performance. - Intergroup relations.

**Fields of interest**

Personality and Social Psychology

**Target groups**

Research

**Type of publication**

Contributed volume

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


$129.00

ISBN 978-1-4614-0024-0
Global Perspectives on Archaeological Field Schools

Constructions of Knowledge and Experience

Archaeological field schools, notably in North America but also across the world, are seminal student experiences. They are also important vehicles by which research students and academic staff carry out fieldwork research, often away from the environs of their home institution. Field schools are teaching and research projects, but they also take place within a contemporary local context. This is the first ever collection of studies examining the tensions between teaching, research and local socio-cultural conditions, and explores the range of experiences associated with field schools. It will be of interest to all those wishing to attend a field school, whether as student or junior staff member, and for novice and experienced field school directors who can gain fresh insights from others’ experiences.

Features

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International Handbook of Rural Demography

This is the third in an essential series of Springer handbooks that explore key aspects of the nexus between demography and social science. With an inclusive international perspective, and founded on the principles of social demography, this handbook shows how the rural population, which recently dropped below 50 per cent of the world total, remains a vital segment of society living in proximity to much-needed developmental and amenity resources. The rich diversity of rural areas shapes the capacity of resident communities to address far-reaching social, environmental and economic challenges. Some will survive, become sustainable and even thrive, while others will suffer rapid depopulation. This handbook demonstrates how these future development trajectories will vary according to local characteristics including, but not limited to, population composition. The growing complexity of rural society is in part a product of significant international variations in population trends, making this[...]

Features

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Contents


Fields of interest

Demography; Regional and Urban Planning; Population Economics

Target groups

Research

Type of publication

Reference work

Usually dispatched within 3 to 5 business days


$299.00
ISBN 978-94-007-1841-8

International Politics in Times of Change

There is every indication that the international system is undergoing a period of significant transformation. The substantially higher growth rates of the emerging-market economies in comparison with those of the developed economies are changing the global distribution of power. Studies project that if economic trends are not reversed in the coming years, China will surpass the US and become the world’s largest economy. India will emerge in Japan’s place as the third-largest economy and Brazil will overtake Germany as the fifth-largest. This book underscores the complexity of forecasting international politics and proceeds cautiously to investigate the questions of change and continuity, examining several actors with respect to multiple issues and across different levels of analysis. Taken as a whole, this collection of essays offers a series of snapshots of different aspects, and from varying angles, of an international system in motion.

Features

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Contents

The Established Global Players.- The Emerging Global Players.- Issues in International Politics.

Fields of interest

Political Science, general; Economic Policy

Target groups

Research

Type of publication

Contributed volume

Due: December 28, 2011

2012. XXV, 334 p. 3 illus. (The Konstantinos Karamanlis Institute for Democracy Series on European and International Affairs, 0) Hardcover

$189.00
ISBN 978-3-642-21954-2

Police Organization and Training

Innovations in Research and Practice

Criminal enterprises are growing in sophistication. Terrorism is an ongoing security threat. The general public is more knowledgeable about legal matters. These developments, among others, necessitate new methods in police work—and in training new recruits and in-service officers. Given these challenges, improvements in training are a vital means of both staying ahead of lawbreakers and delivering the most effective services to the community. Police Organization and Training surveys innovations in law enforcement training in its evolution from military-style models toward continuing professional development, improved investigation methods, and overall best practices. International dispatches by training practitioners, academics, and other experts from the US, the UK, Canada, Germany, Hong Kong, and elsewhere emphasize blended education methods, competency-building curricula, program and policy development, and leadership concepts. These emerging paradigms and technologies, coupled with a clear focus[...]

Features

Criminal enterprises are growing in sophistication. Terrorism is an ongoing security threat. The general public is more knowledgeable about legal matters. These developments, among others, necessitate new methods in police work—and in training new recruits and in-service officers. Given these challenges, improvements in training are a vital means of both staying ahead of lawbreakers and delivering the[...]

Contents


Fields of interest

Criminology & Criminal Justice; Social Policy; Public Administration

Target groups

Research

Type of publication

Contributed volume

Usually dispatched within 3 to 5 business days


$129.00
The Demography and Epidemiology of Human Health and Aging

With this book, Siegel, an internationally known demographer and gerontologist, has made a unique contribution to the fledgling fields of health demography, and the demography and epidemiology of aging. The book represents a felicitous union of epidemiology, gerontology, and demography, and appears to be the first and only comprehensive text on this subject now available. Drawing on a wide range of sciences in addition to demography, gerontology, and epidemiology, including medical sociology, biostatistics, public policy, bioethics, and molecular biology, the author treats theoretical and applied issues, links methods and findings, covers the material internationally, nationally, and locally, and while focusing on the elderly, treats the entire life course. The methods, materials, and perspectives of demography and epidemiology are brought to bear on such topics as the prospects for future increases in human longevity, the relative contribution of lifestyle, environment, genetics, and chance in[...] Features With this book, Siegel, an internationally known demographer and gerontologist, has made a unique contribution to the fledgling fields of health demography, and the demography and epidemiology of aging. The book represents a felicitous union of epidemiology, gerontology, and demography, and appears to be the first and only comprehensive text on this subject now available. Drawing on a wide range of [...] Contents Preface and Acknowledgments. - Part I. Scope of Health Demography, Sources, and Quality of Data: 1. Introduction. - 2. Sources and Quality of Data for Mortality and Health Studies. - Part II. Concepts and Measures of Mortality and Morbidity: 3. Concepts and Basic Measures of Mortality. - 4. The Life Table. - 5. Measures of Health Status, Functioning, and Use of Health Services. - Part III. Mortality and Morbidity Considered Jointly and in Relation to Fertility, Migration, and Population Age Sex Structure. - 6. Health Inequalities, General Trends in Mortality and Morbidity, and Associated[...] Fields of interest Demography; Epidemiology; Aging; Public Health; Geriatrics / Gerontology Target groups Research Type of publication Monograph Usually dispatched within 3 to 5 business days 2012. XXII, 985 p. 64 illus. Hardcover $239.00 ISBN 978-94-007-1314-7

The Social Ecology of Resilience

A Handbook of Theory and Practice

More than two decades after Michael Rutter (1987) published his summary of protective processes associated with resilience, researchers continue to report definitional ambiguity in how to define and operationalize positive development under adversity. The problem has been partially the result of a dominant view of resilience as something individuals have, rather than as a process that families, schools, communities and governments facilitate. Because resilience is related to the presence of social risk factors, there is a need for an ecological interpretation of the construct that acknowledges the importance of people’s interactions with their environments. The Social Ecology of Resilience provides evidence for this ecological understanding of resilience in ways that help to resolve both definition and measurement problems. Features In a time of increasing exposure to personal psychological stress, as well as war, natural disasters, and economic upheaval, positive development under adversity—resilience—is meriting wider and deeper study. Despite this attention and over four decades’ worth of robust literature, resilience remains difficult to define and even harder to measure. Taking the view that resilience is a process to be [...] Contents 1. Introduction to the Theory. - Social Ecologies and their Contribution to Resilience. - Resilience: Causal Pathways and Social Ecology. - Theory and Measurement of Resilience: Views from Development. - Resilience and Children’s Work in Brazil: Lesson from Physics for Psychology. - II. Five Interviews. - An Interview with Macalaine Malindi: The Impact of Education and Changing Social Policy on Resilience During Apartheid and Post-Apartheid in South Africa. - An Interview with Bill Strickland: How Community-based Adult Educational Facilities can Lift People out of Poverty in Urban America. - An Interview[...] Fields of interest Social Work; Clinical Psychology; Psychotherapy Target groups Research Type of publication Handbook Usually dispatched within 3 to 5 business days 2012. XV, 463 p. 14 illus. Hardcover $129.00 ISBN 978-1-4614-0585-6

Translocal Ruralism

Mobility and Connectivity in European Rural Spaces

Rural areas are often viewed as isolated and stagnating areas and urban areas as their opposites. Against such a backdrop, this book seeks to unveil a set of dynamics that view rural areas as ‘translocal’ in the sense that they are ‘changing’ and ‘interconnected’. Social transformations take place in rural areas as the result of intense exchanges between different people, settings and geographies. Accordingly, rural-urban but also rural-rural interrelations on international and national scales are strongly contributing to rural change. Translocal ruralism is exemplified through the analysis of local and global migratory flows, the activities of rural firms in national and global arenas, the spread of different forms of transportation and dislocation, and the growing information society, which enables rural spaces to be connected to the world and improves new ways of interconnection and sociability practices. The book is structured into two parts, which intertwine the dynamics of rural spaces. The[...] Features Rural areas are often viewed as isolated and stagnating areas and urban areas as their opposites. Against such a backdrop, this book seeks to unveil a set of dynamics that view rural areas as ‘translocal’ in the sense that they are ‘changing’ and ‘interconnected’. Social transformations take place in rural areas as the result of intense exchanges between different people, settings and geographies. [...] Contents 1: Translocal ruralism: mobility and connectivity in European rural spaces: Charlotte Hedberg and Renato Miguel do Carmo. - Linking nodes: people and networks connecting places: 2: Between marginalisation and urbanisation: mobilities and social change in Southern Portugal: Renato Miguel do Carmo and Sofia Santos. - 3: The ties that bind: Spatial (im)mobilities and the transformation of rural-urban connections: Hendrik Raat. - 4: ‘The rural’ intervening in the lives of internal and international migrants: migrants, biographies and translocal praxes: Susanne Stenbacka. - 5: Youth ‘settles’[...] Fields of interest Human Geography; Migration; Landscape, Regional and Urban Planning Target groups Research Type of publication Contributed volume Usually dispatched within 3 to 5 business days 2012. XII, 221 p. 23 illus. {GeoJournal Library, Vol. 103} Hardcover $139.00 ISBN 978-94-007-2314-6

M. Ungar, Killam Professor of Social Work, Dalhousie University, Halifax, NS, Canada (Ed.)
Statistical Tools for Measuring Agreement

Agreement assessment techniques are widely used in examining the acceptability of a new or generic process, methodology and/or formulation in areas of lab performance, instrument/assay validation or method comparisons, statistical process control, goodness-of-fit, and individual bioequivalence. Successful applications in these situations require a sound understanding of both the underlying theory and methodological advances in handling real-life problems. This book seeks to effectively blend theory and applications while presenting readers with many practical examples. For instance, in the medical device environment, it is important to know if the newly established lab can reproduce the instrument/assay results from the established but outdated lab. When there is a disagreement, it is important to differentiate the sources of disagreement. In addition to agreement coefficients, accuracy and precision coefficients are introduced and utilized to characterize these sources. This book will appeal to [...] Features

Agreement assessment techniques are widely used in examining the acceptability of a new or generic process, methodology and/or formulation in areas of lab performance, instrument/assay validation or method comparisons, statistical process control, goodness-of-fit, and individual bioequivalence. Successful applications in these situations require a sound understanding of both the underlying theory and [...] Features

Any financial asset that is openly traded has a market price. Except for extreme market conditions, market price may be more or less than a "fair" value. Fair value is likely to be some complicated function of the current intrinsic value of tangible or intangible assets underlying the claim and our assessment of the characteristics of the underlying assets with respect to the expected rate of growth, future dividends, volatility, and other relevant market factors. Some of these factors that affect the price can be assessed at the time of a transaction with reasonably high accuracy. Most factors, however, relate to expectations about the future and to subjective issues, such as current management, corporate policies and market environment, that could affect the future financial performance of the underlying assets. Models are thus needed to describe the stochastic factors and environment, and their implementations inevitably require computational finance tools.

Features

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Introduction


Fields of Interest

Statistics for Business, Economics, Mathematical Finance, Insurance; Computational Mathematics and Numerical Analysis; Finance / Banking

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- Kaplan-Meier Survival Curves and the Log-Rank Test
- The Cox Proportional Hazards Model and Its Characteristics
- Evaluating the Proportional Hazards Assumption
- The Stratified Cox Procedure
- Extension of the Cox Proportional Hazards Model for Time-Dependent Variables
- Parametric Survival Models
- Recurrent Events Survival Analysis
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