The Enzyme Linked Immunosorbent Assay (ELISA) continues, as predicted, to be the predominant assay used in biomedical and agricultural research. While little has changed in the principles of the ELISAs used since the publication of The ELISA Guidebook, many technological advantages, including the increasing number of reagents available for exploitation and the larger spectrum of instruments to measure the coloured products of ELISAs, have greatly benefited the field. Other testing technologies using molecular techniques, predominantly the conventional and more and more often, real time PCR, are rapidly evolving to help diagnose and differentiate disease agents and identify substances present in exquisitely small amounts. The ELISA is still needed either alone in mass screening, such as serological assays, or used in tandem with molecular techniques to fully evaluate the molecular and antigenic nature of analytes.

SELLING POINTS:
- Provides a comprehensive survey of proven ELISA methods
- Includes detailed instructions to avoid problems during test development
- Offers immunological and statistical background
- Suitable for scientists at all levels of expertise
- Contains all chapters from the popular first edition in addition to several new chapters

MARKET: Immunologists, molecular and cellular biologists, biochemists, biotechnologists, pharmaceutical scientists, pathologists and laboratory medicine researchers, microbiologists, virologists, hematologists, and researchers using biochemical assays

SUBJECTS: Immunology; Antibodies; Enzymology

LOCATION IN BOOKSTORE: Biomedicine

RELATED TITLES:
Raem, Immunoassays (978-3-8274-1636-0, 2006, $59.95)
Crowther, ELISA (978-0-89603-279-8, 1995, $115)

COMPETITION:
Brain Hypoxia and Ischemia

EDITORS: Gabriel G. Haddad, University of California, San Diego School of Medicine, San Diego, CA, USA and Shan Ping Yu, Medical University of South Carolina, Charleston, SC, USA

PAGES/ILLUS: approx. 280 p., 47 illus., 26 in color, Hardcover
PRICE: $159.00
AVAILABLE (US): January 2009

This volume focuses on the mechanisms of cell injury and cell survival in the brain, with special emphasis on development and early life, in relation to hypoxia and ischemia in the brain. The major reason for the emphasis placed on the developmental stages of the brain is the major societal and economic burden of the affliction when it occurs in early life.

SELLING POINTS:
- Most up-to-date volume to focus on the mechanisms of cell injury and cell survival in the brain
- Special emphasis on development and early life, in relation to hypoxia and ischemia in the brain
- Addresses a number of active and cutting edge research ideas by leaders in the field

MARKET: Neuroscientists, clinical neuroscientists, neurologists, microcirculation researchers, pathophysiologists, cardiologists, internists, clinical pediatricians

SUBJECTS: Neurosciences; Neurology; Neurobiology

LOCATION IN BOOKSTORE: Biomedicine

RELATED TITLES:
Gusev, Brain Ischemia (978-0-306-47694-5, 2003, $229)
Pinsky, Cerebral Blood Flow (978-3-540-42037-8, 2001, $199)
Fukuuchi, Ischemic Blood Flow in the Brain (978-4-431-70292-4, 2000, $328)

COMPETITION:
Roux, Brain Hypoxia-Ischemia Research Progress (Nova, 1604561394, 2008, $129.00)
Lin, New Concepts in Cerebral Ischemia (CRC, 084930119X, 2001, $149.95)
Cortico-Subcortical Dynamics in Parkinson’s Disease

EDITOR: KUEI-YUAN TSENG, Rosalind Franklin University of Medicine and Science, North Chicago, IL, USA
PAGES/ILLUS: approx. 325 p., 76 illus., Hardcover
PRICE: approx. $169.00
AVAILABLE (US): January 2009

While much currently remains unknown in the field of Parkinson’s research, this book assembles all that is currently known about the pathophysiological changes underlying Parkinson’s Disease (PD). It aims to integrate key aspects of current PD knowledge and research, specifically how disruptions of the non dopamine systems resulting from chronic dopaminergic degeneration could lead to the functional alterations observed in parkinsonism. The understanding of these mechanisms interactions and a proper analysis of the input-output transformations within the cortico-basal ganglia circuitry will contribute to the unveiling of important dynamic features of information processing in the PD brain.

SELLING POINTS:
- Multidisciplinary approaches
- Provides critical reviews about mechanisms of neurodegeneration, particularly within the mesocortical/mesostriatal DA system

MARKET: Basic and clinical neuroscientists, neurobiologists, physiologists, neurologists, drug discovery and development researchers, medical students working in neurodegenerative diseases

SUBJECTS: Neurosciences; Human Physiology; Neurology

LOCATION IN BOOKSTORE: Biomedicine

RELATED TITLES:
Schmidt, Dopamine and Glutamate in Psychiatric Disorders (978-1-58829-325-1, 2005, $185)
Pfeiffer, Parkinson's Disease and Nonmotor Dysfunction (978-1-58829-316-9, 2005, $145)

COMPETITION:
Ebadi, Parkinson’s Disease (CRC Press, 9780849315909, 2004, $219.95)
Ronken, Parkinson's Disease (ISO Press, 9781586032074, 2002, $121.00)
Jenner, A Molecular Biology Approach to Parkinson’s Disease (IOS Press, 9789051994230, 1999, $102.00)
Managing Sustainable Innovation

The Driver for Global Growth

AUTHOR: IAN MAXWELL, Maxco Consulting Group, Takapuna, NZ
PAGES/ILLUS: approx. 210 p., Hardcover
PRICE: approx. $49.95
AVAILABLE (US): January 2009

Ian Maxwell applies decades of research and application to present a novel approach to innovation, with an emphasis on sustainable and renewable practices that benefit many, and not just a handful of executives and shareholders. Featuring examples from a wide range of innovators around the world, from Google to Genentech to the Masdar “clean” city initiative in Abu Dhabi, Maxwell argues that organizations that embrace structured innovation management systems and drive a “top down” innovation culture will achieve sustainable high growth and strong shareholder returns. Countries that provide the right physical, financial and human resource infrastructure to support a highly innovative macro-economic environment will experience both strong GPD growth and high living standards. Those companies and countries that fail to support innovation will struggle to compete and raise living standards, respectively. Maxwell considers the cases of China and India, whose low-cost innovation strategies are posing a serious competitive threat to established multinationals in the developed world, and considers the impact of innovation on such timely issues as climate change, environmental pollution, fossil fuel shortages, third world poverty, rising healthcare costs and ageing populations.

SELLING POINTS:

- Includes recent and relevant research and development examples
- Offers new methodologies for tracking innovation success
- Assists a wide-range of companies with new and improved innovation concepts including multinational companies, technology and telecommunications, healthcare industry, environmental and engineering companies, etc.
- Contains a glossary of terms
- Contains a list of resources recommending books, journals, articles, organizations and websites

MARKET: Senior managers, single market enterprises, start-up companies, government research organizations, politicians, financial companies, MBA /business students, graduate students in science & technology, consulting companies, legal firms, government policy advisors

SUBJECTS: Management/Business for Professionals; Organization/Planning; Technology Management

LOCATION IN BOOKSTORE: Business / Economics
RELATED TITLES:
Koschatzky, Innovation Networks (978-3-7908-1382-1, 2001, $89.95)
Wahren, Erfolgsfaktor Innovation (978-3-540-03082-9, 2003, $64.95)
Bröcker, Innovation Clusters and Interregional Competition (978-3-540-00999-3, 2003, $179)
Olsthoorn, Understanding Industrial Transformation (978-1-4020-3755-9, 2006, $135)

COMPETITION:
Cooper, Winning at New Products: Accelerating the Process from Idea to Launch (Basic Books, 978-0738204635, 2001, $29.00)
Christensen, The Innovator's Dilemma: The Revolutionary Book that Will Change the Way You Do Business (Collins Business, 978-0060521998, 2003, $17.95)
Davila, Making Innovation Work: How to Manage It, Measure It, and Profit from It (Wharton School Publishing, 9780131497863, 2005, $34.99)
Hesselbein, Leading for Innovation: & Organizing For Results (Jossey-Bass, 978-0787953591, 2001, $29.95)
Enterprise Governance of Information Technology

_Achieving Strategic Alignment and Value_

**AUTHORS:** WIM VAN GREMBERGEN, Sint Pauwels, Belgium and STEVEN DE HAES, Malle, Belgium


**PAGES/ILLUS:** approx. 360 p., Hardcover

**PRICE:** approx. $79.95

**AVAILABLE (US):** January 2009

Enterprise governance of information technology is a relatively new concept that is gaining traction in both the academic and practitioner worlds. Going well beyond the implementation of a superior IT infrastructure, “Enterprise Governance of Information Technology” is about defining and embedding processes and structures throughout the organizations that enable both business and IT people to execute their responsibilities, while maximizing the value created from their IT-enabled investments. At the forefront of the field, the authors draw from years of research and advising corporate clients to present the first comprehensive resource on the topic. Featuring numerous case examples from companies around the world, the book integrates theoretical advances and empirical data with practical application, including in-depth discussion of such frameworks as COBIT and VALIT, which are used to measure and audit the value of IT investments and ensuring regulatory compliance. A variety of elements, including executive summaries and sidebars, extensive references, and questions and activities (with additional materials available on-line) ensure that the book will be an essential resource for professionals, researchers, and students alike.

**SELLING POINTS:**
- Features numerous illustrative case examples from companies in different industries and around the world
- Integrates the latest research, policy initiatives, and best practice applications to provide an authoritative resource for practitioners, policymakers, students and researchers alike
- Authors are active in the academic and professional communities, where they will promote the book
- Includes sidebars, executives summaries, graphics, reference lists, and questions to encourage interactivity with the material; additional teaching tools are available online

**MARKET:** Practitioners in IT management, governance, investment, and auditing; IT management consultants; professors, students, and researchers of IT management, strategy, governance, and processes; IT and business architecture; IT assurance/audit; information systems management; policymakers concerned with IT compliance, governance, and auditing

**SUBJECTS:** Information Systems; Technology Management; Computer Systems Organization and Communication Networks

**LOCATION IN BOOKSTORE:** Business / Economics
RELATED TITLES:
Pathak, Information Technology Auditing (978-3-540-22155-5, 2005, $115)
Rüter, IT-Governance in der Praxis (978-3-540-29044-5, 2006, $74.95)
Preissl, Governance of Communication Networks (978-3-7908-1745-4, 2006, $135)

COMPETITION:
Lipman, Corporate Governance Best Practices: Strategies for Public, Private, and Not-for-Profit Organizations (Wiley, 978-0470043790, 2006; $55.00)
Weill, IT Governance: How Top Performers Manage IT Decision Rights for Superior Results; (Harvard Business School, 978-1591392538, 2004; $35.00)
IT Governance Institute, Governance of the Extended Enterprise: Bridging Business and IT Strategies (Wiley, 978-0471334439, 2005, $92.00)
Kim, Corporate Governance (Prentice Hall, 978-0131735347, 2006, $44.00)
Nanochemistry
_A Chemical Approach to Nanomaterials_
Second Edition

AUTHORS: GEOFFREY A. OZIN, University of Toronto, ON, Canada; ANDRÉ C. ARSENAULT, Opalux Inc., Toronto, ON, Canada and LUDOVICO CADEMARTIRI, University of Toronto, ON, Canada

(Replaces ISBN: 978-0-85404-664-5)
PAGES/ILLUS: 770 p., Hardcover
PRICE: $89.95
AVAILABLE (US): January 2009

The global success of the 1st edition of Nanochemistry, along with exceptionally rapid change in the field, has necessitated the publication of a 2nd edition after only three years. This truly major update highlights the latest breakthroughs using more than eighty new case histories, more problem sets, and more teaching principles. Nanotechnology is touted to begin a new era by bringing us materials that were not available before. This book describes the fascinating chemistry behind nanotechnology in a clear and easy to read style. Aimed at teachers, graduate students and advanced undergraduates it provides an authoritative, rigorous and hype-free guide to this burgeoning field. For those who already have some knowledge of the subject, the book remains invaluable as a reference and source of inspiration for future research or teaching.

SELLING POINTS:
- Authors are leaders in the fields of materials chemistry and nanochemistry.
- Major update highlights the latest breakthroughs using over 80 new case histories, more problem sets, and more teaching principles
- Using simple language, and focusing on the concepts, it covers all chemistry techniques commonly used to synthesize nanomaterials
- The extensive bibliography will satisfy those hungry for more detail

MARKET: Graduate and advanced undergraduate students of chemistry, nanochemistry and materials science

SUBJECTS: Nanotechnology; Materials Science; Food Science

LOCATION IN BOOKSTORE: Chemistry

RELATED TITLES:
Roduner, Nanoscopic Materials (978-0-85404-857-1, 2006, $69.95)
Watarai, Interfacial Nanochemistry (978-0-306-48527-5, 2005, $129)
Bréchignac, Nanomaterials and Nanochemistry (978-3-540-72992-1, 2007, $219)
Ozin, Nanochemistry (978-0-85404-664-5, 2005, $89.95)
COMPETITION:
Rao, Nanomaterials Chemistry: Recent Developments and New Directions (Wiley, 3527316647, 2007, $200.00)
Sergeev, Nanochemistry (Elsevier Science, 0444519564, 2006, $215.00)
Steed, Core Concepts in Supramolecular Chemistry and Nanochemistry (Wiley, 0470858672, 2007, $50.00)
Cao, Nanostructures & Nanomaterials: Synthesis, Properties & Applications (Imperial College Press, 1860944809, 2004, $69.00)
Proton Exchange Fuel Cell Durability

EDITORS: FELIX N. BÜCHI, Paul Scherrer Institut, Switzerland; MINORU INABA, Doshisha University, Kyoto, Japan and THOMAS J. SCHMIDT, BASF Fuel Cell GmbH, Frankfurt, Germany

PAGES/ILLUS: approx. 510 p., 250 illus., Hardcover
PRICE: $129.00
AVAILABLE (US): January 2009

This book will cover one of the most important aspects of fuel cell research and development, fuel cell durability. The rather broad topic of fuel cell durability will be covered from different viewpoints. First, the durability and degradation issues of catalyst materials (both anode and cathode catalysts) will be described in individual contributions as well as stability aspects from carbon support materials. A following chapter is completely dedicated to important topics from membrane materials, i.e., chemical and physical degradation as well durability from newly developed hydrocarbon membranes. After discussion of stability and durability topics from gas diffusion layer materials and bipolar plate materials, a large part of the book will cover various aspects from membrane electrode assemblies, i.e., low and high temperature MEAs as well as DMFC MEAs. Since MEA Cost and Durability are heavily linked, this topic will be discussed one contribution. In the consecutive chapter on MEA and stack operation, the impact of contaminants (e.g. in the gas streams or water for humidification) on MEA and stack lifetime will be described. Furthermore, some information will be given on reliability and predictive testing of MEAs and stacks.

SELLING POINTS:
- There is an intense interest in fuel cell durability with continued interest in fuel cells in general
- Addresses the need to bring durability issues from the commercial sector to the academic sector
- The editors are distinguished in the field and therefore have deep insights to share from their experienced career in industry

MARKET: This book will be useful for both industrial and academic researchers in the fuel cell community who are working in the fields of polymer chemistry, electrochemistry, material sciences, chemical engineering, engineering, physics as well as for graduate students with interest in fuel cell research and working in these same fields. Additionally, since this book will cover a summary of the state-of-the-art of fuel cell R&D and especially fuel cell durability, R&D directions can be given for publicly funded projects (e.g. government agencies etc.).

SUBJECTS: Electrochemistry; Materials Science; Catalysis

LOCATION IN BOOKSTORE: Chemistry
**RELATED TITLES:**
Sammes, Fuel Cell Technology (978-1-85233-974-6, 2006, $229)

**COMPETITION:**
Knowledge Foundation, Fuel Cells Durability (Knowledge Press, 978-1594301162, 2005, $399.00)
Access to Mobile Services

AUTHORS: ATHMAN BOUGUETTAYA, Virginia Tech, Blacksburg VA, USA and XU YANG, Virginia Tech, Blacksburg VA, USA


PAGES/ILLUS: approx. 200 p., 20 illus., Hardcover

PRICE: approx. $125.00

AVAILABLE (US): January 2009

Access to Mobile Services focuses on methods for accessing broadcast based M-services from multiple wireless channels. This book presents a novel infrastructure that provides a multi-channel broadcast framework for mobile users to effectively discover and access composite M-services. Multi-channel algorithms are proposed for efficiently accessing composite services.

Access to Mobile Services provides an in-depth survey of wireless data access and motivates the need to treat mobile services differently. A wireless adaptation of Service Oriented Architecture (SOA) is also covered.

Designed for researchers and practitioners who work in the general area of mobile services, this book is also suitable for advanced-level students in computer science and electrical engineering.

SELLING POINTS:

• First book to provide overview of technical challenges for accessing broadcasted Web services over Wireless media
• Provides innovative solutions for efficiently accessing simple and composed services in single and multi-channel wireless environment
• Presents novel infrastructure that provides multi-channel broadcast framework for mobile users to effectively discover and access composite M-services

MARKET: Researchers and practitioners; advanced-level students

SUBJECTS: Computer Communication Networks; Communications Engineering, Networks; Database Management

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:

Bouwman, Mobile Service Innovation and Business Models (978-3-540-79237-6, 2008, $129)
Sheikh, Wireless Communications (978-1-4020-7621-3, 2004, $139)

COMPETITION:

Klemettinen, Enabling Technologies for Mobile Services (Wiley, 0470512903, 2007, $150.00)
Ontology Economics

EDITORS: MARTIN HEPP, University of Innsbruck, Austria and ROBERT TOLKSDORF, Freie Universität Berlin, Germany

PAGES/ILLUS: approx. 300 p., 20 illus., Hardcover
PRICE: approx. $125.00
AVAILABLE (US): January 2009

The state of the art in ontology building, and modeling in general, widely disregards the fact that the behavior of rational actors in the modeling process will be driven by individual economic incentives. Creating an ontology requires resources (e.g. labor) from the contributing individuals. If there is a remote possibility the overall benefit of an ontology might exceed the costs for creating the ontology over its lifetime, it may not be created if it's not economically feasible for each individual required to contribute. Ontology Economics, an edited volume authored by distinguished leaders in this field, provides a one-stop reference on the economic dimension of building, committing to, and using ontologies which are grounded by economic research. Linked to experience and data from real-world ontology projects, this volume is concise and self-contained.

A reference book for advanced-level students and researchers in computer science and engineering; also useful for industry practitioners.

SELLING POINTS:
• First book to exclusively cover the latest developments on Ontology Economics
• Includes case studies based on real-world examples

MARKET: Advanced-level students and researchers in computer science; practitioners in industry

SUBJECTS: Information Systems Applications (incl.Internet); Information Systems and Communication Service;

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Gómez-Pérez, Ontological Engineering (978-1-85233-551-9, 2003, $99)
Cardoso, Semantic Web Services, Processes and Applications (978-0-387-30239-3, 2006, $109)

COMPETITION:
Davies, Towards the Semantic Web (Wiley, 978-0470848678, 2003, $110.00)
Davies, Semantic Web Technologies: Trends & Research in Ontologies Based Systems (Wiley, 978-0470025963, 2006, $130.00)
Introduction to Computational Cardiology

AUTHOR: BORIS Y. KOGAN, UCLA, USA
PAGES/ILLUS: approx. 400 p., 20 illus., Hardcover
PRICE: approx. $99.00
AVAILABLE (US): January 2009

The textbook Introduction to Computational Cardiology provides a comprehensive, in-depth treatment of the fundamental concepts and research challenges involved in the mathematical modeling and computer simulation of electrophysiological heart processes, under normal and pathological conditions. This book is based on the author’s lecture notes from his course Introduction to Computational Cardiology, and also covers results of his students’ research activity in the US and USSR over the last 30-35 years. Exercises and examples are included throughout this textbook, with electronic access to a solutions manual.

Introduction to Computational Cardiology serves as a textbook for advanced-level students in computer science and biomedical engineering; it is also suitable for researchers and practitioners in industry.

SELLING POINTS:
- Includes models used in both biology and medicine to find the mechanisms of function and malfunction of living organisms and its organs on different levels
- Covers the Theory of Stationary Spiral Wave Propagation

MARKET: Researchers and graduate-level students; professionals

SUBJECTS: Cardiology; Computer Imaging, Graphics and Computer Vision

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Vitola, Nuclear Cardiology and Correlative Imaging (978-0-387-20707-0, 2004, $185)
Paun, DNA Computing (978-3-540-64196-4, 1998, $115)

COMPETITION:
Heller, Nuclear Cardiology: Practical Applications (McGraw Hill, 978-0071386357, 2003, $82.95)
Johnston, Computational Inverse Problem in Electrocardiography (WIT Press, 978-1853126147, 2001, $198.00)
Applying Computational Intelligence
How to Create Value

AUTHOR: ARTHUR KORDON, The Dow Chemical Company, Freeport, TX, USA
PAGES/ILLUS: approx. 490 p., Hardcover
PRICE: approx. $89.95
AVAILABLE (US): April 2009

The flow of academic ideas in the area of computational intelligence is impacting industrial practice at considerable speed. Practitioners face the challenge of tracking, understanding and applying the latest techniques, which often prove their value even before the underlying theories are fully understood. This book offers realistic guidelines on creating value from the application of computational intelligence methods.

The author adopts a light tone in the book, visualizes many of the techniques and ideas, and supports the text with notes from successful implementations. The book is ideal for engineers implementing these techniques in the real world, managers charged with creating value and reducing costs in the related industries, and scientists in computational intelligence looking towards the application of their research.

SELLING POINTS:
- Offers simple explanations of the key computational intelligence technologies
- Defines the typical business environment and analyzes the competitive advantages these techniques offer
- Introduces a methodology for effective real-world application of computational intelligence while minimizing development cost
- Looks to technologies still in the research domain

MARKET: Practitioners, researchers

SUBJECTS: Artificial Intelligence (incl. Robotics); Information Systems

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Michalewicz, Adaptive Business Intelligence (978-3-540-32928-2, 2006, $49.95)
Konar, Computational Intelligence (978-3-540-20898-3, 2005, $129)
Berthold, Intelligent Data Analysis (978-3-540-43060-5, 2003, $79.95)

COMPETITION:
Pyle, Business Modeling and Data Mining (Morgan Kaufmann, 155860653X, 2003, $76.95)
Voges, Business Applications and Computational Intelligence (Idea, 1591407028, 2006, $89.95)
Wireless communication technologies are undergoing rapid advancements. The last few years have experienced a steep growth in research in the area of wireless sensor networks (WSNs). In WSNs, communication takes place with the help of spatially distributed autonomous sensor nodes equipped to sense specific information. WSNs find a variety of applications in both the military and the civilian population worldwide such as in cases of enemy intrusion in the battlefield, object tracking, habitat monitoring, patient monitoring, fire detection and so on. Even though sensor networks have emerged to be attractive and they hold great promises for our future, there are several challenges that need to be addressed. Some of the well known challenges are attributed to issues relating to coverage and deployment, scalability, quality-of-service, size, computational power, energy efficiency and security.

This handbook attempts to provide a comprehensive guide on fundamental concepts, new ideas and results in the area of WSNs. This book has been prepared keeping in mind that it needs to prove itself to be a valuable resource dealing with both the important core and the specialized issues in this area. Offering a wide coverage of topics, this book provides a valuable reference for students, instructors, researchers and industry practitioners.

SELLING POINTS:

- This reader-friendly guide presents a comprehensive account of Wireless Communication Networks
- With around seventy-four authors contributing to this book there is an extensive range of expertise with each chapter containing questions with solutions online, there is also a free service for teachers to gain access to presentation slides
- Anyone ranging from beginner to advanced can find the information that this book provides invaluable but it particularly targets the student community
- This practical guide is useful for both academicians and practitioners alike

MARKET: University students of all levels; Lecturers; Research community; Computer science industry

SUBJECTS: Computer Communication Networks; Communications Engineering, Networks; Computer Systems Organization and Communication Networks

LOCATION IN BOOKSTORE: Computer Science
**RELATED TITLES:**
Langendoen, Wireless Sensor Networks (978-3-540-69829-6, 2007, $74.95)
Kutylowski, Algorithmic Aspects of Wireless Sensor Networks (978-3-540-77870-7, 2008, $59.95)

**COMPETITION:**
Foundations of Systems Biology
Using Cell Illustrator and Pathway Databases

AUTHORS: MASAO NAGASAKI; AYUMU SAIITO; ATSUSHI DOI; HIROSHI MATSUNO and SATORU MIYANO
PAGES/ILLUS: approx. 170 p., 145 illus. in color, w/ CD-ROM, Hardcover
PRICE: $39.95
AVAILABLE (US): January 2009

This easy-to-follow text serves as a valuable introduction to contemporary cell biology and offers insight into the key research directions in the field. It begins with an overview of existing tools for finding, designing and investigating metabolic, genetic, signalling and other network databases. It then introduces Cell Illustrator 3.0, a software tool for biological pathway modelling and simulation. In-depth discussion is given to how this tool can be used for creating, analysing and simulating models, explicating and testing current understanding of basic biological processes.

SELLING POINTS:
• A concise, easy-to-follow text that serves as a valuable introduction to contemporary cell biology and offers insights into the key research directions in the field
• Includes a CD ROM containing Cell Illustrator, allowing readers to create highly-complex pathways and simulations
• Introduces the current big bio-databases and why and how they can be used to develop and support systems biology research

MARKET: Undergraduates, graduates

SUBJECTS: Bioinformatics

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Xia, Bioinformatics and the Cell (978-0-387-71336-6, 2007, $129)
Marcus, Bioinformatics and Systems Biology (978-3-540-78352-7, 2008, $129)
Burger, Anatomy Ontologies for Bioinformatics (978-1-84628-884-5, 2007, $119)

COMPETITION:
Alon, An Introduction to Systems Biology (CRC, 1584886420, 2006, $54.95)
Szallasi, System Modeling in Cellular Biology (MIT, 978-0262195485, 2006, $52.00)
Konopka, Systems Biology: Principles, Methods, and Concepts (CRC, 0824725204, 2006, $69.95)
Bioinformatics: An Introduction is structured into three parts devoted to Information, Biology and Applications. Every section of the book has been thoroughly updated, and expanded where relevant, to take account of significant new discoveries and realizations of the importance of certain concepts. Furthermore new chapters on Algorithms, Data Processing and Biotechnology have been added. Emphasis is placed on the underlying fundamentals and acquisitions of a broad and comprehensive grasp of the field as a whole.

This second edition is intended to be a complete study companion for the advanced undergraduate or graduate student. It is self-contained, bringing together the multiple disciplines necessary for a profound grasp of the field into a coherent whole, allowing the reader to gain much insight into the state of art of bioinformatics.

SELLING POINTS:
- Provides a comprehensive, self-contained introduction to the field of bioinformatics and state-of-the-art research
- Second edition offers three additional chapters plus many expanded sections
- Brings together the multiple disciplines necessary for a profound grasp of the field

MARKET: Researchers, graduate students, advanced undergraduates

SUBJECTS: Bioinformatics; Evolutionary Biology

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Ramsden, An Introduction to Bioinformatics (978-1-4020-2141-1, 2004, $115)
Xia, Bioinformatics and the Cell (978-0-387-71336-6, 2007, $129)
Polanski, Bioinformatics (978-3-540-24166-9, 2007, $69.95)

COMPETITION:
Lesk, Introduction to Bioinformatics (OUP, 0199208042, 2008, $49.95)
Tramontano, Introduction to Bioinformatics (Chapman & Hall/CRC, 1584885696, 2006, $59.95)
Mitra, Introduction to Machine Learning and Bioinformatics (Chapman & Hall/CRC, 158488682X, 2008, $79.95)
Attacks take place everyday with computers connected to the internet, because of worms, viruses or due to vulnerable software. These attacks result in a loss of millions of dollars to businesses across the world.

Identifying Malicious Code Through Reverse Engineering provides information on reverse engineering and concepts that can be used to identify the malicious patterns in vulnerable software. The malicious patterns are used to develop signatures to prevent vulnerability and block worms or viruses. This book also includes the latest exploits through various case studies.

**SELLING POINTS:**
- Introduces various vulnerabilities within assembly code to assist with targeting vulnerability in a software program
- Covers Patch Analysis, vital information for IDS/ IPS security experts trying to locate vulnerable functions or patterns and develop rules/signature for their product
- Includes latest exploits through various case studies

**MARKET:** Professionals and researchers; secondary textbook for advance-level students

**SUBJECTS:** Computer Communication Networks; Communications Engineering, Networks

**LOCATION IN BOOKSTORE:** Computer Science

**RELATED TITLES:**
Raja, Reverse Engineering (978-1-84628-855-5, 2007, $139)
Marchette, Computer Intrusion Detection and Network Monitoring (978-0-387-95281-9, 2001, $94)

**COMPETITION:**
Nazario, Defense and Detection Strategies against Internet Worms (Artech House Publishers, 1580535372, 2003, $89.00)
Eilam, Reverse Secrets of Reverse Engineering (Wiley, 0764574817, 2005, $40.00)
Managing Complex Service Systems

AUTHORS: RICHARD TAYLOR, Hewlett Packard Laboratories, Bristol, UK and CHRISTOPHER TOFTS, Hewlett Packard Laboratories, Bristol, UK

PAGES/ILLUS: approx. 280 p., 30 illus., Hardcover
PRICE: approx. $99.00
AVAILABLE (US): January 2009

This book establishes and communicates a scientific approach to the analysis, design and management of complex information systems enabled services. Case studies illustrate how the techniques described can be employed in large scale, real world examples that are developed to match the theoretical and practical presentation. The authors reframe the problem of analyzing a complex service system from an 'understand the system' view to an 'understand it under control' perspective. This fundamental change recognizes that service systems are largely constructed and should be treated differently from natural systems, something that has typically been ignored in the past. By shifting to a view in which the systems dynamics over the full range of significant factors -- people, the economic and physical environments, as well as technology options -- are understood, many of the pitfalls that have sunk large projects in the past can be avoided.

SELLING POINTS:
• Toolbox of techniques for understanding the value of complex service systems
• Demonstrates effective, proven methodologies for evaluating, designing and managing service systems
• Presents a process for resolving and documenting the differences between stakeholders in a complex service systems environment
• Outlines key techniques for sharing and comprehending the source and delivery of knowledge performance indicators

MARKET: Researchers, professionals, graduate students

SUBJECTS: Technology Management; Information Systems; System Performance

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Becker, Process Management (978-3-540-43499-3, 2003, $99)

COMPETITION:
Alvesson, Knowledge Work and Knowledge-Intensive Firms (OUP, 019926886X, 2004, $48.95)
A Study of Statistical Zero-Knowledge Proofs

AUTHOR: SALIL P. VADHAN, Harvard University, Cambridge, MA, USA
PAGES/ILLUS: approx. 200 p., Hardcover
PRICE: approx. $79.95
AVAILABLE (US): January 2009

Zero-knowledge interactive proofs play a central role in the design and study of cryptographic protocols and are rich objects for complexity-theoretic study. Statistical zero-knowledge (SZK) proofs achieve strong information-theoretic "security", and can provide a clean test bed for the study of more general notions that incorporate computational security.

This monograph is a revised and extended version of the author's PhD thesis, the winning thesis of the 2000 ACM Doctoral Dissertation Competition. It is a comprehensive investigation of statistical zero-knowledge (SZK) proofs. It begins by showing that SZK has two natural complete problems, and then uses these complete problems to address a wide variety of fundamental questions about SZK.

SELLING POINTS:
- The presentation offers clarity and intuition, assuming only a basic background in computational complexity and cryptography
- The book can bring a graduate student or a researcher in a related area up to date on this topic
- Includes clear statements of numerous open problems and research directions, which are likely to interest experts in the area

MARKET: Academic researchers, graduate students

SUBJECTS: Data Structures, Cryptology and Information Theory; Coding and Information Theory; Theory of Computation

LOCATION IN BOOKSTORE: Computer Science

RELATED TITLES:
Rosen, Concurrent Zero-Knowledge (978-3-540-32938-1, 2006, $84.95)
Rothe, Complexity Theory and Cryptology (978-3-540-22147-0, 2005, $99)

COMPETITION:
Detlefsen, Proof, Logic and Formalization (Routledge, 0415023351, 1992, $135.00)
Cupillari, The Nuts and Bolts of Proofs (Academic Press, 0120885093, 2005, $44.95)
Embedded Memories for Nano-Scale VLSIs

EDITOR: KEVIN ZHANG, Intel Corporation, Hillsboro, OR, USA
PAGES/ILLUS: approx. 400 p. 110 illus., Hardcover
PRICE: $129.00
AVAILABLE (US): January 2009

Embedded Memories for Nano-Scale VLSIs provides a comprehensive and in-depth view on the state-of-the-art embedded memory technologies. The book helps practicing engineers grasp key technology attributes and advanced design techniques in nano-scale VLSI design. It also helps them make decisions concerning the right design tradeoffs in real product development. This book provides readers a broad knowledge on the entire embedded memory technologies in order to better comprehend the technologies and create optimal memory solutions in real applications.

SELLING POINTS:
• Provides a comprehensive and in-depth view on the state-of-the-art embedded memory technologies
• Gives an overview on the landscape and trend of embedded memory in various VLSI system designs, including high-performance microprocessor, low-power mobile handheld devices, micro-controllers, and various consumer electronics
• Shows an in-depth view on each different type of embedded memory technology, including high-speed SRAM, ultra-low-voltage and alternative SRAM, embedded DRAM, embedded nonvolatile memory, and emerging or so-called “universal” memories such as FeRAM, MRAM, and PRAM
• Covers all the key technology attributes from a product application perspective, ranging from technology scaling challenges to advanced circuit techniques for achieving optimal design tradeoff in performance and power

MARKET: Professional engineers and graduate students in the VLSI field

SUBJECTS: Circuits and Systems; Electronics and Microelectronics, Instrumentation; Memory Structures

LOCATION IN BOOKSTORE: Electrical Engineering

RELATED TITLES:
Itoh, Ultra-Low Voltage Nano-Scale Memories (978-0-387-33398-4, 2007, $129.00)

COMPETITION:
Taur, Fundamentals of Modern VLSI Devices (CUP, 0521559596, 1998, $74.00)
Wong, Nano-CMOS Circuit and Physical Design (Wiley, 0471466107, 2004, $123.95)
Biomedical Materials

EDITOR: ROGER NARAYAN, University of North Carolina, Chapel Hill, USA
PAGES/ILLUS: approx. 600 p., 100 illus., Hardcover
PRICE: approx. $99.95
AVAILABLE (US): January 2009

Biomedical Materials provides a comprehensive discussion of contemporary biomaterials research and development. Highlighting important topics associated with Engineering, Medicine and Surgery, this volume reaches a wide scope of graduate students involved with biomaterials. A pedagogical writing style and structure provides students with an understanding of the fundamental concepts necessary to pursue research and industrial work on biomaterials, including characteristics of biomaterials, biological processes, biocompatibility, and applications of biomaterials in implants and medical instruments. Written by leading researchers in the field, this text book takes the reader to the forefront of biomedical materials development, providing the student with a taste of how the field is changing, while also serving as a useful reference to physicians and engineers.

SELLING POINTS:
• Offers a comprehensive discussion of contemporary biomaterials research and development
• Organized in a sequence that allows the engineering students to be gradually exposed to typically unfamiliar biology-related materials
• Includes in-depth descriptions of fundamental properties of metal, ceramics, and polymers used in medicine, which competitive texts lack

MARKET: Graduate and advanced undergraduate students, (bio-)engineers and physicians involved with biomedical materials

SUBJECTS: Biomedical Engineering; Biomaterials; Biotechnology

LOCATION IN BOOKSTORE: Engineering

RELATED TITLES:
Park, Biomaterials (978-0-387-37879-4, 2007, $89.95)
Fung, Biomechanics: Mech Props of Living Tissues (978-0-387-97947-2, 1993, $79.95)

COMPETITION:
Temenoff, Biomaterials: The Intersection of Biology and Materials Science (Pearson Prentice Hall, 978-0132350440, 2008, $73.00)
Design of Flexible Production Systems

Methodologies and Tools

EDITOR: TULLIO TOLIO, Politecnico di Milano, Italy
PAGES/ILLUS: approx. 260 p., 100 illus., Hardcover
PRICE: approx. $129.00
AVAILABLE (US): January 2009

Manufacturing Flexibility is usually seen as the answer to demands in present markets. It can be characterized by short lead times, tight product tolerances, pressure on costs, frequent changes demand and continuous evolution of the technological requirements of the products. However, the competitiveness of a firm can be strongly affected by the burden of capital intensive investments into system flexibility.

Designing optimized manufacturing systems represents a very complex problem. Manufacturing strategy, risk appraisal and management techniques, scenario analysis and system performance evaluation must be jointly taken into account over the system’s lifecycle. Moreover, traditional system architectures usually do not represent the most efficient solutions to properly face new production contexts. Dedicated systems are not able to adapt to changes of the product characteristics while flexible systems often offer more flexibility than what is really needed, thus increasing investment and operating costs. It is shown that the design of flexibility will lead to hybrid systems, automated integrated systems where the products can be processed both by general purpose machines and by dedicated machines.

SELLING POINTS:

- New approach to design flexible manufacturing system architectures (Focused Flexibility Manufacturing Systems-FFMSs) endowed with the right level of flexibility required by the specific production problem
- Addressed production problems are analyzed by methods and tools giving manufacturing system solutions with flexibility degree tuned on the production problem itself

MARKET: Postgraduate students, researchers

SUBJECT: Manufacturing, Machines, Tools

LOCATION IN BOOKSTORE: Engineering

RELATED TITLES:

COMPETITION:
Sarkis, Advanced Manufacturing Systems (CRC, 9056996738, 1999, $129.95)
Engineering Electromagnetics

Third Edition

AUTHOR: NATHAN IDA, The University of Akron, OH, USA
(Replaces ISBN: 978-0-387-20156-6)
PAGES/ILLUS: approx. 1200 p., w/ online files/updates, Hardcover
PRICE: approx. $139.00
AVAILABLE (US): January 2009

Engineering Electromagnetics, Third Edition not only provides students with a good theoretical understanding of electromagnetic field equations but it also treats a large number of applications. Topics presented have been carefully chosen for their direct applications to engineering design or to enhance the understanding of a related topic. Included in this new edition are more than 400 examples and exercises and 600 end-of-chapter problems, many of them applications. Many chapters have been reorganized, updated, and condensed for ease of classroom use. A key feature of this new edition is the use of Matlab applications throughout the text. Supplementary files are available online at www.springer.com. The book is a comprehensive two-semester textbook. It is written in direct terms with all details of derivations included and all steps in the solutions to examples listed. It requires little beyond basic calculus and can be used for self study. A wealth of examples and alternative explanations makes it very approachable by students. A complete solutions manual for the end-of-chapter problems is available for professors.

SELLING POINTS:
- This new edition includes references to a MATLAB visualization program (available on our website as a supplement to a student's own MATLAB program) which allows students to explore field behavior graphically
- Provides students with a good theoretical understanding of electromagnetic field equations and also treats a large number of applications
- All topics are directly applicable to engineering design or further understanding of other topics
- Written in simple terms with all details of derivations included and all steps in solutions listed. It requires little beyond basic calculus and can be used for self-study
- Includes over 600 exercises to enhance student understanding
- Examples throughout the text feature fully worked out solutions, while a solutions manual is available to professors for end-of-chapter problems

MARKET: Undergraduates in an electromagnetics course

SUBJECTS: Electronics and Microelectronics, Instrumentation; Electromagnetism, Optics and Lasers; Optical and Electronic Materials

LOCATION IN BOOKSTORE: Engineering,
RELATED TITLES:
Engineering Electromagnetics 2E / Ida (2004, 978-0-387-20156-6, 1233 p., 139.00)

COMPETITION:
Hayt, Electromagnetic Engineering with E-text and Appendix E on CD ROM (McGraw Hill, 0072551666, 2001, $119.00)
Kraus, Electromagnetics with Applications (McGraw Hill, 0072899697, 1999, $135.00)
Cheng, Fundamentals of Engineering Electromagnetics (Addison Wesley, 0201566117, 1992, $154.00)
Rao, Elements of Engineering Electromagnetics (Prentice-Hall, 0131139614, 2004, $154.00)
Karmel, Introduction to Electromagnetic and Microwave Engineering (Wiley, 0471177814, 1997, $150.00)
Urbanization of the Earth’s population will have increased the Earth’s urban population from less than one billion in 1950 to five billion by 2030. Managing water for this burgeoning urban population is one of the critical needs for humanity. This book uses a holistic, interdisciplinary approach to examine the urban water environment. Water has multiple roles: municipal water supply, aquatic habitat, landscape aesthetics and recreation. Increasingly, urban water is reused, serving multiple purposes. Humans alter the urban hydrologic cycle and the chemical and physical integrity of urban water systems and resources. Some of those changes are beneficial, and others harmful. Understanding those changes and impacts requires expertise and perspective from a wide range of disciplines. Chapter authors represent this diversity of expertise, with expertise in surface and groundwater hydrology, civil and environmental engineering, environmental policy, urban planning, law, geomorphology, and recreation management.

SELLING POINTS:
- Focuses on the U.S. because it is already highly urbanized (85%), spans a wide range of hydrologic settings, has diverse urban water institutions, and is well-studied.
- Offers new paradigms for urban water management, emphasizing innovative concepts

MARKET: Undergraduates, graduate students and policy professionals with broad interest in the urban water environment, city planners, civil engineers, urban designers

SUBJECTS: Environmental Management; Landscape/Regional and Urban Planning; Waste Water Technology / Water Pollution Control / Water Management / Aquatic Pollution

LOCATION IN BOOKSTORE: Environmental Sciences

RELATED TITLES:

COMPETITION:
Tompson, Water Use, Management, and Planning in the US. (Elsevier, 0126893403, $122.00)
Cech, Principles of Water Resources (Wiley, 0199245304, 2004, $165.00)
The Effects of Air Pollution on Cultural Heritage

EDITORS: JOHN WATT, Middlesex University, Enfield, UK; JOHAN TIDBLAD, KIMAB, Stockholm, Sweden; VLADIMIR KUCERA, KIMAB, Stockholm, Sweden

PAGES/ILLUS: approx. 350 p., 56 illus., 16 in color, Hardcover
PRICE: $139.00
AVAILABLE (US): January 2009

This book reviews the sources of the air pollutants responsible for building damage and the mechanisms involved. Studies investigating the relationships between pollution concentration (dose) and the resulting damage (response) are described and the latest research findings for dose-response functions are presented. Trends in pollutant emissions, ambient concentrations and building damage over time are described and future predictions are presented. Methodologies for assessing the extent of the potential problem in a region – the stock at risk – are presented. Procedures for estimating the economic implications are described and the consequences are discussed in detail, because economic factors are important for reaching policy and management decisions at local, national and international scales.

SELLING POINTS:
- Combines the results of recent research with practical information for environmental managers
- Provides an important reference manual for researchers, policy makers, economists and historic building managers working in the field of cultural heritage materials and their damage due to air pollution

MARKET: Graduate students in applied environmental sciences; environmental managers involved in building conservation and preservation; environmental policy makers

SUBJECTS: Atmospheric Protection/Air Quality Control/Air Pollution; Cultural Heritage; Environmental Management

LOCATION IN BOOKSTORE: Environmental Sciences

RELATED TITLES:
Mandrioli, Cultural Heritage and Aerobiology (978-1-4020-1622-6, 2004, $169)
Winkler, Stone in Architecture (978-3-540-57626-6, 1997, $209)

COMPETITION:
Saiz-Jimenez, Air Pollution and Cultural Heritage (T&F, 9058096823, 2004, $179.95)
Brimblecome, The Effects of Air Pollution on the Built Environment (World Scientific, 1860942914, 2003, $59.00)
The Future of Fisheries Science in North America

EDITORS: Richard J. Beamish, Pacific Biological Station, Fisheries and Oceans Canada, Nanaimo, Canada and Brian J. Rothschild, University of Massachusetts, MA, USA

PAGES/ILLUS: approx. 450 p., Hardcover
PRICE: $89.95
AVAILABLE (US): January 2009

Fisheries science in North America is changing in response to a changing climate, new technologies, and an ecosystem approach to management and new thinking about the processes affecting stock and recruitment. Authors of the 34 chapters review the science in their particular fields and use their experience to develop informed opinions about the future. Everyone associated with fish, fisheries and fisheries management will find material that will stimulate their thinking about the future. Readers will be impressed with the potential for new discoveries, but disturbed by how much needs to be done in fisheries science if we are to sustain North American fisheries in our changing climate. Officials that manage or fund fisheries science will appreciate the urgency for the new information needed for the stewardship of fish populations and their ecosystems. Fisheries science has been full of surprises with some of the surprises having major economic impacts. It is important to minimize these impacts as the demand for seafood increases and the complexities of fisheries management increase.

SELLING POINTS:
- The first comprehensive book to look at the past, present and future of fisheries science in North America
- Thoughtful interpretations about the complexities of managing fisheries
- Extensive references to past science

MARKET: Researchers associated with fish and fisheries; Managers and funding agencies

SUBJECTS: Fish & Wildlife Biology & Management; Marine & Freshwater Sciences; Ecosystems

LOCATION IN BOOKSTORE: Life Sciences

RELATED TITLES:
Hart, Fisheries Ecology (978-0-412-38260-4, 1983, $159.00)

COMPETITION:
King, Fisheries Biology, Assessment and Management (Wiley, 140515831X, 2007, $99.99)
Walters, Fisheries Ecology and Management (Princeton University, 069115451, 2004, $55.00)
Chromatin Protocols  
Second Edition

EDITOR: SRIKUMAR P. CHELLAPPAN, Moffitt Cancer Center and Research Institute, Tampa, FL, USA
PAGES/ILLUS: approx. 400 p., 51 illus., 2 in color, Hardcover
PRICE: $110.00
AVAILABLE (US): January 2009

Significant advancements have been made in the study of chromatin structure and function over the past fifty years but none as spectacular as those made in the last decade due to the development of novel techniques and the ability to sequence large stretches of DNA. In Chromatin Protocols, Second Edition, expert researchers delineate these cutting-edge techniques via step-by-step laboratory methods and protocols, which encompass a wide array of topics from the isolation of nucleosomes, assembly of nucleosomes and study of the basic chromatin structure to detailed analysis of histone modifications and chromatin function. Written in the highly successful Methods in Molecular Biology™ series style, chapters include brief introductions to the subjects, lists of the necessary materials and reagents, readily reproducible protocols, and Notes sections which highlight tips on troubleshooting and avoiding known pitfalls.

Comprehensive and up-to-date, Chromatin Protocols, Second Edition is a valuable tool for scientists studying various aspects of chromatin function and an ideal guide to aid in the development of new techniques as well as new ideas in the field of chromatin biology.

SELLING POINTS:
• Provides an easily accessible reference volume for analysis of chromatin structure and function incorporating the latest techniques
• Includes detailed, step by step guidelines for the analysis of chromatin structure and its role in transcription, replication and other biological processes
• Details elaborate protocols for the detection and characterization of histone modifications including acetylation, methylation and ubiquitination
• Describes protocols for techniques ranging from immunohistochemical detection of chromatin modifications to genome-wide analysis of chromatin associated proteins
• Acts as a comprehensive guide to the most up to date techniques dealing with all aspects of chromatin biology
• Presents experimental details in an easy to follow modular format typical of the MiMB series

MARKET: Biochemists, molecular and cellular biologists

SUBJECTS: Biochemistry, general; Nucleic Acid Chemistry; Gene Expression

LOCATION IN BOOKSTORE: Life Sciences
RELATED TITLES:
Laurent, Chromatin Dynamics in Cellular Function (978-3-540-33685-3, 2006, $89.95)

COMPETITION:
Machinery of Life
Second Edition

AUTHOR: DAVID S. GOODSELL, Scripps Research Institute, La Jolla, CA, USA
PAGES/ILLUS: approx. 130 p., 70 illus. in color, Hardcover
PRICE: approx. $29.00
AVAILABLE (US): January 2009

The Machinery of Life is a journey into the sub-microscopic world of molecular machines. Readers are introduced to the types of molecules built by cells, including proteins, nucleic acids, lipids, and polysaccharides; then, in a series of full-color "watercolor" illustrations, which show a portion of a living cell magnified by 1,000,000 times, the reader is guided through the interior world of cells. The book explores the ways in which molecules work in concert to perform the processes of living, and how vitamins, viruses, poisons, and drugs each have their effects on the molecules in our bodies. The book is a fascinating introduction to biochemistry for the non-specialist, and combines a lucid text with an abundance of drawings and computer graphics that present the world of cells and their components in a truly unique way. This new edition has been updated to include the many major advances of the past decade, and is richly illustrated in full color throughout.

SELLING POINTS:
- Explores the complexity and interconnected nature of living things
- Contains 50+ full color illustrations of molecules and molecular processes at the atomic and cellular level
- Includes a clear, jargon-free text accessible to the lay reader

SUBJECTS: Cell Biology; Biochemistry, general; Microbiology

LOCATION IN BOOKSTORE: Life Sciences

RELATED TITLES:

COMPETITION:
Protein phosphorylation controls many basic cellular processes, such as cell growth, differentiation, migration, metabolism, and cell death, and its study can provide key insights into the signal transduction pathways that are activated in cells in response to different stimuli, such as growth factor stimulation or exposure to toxicants. In Phospho-Proteomics: Methods and Protocols, expert researchers contribute both well-established protocols and some of the newest strategies for the identification and evaluation of protein phosphorylation on Tyr, Ser, and Thr residues, including topics such as 2-dimensional gel electrophoresis and protein phosphorylation, enrichment of phospho-proteins and peptides, quantitative analysis of phosphorylation by labeling and MS analysis, and antibody and kinase arrays. Written in the highly successful Methods in Molecular Biology™ series format.

SELLING POINTS:
- Comprehensive phospho-proteomics laboratory manual and research guide for both novice and experienced researchers
- Provides step-by-step protocols written by leading researchers in the field that are fully adaptable to any specific phospho-proteome analysis task
- Includes two detailed critical reviews on qualitative and quantitative mass-spectrometry-based phospho-proteomic analysis
- Covers both basic and state-of-the-art practical procedures as well as bio-informatics approaches to explore the phospho-proteome

MARKET: Protein scientists, molecular and cellular biologists, biochemists

SUBJECTS: Protein Science; Proteomics

LOCATION IN BOOKSTORE: Life Sciences

RELATED TITLES:
Palzkill, Proteomics (978-0-7923-7565-4, 2002, $185)
Vlahou, Clinical Proteomics (978-1-58829-837-9, 2008, $99.5)

COMPETITION:
Rakwal, Plant Proteomics (Wiley, 0470069767, 2008, $150.00)
Twyman, Principles of Proteomics (BIOS, 1859962734, 2004, $70.00)
Since the discovery of DNA structure and throughout the ensuing “DNA era”, the field of DNA replication has expanded to cover a vast number of experimental systems. In *DNA Replication: Methods and Protocols*, expert researchers present a collection of techniques and approaches used to investigate DNA replication with an emphasis on the most recent technological developments. Beginning with several informative introductory review chapters, this extensive volume is organized for clarity while fully encouraging innovation by the mixing of methods to create new techniques. Written in the highly successful *Methods in Molecular Biology™* series format, chapters contain brief introductions to the topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and notes on troubleshooting and avoiding known pitfalls.

**SELLING POINTS:**

- Presents a collection of methods described by the experts in the field of DNA replication
- Contains overview chapters as an introduction to the field of DNA replication and as a guide in selecting the methods to use
- Covers techniques for various biological systems, including viral, bacterial, yeast and mammalian DNA replication
- Describes assays based on different technical approaches, including, among others, whole cell microscopy, genetics, in vitro biochemistry and DNA fiber analysis
- Provides detailed, step-by-step protocols for setting up a technique

**MARKET:** Geneticists, molecular and cellular biologists, biochemists, biophysicists

**SUBJECTS:** Animal Genetics and Genomics; Biochemical Engineering; Genetic Engineering

**LOCATION IN BOOKSTORE:** Life Sciences

**RELATED TITLES:**
Copeland, Mitochondrial DNA (978-0-89603-972-8, 2002, $115)
Nickoloff, DNA Damage and Repair (978-0-89603-803-5, 2001, $140)

**COMPETITION:**
Kornberg, DNA Replication (University Science, 978-1891389443, 2005, $88.00)
Open Innovation in the Financial Services
*Growing Through Openness, Flexibility and Customer Integration*

**AUTHOR:** DANIEL FASNACHT

**ISBN-13:** 978-3-540-88230-5

**PAGES/ILLUS:** approx. 300 p., Hardcover

**PRICE:** approx. $79.95

**AVAILABLE (US):** January 2009

Open innovation means gathering new ideas hatched outside organizational boundaries and leveraging new delivery models through collaboration. Fasnacht’s book, as the first of its kind, discusses open business models in the context of the financial services industry. He explores the developments during the last twenty years, including the recent subprime crisis and explains the vital transition from a closed model of operation to open innovation. Fasnacht explains, based on a number of examples, why the transition is necessary and how it can be mastered. The case studies explain how to integrate the client into the firm's innovation process and emphasize the importance of smart client segmentation and a holistic advisory model to serve clients around the globe. Leaders must develop a set of new management practices to be able to invest into multiple strategic directions, growth and to realize organizational energy. They are responsible to create social relationship capital based upon an open innovation culture.

**SELLING POINTS:**
- Innovative and inspiring: Open business models for financial institutions
- A plea for thinking outside of organizational boundaries

**MARKET:** Researchers and professionals in banking and financial services

**SUBJECTS:** Management/Business for Professionals; Finance/Banking; Entrepreneurship

**LOCATION IN BOOKSTORE:** Management / Business for Professionals

**RELATED TITLES:**
Mertins, Knowledge Management (978-3-540-00490-5, 2003, $99)
Menne-Haritz, Business Processes (978-1-4020-2197-8, 2004, $159)
Puu, Business Cycle Dynamics (978-3-540-32167-5, 2006, $135)

**COMPETITION:**
Malhotra, Knowledge Management and Business Model Innovation (IGI Global, 1878289985, 2001, $149.95)
Knowledge Services Management

AUTHOR:  PETER K. MILLS, University of Oregon, Eugene, OR, USA
PAGES/ILLUS:  approx. 200 p., 50 illus., Hardcover
PRICE:  approx. $89.00
AVAILABLE (US):  January 2009

Knowledge Services Management looks at the transformation of the traditional workplace into a quasi-internal market environment where work activities in knowledge services are organized around clusters of similar or complementary knowledge stocks to address particular types of customer-clients priorities. The book explores a new internal market structure for these service organizations and the implications this presents for managers and scholars in the 21st century workplace. By adopting an internal market perspective, the book develops new organizational forms outside the traditional hierarchical paradigm, which is ill-suited for the emerging knowledge workplace, in order to effectively manage emerging knowledge services.

SELLING POINTS:
• Combines principles of corporate strategy, human resource management, and organization design in discussing ways in which managers can develop a distinctive competitive edge in knowledge services organizations
• Integrates management, marketing and operations management to address issues facing managers of knowledge services
• Presents secondary differentiation strategies for sustained competitive advantages in knowledge services

MARKET:  Corporate managers, management consultants, managers and workers in service firms, MBA students

SUBJECTS:  Management/Business for Professionals; Organization/Planning;
Business/Management Science, general

LOCATION IN BOOKSTORE:  Management / Business for Professionals

RELATED TITLES:
Jetter, Knowledge Integration (978-3-7908-1586-3, 2005, $119)
Mertins, Knowledge Management (978-3-540-00490-5, 2003, $99)
Bahrami, Super-Flexibility for Knowledge Enterprises (978-3-540-20576-0, 2004, $69.95)
Darkow, Innovation Management in Global Networks (978-3-540-47627-6, 2007, $129)

COMPETITION:
Dawson, Developing Knowledge-Based Client Relationships (Butterworth-Heinemann, 978-0750678711, 2005, $35.95)
Alvesson, Knowledge Work and Knowledge-Intensive Firms (OUP, 019926886X, 2004, $48.95)
The Purchasing Chessboard

64 Methods to Reduce Cost and Increase Value with Suppliers

AUTHORS: CHRISTIAN SCHUH, A.T. Kearney, Vienna, Austria;
ROBERT KROMOSER, A.T. Kearney, Vienna, Austria;
MICHAEL F. STROHMER, A.T. Kearney, Vienna, Austria;
RAMÓN ROMERO PÉREZ, A.T. Kearney, Berlin, Germany and
ALENKA TRIPLAT, A.T. Kearney, Vienna, Austria

PAGES/ILLUS: approx. 230 p., Hardcover
PRICE: approx. $59.95
AVAILABLE (US): January 2009

The “golden” age of purchasing, in which it was relatively easy to achieve annual cost reductions of between one and three percent, has come to an end. The major reasons for this are the consolidation in many supplier markets, rising energy costs, and growing resource consumption in many emerging markets such as China.

To support companies that need to master the challenges in purchasing and achieve significant value propositions, the authors have developed the Purchasing Chessboard™. The Purchasing Chessboard™ provides a suitable purchasing strategy for every constellation of buying power and selling power.

SELLING POINTS:
• A new strategic framework for supply managers: the Purchasing Chessboard
• Get to know 64 methods to reduce cost and increase value with suppliers
• Developed and presented by A.T. Kearney management consultants
• Includes a foldout map of the chessboard for parallel reading

MARKET: Executive managers with responsibility for purchasing and supply management

SUBJECTS: Procurement; Management/Business for Professionals

LOCATION IN BOOKSTORE: Management / Business for Professionals

RELATED TITLES:
Thiadens, Manage IT! (978-1-4020-3639-2, 2005, $79.95)
Seuring, Cost Management in Supply Chains (978-3-7908-1500-9, 2002, $139)

COMPETITION:
vane Weele, Purchasing and Supply Chain Management (Cengage, 1844800245, 2004, $55.99)
Handbook of Sample Preparation for Scanning Electron Microscopy and X-Ray Microanalysis

AUTHOR:  PATRICK ECHLIN, Cambridge Analytical Microscopy, UK
PAGES/ILLUS:  approx. 200 p., 159 illus. in color, Hardcover
PRICE:  $99.00
AVAILABLE (US):  January 2009

This Handbook is a complete guide to preparing a wide variety of specimens for the scanning electron microscope and x-ray microanalyzer. Specimens range from inorganic, organic, biological, and geological samples to materials such as metals, polymers, and semiconductors which can exist as solids, liquids, and gases. While the Handbook complements the best-selling textbook, *Scanning Electron Microscopy and X-Ray Microanalysis*, Third Edition, by Goldstein, et al., it is entirely self-contained and describes what is needed up to the point the sample is put into the instrument. Photomicrographs of each specimen complement the many sample preparation “recipes”.

SELLING POINTS:

- Identifies problems that all specimens present in examining structure and analysis in SEM
- Describes a series of protocols to ensure that a specimen is properly prepared once the particular problems are identified
- Guides the reader through a general approach to the problem before a particular procedure is applied to the requirements of a given sample
- Designed both as an introduction for the novice and as a guide for the practicing scanning microscopist

MARKET:  Anyone who uses scanning electron microscopy and x-ray microanalysis as part of their research

SUBJECTS:  Characterization and Evaluation Materials; Biological Microscopy; Condensed Matter and Material Sciences

LOCATION IN BOOKSTORE:  Materials Science

RELATED TITLES:
Goldstein, Scanning Electron Microscopy and X-ray Microanalysis (978-0-306-47292-3, 2003, $84.95)
Czanderna, Specimen Handling, Preparation, and Treatments in Surface Characterization (978-0-306-45887-3, 1999, $169)

COMPETITION:
Echlin, Advanced Scanning Electron Microscopy and X-Ray Microanalysis (Plenum, 0306421402, 1986, $89.95)
Analysis III

AUTHORS: Herbert Amann, Universität Zürich, Switzerland and Joachim Escher, Universität Hannover, Germany

PAGES/ILLUS: approx. 490 p., Softcover
PRICE: $109.00
AVAILABLE (US): January 2009

The third and last volume of this series deals with the theory of integration and the foundations of global analysis. Again a modern and clear construction is emphasized which not only provides a well-structured and beautiful theory, but also equips the reader with powerful tools for his further work in mathematics. On this account, for instance, the Bochner-Lebesgue integral is presented which is an indispensable resource for the modern theory of partial differential equations. Likewise a version of Stoke’s theorem is proven that meets the practical needs of mathematics and theoretical physics as far as possible.

In the same way as in the previous volumes numerous prospects of continuative theories also will be given, and this will convey an impression of the importance and the strength of the presented theories to the reader. Additionally these parts will be used to practice and to deepen the provided material.

SELLING POINTS:
- Numerous examples and real calculations are provided
- Includes a large number of exercises and many figures that make this book a reliable escort for the whole course of studies

MARKET: Advanced undergraduate and graduate students; advisors; teachers

SUBJECTS: Analysis; Measure and Integration; Global Analysis and Analysis on Manifolds

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Godement, Analysis II (978-3-540-20921-8, 2005, $69.95)
Zorich, Mathematical Analysis II (978-3-540-40633-4, 2004, $69.95)

COMPETITION:
Dieudonné, Foundations Of Modern Analysis (Hesperides Press, 1406727911, 2006, $29.95)
Numerical Solutions of Partial Differential Equations

AUTHORS: SILVIA BERTOLUZZA, CNR, Pavia, Italy; SILVIA FALLETTA, Politecnico di Torino, Italy; GIOVANNI RUSSO, University of Catania, Italy and CHI-WANG SHU, Brown University, Providence, RI, USA

PAGES/ILLUS: approx. 200 p., Softcover
PRICE: $39.95
AVAILABLE (US): January 2009

This volume contains three sets of revised and augmented notes prepared by the authors for the Advanced School on Numerical Solutions of Partial Differential Equations held at the Centre de Recerca Matemàtica in November 2007.

The book is aimed at master students, PhD students, recent PhD doctorates, and researchers in general willing to update their research skills with recent developments on numerical techniques that play an important role in the international scene.

The text offers to researchers the opportunity to catch up with important developments in the field of numerical analysis and scientific computing and/or to get in touch with state-of-art numerical techniques that are not covered in usual books.

SELLING POINTS:
• Contains a review on central schemes, error estimates for discontinuous Galerkin methods and on the use of wavelets in scientific computing form
• Excellent teaching material for graduate students

MARKET: Graduate students and lecturers in numerical analysis and PDE

SUBJECTS: Numerical Analysis; Partial Differential Equations

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Sauvigny, Partial Differential Equations (978-3-540-34457-5, 2006, $49.95)

COMPETITION:
Evans, Partial Differential Equations (American Mathematical Society, 0821807722, 1998, $79.00)
A Concrete Introduction to Higher Algebra

Third Edition

AUTHOR: LINDSAY N. CHILDS, State University of New York at Albany, NY, USA

(Replaces ISBN: 978-0-387-94484-5)

PAGES/ILLUS: approx. 620 p. 5 illus., Hardcover

PRICE: $69.95

AVAILABLE (US): January 2009

This book is an informal and readable introduction to higher algebra at the post-calculus level. The concepts of ring and field are introduced through study of the familiar examples of the integers and polynomials. A strong emphasis on congruence classes leads in a natural way to finite groups and finite fields. The new examples and theory are built in a well-motivated fashion and made relevant by many applications - to cryptography, coding, integration, history of mathematics, and especially to elementary and computational number theory. The later chapters include expositions of Rabiin's probabilistic primality test, quadratic reciprocity, and the classification of finite fields. Over 900 exercises, ranging from routine examples to extensions of theory, are found throughout the book; hints and answers for many of them are included in an appendix.

SELLING POINTS:

• Informal and readable introduction to higher algebra
• New sections on Luhn's formula, Cosets and equations, and detaching coefficients
• Successful undergraduate text for more than 20 years

MARKET: Undergraduate math students

SUBJECT: Algebra

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Waerden, Algebra - Volume I (978-0-387-40624-4, 2003, $44.95)
Waerden, Algebra – Volume II (978-0-387-40625-1, 2003, $44.95)
Lorenz, Algebra (978-0-387-28930-4, 2005, $49.95)
Lang, Undergraduate Algebra (978-0-387-22025-3, 2005, $69.95)

COMPETITION:
Dummit, Abstract Algebra (Wiley, 047143349, 2003, $118.64)
Rotman, Advanced Modern Algebra (Prentice Hall, 0130878685, 2002, $132.80)
Almost Periodic Oscillations and Waves

AUTHOR: CONSTANTIN CORDUNEANU, University of Texas, Arlington, TX, USA
PAGES/ILLUS: approx. 320 p., Hardcover
PRICE: $89.95
AVAILABLE (US): January 2009

This text is well-designed with respect to the exposition from the preliminary to the more advanced and the applications interwoven throughout. It provides the essential foundations for the theory as well as the basic facts relating to almost periodicity. In six structured and self-contained chapters, the author unifies the treatment of various classes of almost periodic functions, while uniquely addressing oscillations and waves in the almost periodic case. This is the first text to present the latest results in almost periodic oscillations and waves. The presentation level and inclusion of several clearly presented proofs make this work ideal for graduate students in engineering and science. The concept of almost periodicity is widely applicable to continuum mechanics, electromagnetic theory, plasma physics, dynamical systems, and astronomy, which makes the book a useful tool for mathematicians and physicists.

SELLING POINTS:
• Author is a renowned expert in the fields of PDEs and ODEs
• An introduction to metric spaces
• Presentation of several classes of almost periodic functions, including those of Bohr, Besicovitch, and Stepanov
• Convergence of Fourier Analysis to almost any periodic function
• Almost periodic solutions for ODEs in a linear setting

MARKET: Graduate students in mathematics and engineering, applied mathematicians, researchers including physicists studying oscillations or waves

SUBJECTS: Dynamical Systems and Ergodic Theory; Vibration, Dynamical Systems, Control; Fourier Analysis

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Bachmann, Fourier and Wavelet Analysis (978-0-387-98899-3, 1999, $79.95)
Heinonen, Lectures on Analysis on Metric Spaces (978-0-387-95104-1, 2000, $49.95)
Gray, Fourier Transforms (978-0-7923-9585-0, 1995, $135)

COMPETITION:
Halanay, Stability and Stable Oscillations (CRC, 978-9056996710, 2000, $99.95)
Kapitaniak, Chaotic Oscillators (World Scientific, 978-9810206536, 1992, $113)
Self-dual Partial Differential Systems and Their Variational Principles

AUTHOR: NASSIF GHOUSSOUB, University of British Columbia, Vancouver, BC, Canada
PAGES/ILLUS: XIV, 354 p., Hardcover
PRICE: $69.95
AVAILABLE (US): October 2008

This text is intended for a beginning graduate course on convexity methods for PDEs. The generality chosen by the author puts this under the classification of “functional analysis”. The applications, however, require a fair knowledge of classical analysis and PDEs which is needed to make judicious choices of function spaces where the self-dual variational principles need to be applied, and these choices necessarily require prior knowledge of the expected regularity of the (weak) solutions. While this text contains many new results, it is the author's hope that this material will soon become standard for all graduate students.

SELLING POINTS:
- Contains plenty of examples and exercises
- Includes new results which have not been previously presented in book form

MARKET: Graduate students and researchers

SUBJECTS: Functional Analysis; Partial Differential Equations

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Gilbarg, Elliptic Partial Differential Equations of Second Order (978-3-540-41160-4, 2001, $49.95)
Hiriart-Urruty, Fundamentals of Convex Analysis (978-3-540-42205-1, 2001, $69.95)
Lucchetti, Convexity and Well-Posed Problems (978-0-387-28719-5, 2005, $89.95)
Struwe, Variational Methods (978-3-540-66479-6, 2000, $195)

COMPETITION:
Ekeland, Convex Analysis and Variational Problems (SIAM, 978-0898714500, 1987, $63.50)
Introduction to Boolean Algebras

AUTHORS: STEVEN GIVANT, Mills College, Oakland, CA, USA and PAUL HALMOS, deceased


PAGES/ILLUS: approx. 585 p., 10 illus., Hardcover

PRICE: $59.95

AVAILABLE (US): January 2009

This book is an informal yet systematic presentation of lectures given by the author on Boolean algebras. The author’s style is characteristically bold and fresh. He treats Boolean algebras, develops some intriguing ideas, and provides rare insights. Exercises are generously sprinkled through the text for course study.

SELLING POINTS:
- Provides a friendly introduction to Boolean algebras
- Includes hundreds of exercises and a solutions manual
- Contains background chapters on topology and continuous functions
- Author has streamlined many of the proofs and rearranged material in a more logical order

MARKET: Graduate and advanced undergraduate mathematics students, mathematicians

SUBJECTS: Mathematical Logic and Foundations; Order, Lattices, Ordered Algebraic Structures

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Monk, Cardinal Invariants on Boolean Algebras (978-3-7643-5402-2, 1996, $107)
Vladimirov, Boolean Algebras in Analysis (978-1-4020-0480-3, 2002, $273)
Clote, Boolean Functions and Computation Models (978-3-540-59436-9, 2002, $89.95)
Rudeanu, Lattice Functions and Equations (978-1-85233-266-2, 2001, $149)
Blyth, Lattices and Ordered Algebraic Structures (978-1-85233-905-0, 2005, $79.95)

COMPETITION:
Davey, Introduction to Lattices and Order (Cambridge Univ, 978-0521784511, 2002, $48.00)
Powell, Ordered Algebraic Structures (CRC, 978-0824773427, 1985, $169.95)
Distributions and Operators

AUTHOR: Gerd Grubb, University of Copenhagen, Denmark
PAGES/ILLUS: XII, 464 p., 8 illus., Hardcover
PRICE: $69.95
AVAILABLE (US): October 2008

This book gives an introduction to distribution theory, based on the work of Schwartz and of many other people. Additionally, the aim is to show how the theory is combined with the study of operators in Hilbert space by methods of functional analysis, with applications to ordinary and partial differential equations. In some of the latter chapters, the author illustrates how distribution theory is used to define pseudodifferential operators and how they are applied in the discussion of solvability of PDE, with or without boundary conditions. Each chapter has been enhanced with many exercises and examples, and a bibliography of relevant books and papers is collected at the end.

SELLING POINTS:
- The first book to present distribution theory as a standard text
- Contains unique topics including: (1) Boundary value problems in a constant-coefficient case; (2) Pseudodifferential Boundary Operators; (3) Families of extensions
- The author has made this easily accessible to advanced undergraduates, as well as graduates

MARKET: Advanced undergraduates, graduate students

SUBJECTS: Functional Analysis; Partial Differential Equations

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Yosida, Functional Analysis (978-3-540-58654-8, 2003, $44.95)
Conway, A Course on Functional Analysis (978-0-387-97245-9, 1994, $79.95)

COMPETITION:
Taylor, Pseudodifferential Operators (PUP, 978-0691082820, 1981, from $193.05)
Treves, Topological Vector Spaces, Distributions and Kernels (Dover, 978-0486453521, 2006, $29.95)
Stopped Random Walks
Limit Theorems and Applications
Second Edition

AUTHOR: ALLAN GUT, Uppsala University, Uppsala, Sweden
(Replaces ISBN: 978-0-387-96590-1)
PAGES/ILLUS: approx. 270 p., Hardcover
PRICE: approx. $59.95
AVAILABLE (US): April 2009

Classical probability theory provides information about random walks after a fixed number of steps. For applications, however, it is more natural to consider random walks evaluated after a random number of steps. Examples are sequential analysis, queueing theory, storage and inventory theory, insurance risk theory, reliability theory, and the theory of counters. Stopped Random Walks: Limit Theorems and Applications shows how this theory can be used to prove limit theorems for renewal counting processes, first passage time processes, and certain two-dimensional random walks, and to how these results are useful in various applications.

SELLING POINTS:
• Second edition features a new chapter on perturbed random walks, which are modeled as random walks plus “noise”
• Presents updates to the first edition, including an outlook on further results, extensions, and generalizations on the subject
• Close to 100 additional bibliographic references added to some 200 original ones
• Concise blend of material useful for both the researcher and student of probability theory
• Self-contained text motivated by examples and problems

MARKET: For classroom use or self-study

SUBJECTS: Probability Theory and Stochastic Processes; Operations Research, Mathematical Programming

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Gut, Probability: A Graduate Course (978-0-387-22833-4, 2005, $89.95)
Fayolle, Random Walks in the Quarter-Plane (978-3-540-65047-8, 1999, $114)

COMPETITION:
Cohen, Analysis of Random Walks (Ios Pr Inc, 978-9051990867, 1992, $119.00)
Woess, Random Walks on Infinite Graphs and Groups (CUP, 978-0521061728, 2008, $55.00)
Guillotin-Plantard, Dyanamic Random Walks (Elsevier, 978-0444527356, 2006, $101.00)
Solving the Pell Equation

AUTHORS: Michael J. Jacobson, Jr., University of Calgary, AB, Canada and Hugh C. Williams, University of Calgary, AB, Canada

PAGES/ILLUS: approx. 515 p., 20 illus., Hardcover
PRICE: $79.95
AVAILABLE (US): December 2008

Pell’s Equation is a very simple Diophantine equation that has been known to mathematicians for over 2000 years. Even today research involving this equation continues to be very active, as can be seen by the publication of at least 150 articles related to this equation over the past decade. However, very few modern books have been published on Pell’s Equation, and this will be the first to give a historical development of the equation, as well as to develop the necessary tools for solving the equation.

The authors provide a friendly introduction for advanced undergraduates to the delights of algebraic number theory via Pell’s Equation. The only prerequisites are a basic knowledge of elementary number theory and abstract algebra. There are also numerous references and notes for those who wish to follow up on various topics.

SELLING POINTS:
- Describes modern (and surprising) applications to cryptography
- Includes the most recent advances, with a deeper approach than any other book
- Hugh Williams is Canada’s most famous computational number theorist who has published close to 200 articles in top journals
- Michael Jacobson is the known expert on subexponential methods, and a former student of Hugh Williams
- Both authors are known as outstanding expositors

MARKET: Advanced undergraduates, number theorists - professional and amateur

SUBJECT: Number Theory

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Barbeau, Pell’s Equation (978-0-387-95529-2, 2003, $59.95)
Cohen, A Course in Computational Algebraic Number Theory (978-3-540-55640-4, $89.95, 1993)
Buell, Binary Quadratic Forms (978-0-387-97037-0, 1989, $109)

COMPETITION:
Whitford, The Pell Equation (University of Michigan Library, 1418180483, 2005, $18.99)
This is the softcover reprint of the very popular hardcover edition. The book is suitable for advanced undergraduate and beginning graduate students of applied mathematics and engineering. The main theme is the integration of the theory of linear PDEs and the numerical solution of such equations. For each type of PDE, elliptic, parabolic, and hyperbolic, the text contains one chapter on the mathematical theory of the differential equation, followed by one chapter on finite difference methods and one on finite element methods. As preparation, the two-point boundary value problem and the initial-value problem for ODEs are discussed in separate chapters.

**SELLING POINTS:**
- Does not presume a deep knowledge of mathematical and functional analysis
- Includes a chapter on the elliptic eigenvalue problem and eigenfunction expansion
- Some background on linear functional analysis and Sobolev spaces, and also on numerical linear algebra, is reviewed in two appendices

**MARKET:** Advanced undergraduate and beginning graduate students of applied mathematics and engineering

**SUBJECTS:** Numerical Analysis; Partial Differential Equations

**LOCATION IN BOOKSTORE:** Mathematics

**RELATED TITLES:**
Larsson, Partial Differential Equations with Numerical Methods (978-3-540-01772-1, 2003, $84.95)
Sauvigny, Partial Differential Equations (978-3-540-34457-5, 2006, $49.95)

**COMPETITION:**
Evans, Partial Differential Equations (American Mathematical Society, 0821807722, 1998, $79.00)
**Introduction to Nonlinear Dispersive Equations**

**AUTHORS:** FELIPE LINARES, Instituto Nacional de Matematica Pura e Aplicada, Rio de Janeiro, Brazil and GUSTAVO PONCE, University of California, Berkeley, CA, USA

**ISBN-13:** 978-0-387-84898-3  
**PAGES/ILLUS:** approx. 265 p., Softcover  
**PRICE:** $49.95  
**AVAILABLE (US):** December 2008

The aim of this textbook is to introduce the theory of nonlinear dispersive equations to graduate students in a constructive way. The first three chapters are dedicated to preliminary material, such as Fourier transform, interpolation theory and Sobolev spaces. The authors then proceed to use the linear Schrodinger equation to describe properties enjoyed by general dispersive equations. This information is then used to treat local and global well-posedness for the semi-linear Schrodinger equations. The end of each chapter contains recent developments and open problems, as well as exercises.

**SELLING POINTS:**
- Includes a nice selection of topics
- Contains a large selection of non-standard exercises
- Accessible presentation of key tools in harmonic and Fourier analysis

**MARKET:** Advanced undergads, graduate students

**SUBJECT:** Partial Differential Equations

**LOCATION IN BOOKSTORE:** Mathematics

**RELATED TITLES:**  
John, Partial Differential Equations, 4/e (978-0387906096, $69.95, 1991)  
Gilbarg, Elliptic Partial Differential Equations of Second Order (978-3540411604, $49.95, 2001)

**COMPETITION:**  
Fractals and Universal Spaces in Dimension Theory

AUTHOR: STEPHEN LIPSCOMB, University of Mary Washington, Fredericksburg, VA, USA
PAGES/ILLUS: XVIII, 242 p. 101 illus., 15 in color, Hardcover
PRICE: $79.95
AVAILABLE (US): January 2009

Historically, for metric spaces the quest for universal spaces in dimension theory spanned approximately a century of mathematical research. The history breaks naturally into two periods - the classical (separable metric) and the modern (not-necessarily separable metric). The classical theory is now well documented in several books. This monograph is the first book to unify the modern theory from 1960-2007. Like the classical theory, the modern theory fundamentally involves the unit interval.
Unique features include: Lucid coverage of a range of topics including point-set topology and mapping theory, fractal geometry, and algebraic topology; A final chapter contains surveys and provides historical context for related research that includes other imbedding theorems, graph theory, and closed imbeddings; Each chapter contains a comment section that provides historical context with references that serve as a bridge to the literature.

SELLING POINTS:
- Author includes more than 60 black & white illustrations and 15 in color
- Each chapter contains comments that provide historical context
- This is the first time most of this material has appeared in book form

MARKET: Advanced graduate students, researchers; topologists; mathematicians working in fractal geometry; historians of mathematics

SUBJECTS: Topology; Analysis; Functions of a Complex Variable

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Lapidus, Fractal Geometry, Complex Dimensions and Zeta Functions (978-0-387-33285-7, 2006, $54.95)
Peitgen, Chaos and Fractals (978-0-387-20229-7, 2004, $79.95)
Spanier, Algebraic Topology (978-0-387-94426-5, 1994, $69.95)

COMPETITION:
Iliadis, Universal Spaces and Mappings (North Holland, 978-0444515865, $185, 2005)
Introduction to Hamiltonian Dynamical Systems and the N-Body Problem
Second Edition

AUTHORS: KENNETH MEYER; GLEN HALL and DAN OFFIN
(Replaces ISBN: 978-0-387-97637-2)
PAGES/ILLUS: approx. 415 p., 67 illus., Hardcover
PRICE: approx. $79.95
AVAILABLE (US): January 2009

This text grew out of graduate level courses in mathematics, engineering and physics given at several universities. The courses took students who had some background in differential equations and lead them through a systematic grounding in the theory of Hamiltonian mechanics from a dynamical systems point of view. Topics covered include a detailed discussion of linear Hamiltonian systems, an introduction to variational calculus and the Maslov index, the basics of the symplectic group, an introduction to reduction, applications of Poincaré’s continuation to periodic solutions, the use of normal forms, applications of fixed point theorems and KAM theory. There is a special chapter devoted to finding symmetric periodic solutions by calculus of variations methods.

SELLING POINTS:
• Main examples treated in this text are the N-body problem and various specialized problems like the restricted three-body problem
• Theory of the N-body problem is used to illustrate the general theory
• Additional topics covered are the classical integrals and reduction, central configurations, the existence of periodic solutions by continuation and variational methods, stability and instability of the Lagrange triangular point

MARKET: Researchers and graduated students

SUBJECTS: Dynamical Systems and Ergodic Theory; Mathematical and Computational Physics; Analysis

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Meyer, Periodic Solutions of the N-body Problem (978-3-540-66630-1, 2000, $44.95)
Craig, Hamiltonian Dynamical Systems and Applications (978-1-4020-6962-8, 2008, $229.95)

COMPETITION:
MacKay, Hamiltonian Dynamical Systems (Taylor & Francis, 0852742169, 1987, $82.00)
Greenspan, N-Body Problems and Models (World Scientific, 9812387226, 2004, $75.00)
This is a textbook about classical elementary number theory and elliptic curves. The first part discusses elementary topics such as primes, factorization, continued fractions, and quadratic forms, in the context of cryptography, computation, and deep open research problems. The second part is about elliptic curves, their applications to algorithmic problems, and their connections with problems in number theory such as Fermat’s Last Theorem, the Congruent Number Problem, and the Conjecture of Birch and Swinnerton-Dyer. The intended audience of this book is an undergraduate with some familiarity with basic abstract algebra, e.g. rings, fields, and finite abelian groups.

SELLING POINTS:
- Each chapter contains exercises, and throughout the text there are examples of calculations done using the powerful free open source mathematical software system Sage
- The goal of this book is to resolve the congruent number problem, deepen our understanding into the structure of prime numbers, and both challenge and improve our ability to communicate securely

MARKET: Undergraduate mathematics students, graduate mathematics students, mathematicians, mathematics teachers

SUBJECTS: Number Theory; Algebraic Geometry

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Stillwell, Elements of Number Theory (978-0-387-95587-2, 2002, $54.95)
Diamond, A First Course in Modular Forms (978-0-387-23229-4, 2005, $74.95)
Erdös, Topics in the Theory of Numbers (978-0-387-95320-5, 2003, $64.95)

COMPETITION:
Stark, An Introduction to Number Theory (MIT Press, 0262690608, 1978, $40.00)
Dence, Elements of the Theory of Numbers (Academic Press, 0122091302, 1999, $122.00)
Rosen, Elementary Number Theory and Its Applications, 4/e (Addison-Wesley, 2000, 544pp., $102.00)
Silverman, A Friendly Introduction to Number Theory (Prentice Hall, 0131861379, 2005, $106)
Introduction to Partial Differential Equations
A Computational Approach

AUTHORS: ASLAK TVEITO, Simula Research Laboratory, Lysaker, Norway and RAGNAR WINHER, University of Oslo, Norway

PAGES/ILLUS: XVI, 392 p., Softcover
PRICE: approx. $49.95
AVAILABLE (US): January 2009

This is the softcover reprint of a popular book teaching the basic analytical and computational methods of partial differential equations. Standard topics such as separation of variables, Fourier analysis, maximum principles, and energy estimates are included. Prerequisites for this text are the very basics of calculus, linear algebra and ordinary differential equations. Numerical methods are included in the book to show the significance of computations in partial differential equations, and to illustrate the strong interaction between mathematical theory and numerical methods. Great care has been taken throughout the book to seek a sound balance between the analytical and numerical techniques.

SELLING POINTS:
• The authors present the material at an easy pace with exercises and projects ranging from the straightforward to the challenging
• The text would be suitable for advanced undergraduate and graduate courses in mathematics and engineering, and it develops basic tools of computational science

MARKET: Senior undergraduate and graduate students

SUBJECTS: Analysis; Partial Differential Equations; Scientific Computing

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Sauvigny, Partial Differential Equations (978-3-540-34457-5, 2006, $49.95)

COMPETITION:
Evans, Partial Differential Equations (American Mathematical Society, 0821807722, 1998, $79.00)
The finite simple groups are the building blocks from which all the finite groups are made and as such are objects of fundamental importance throughout mathematics. They can be divided into the alternating, sporadic and Lie type groups, the latter further subdivided into classical and exceptional, or into untwisted and twisted types. This book is the first accessible introduction to all these families of finite simple groups at a level suitable for final year undergraduate and beginning graduate students.

The first five chapters provide a thorough grounding in the theory of the alternating and classical groups, followed by an overview of the exceptional groups (treated as automorphism groups of multilinear forms) and the sporadic groups. These chapters form the basis of a final year undergraduate course bringing their undergraduate studies to a fitting climax with seminal results from the late 20th century.

The final two chapters give an introduction to the theory of Lie algebras and Chevalley groups (which provides a unified approach to all the untwisted finite groups of Lie type) and to algebraic groups (which unites the twisted and untwisted types). These final chapters are ideal guides for undergraduate projects and prepare the students for further reading in more advanced texts on these important topics.

SELLING POINTS:
- Is the only book aiming to provide an introduction to all the finite simple groups.
- Treatment of exceptional groups via octonions rather than Lie algebras makes the groups more accessible.

MARKET: Beginning postgraduates in group theory. Researchers, 4th year undergraduates.

SUBJECTS: Group Theory and Generalizations; Topological Groups, Lie Groups

LOCATION IN BOOKSTORE: Mathematics

RELATED TITLES:
Gorenstein, Finite Simple Groups (978-0-306-40779-6, 1982, $114.5)

COMPETITION:
Carter, Lie Algebras of Finite and Affine Type (CUP, 0521851386, 2005, $90.00)
Obstetric Dermatology
A Practical Guide

AUTHOR: ARIEH INGBER, Hadassah University Hospital, Jerusalem, Israel
PAGES/ILLUS: approx. 170 p., 48 illus. in color, Hardcover
PRICE: $109.00
AVAILABLE (US): January 2009

The hormonal, immunologic, and vascular changes during pregnancy also affect the skin. In fact, some dermatoses only appear during pregnancy or the postpartum period. In order to apply the most appropriate treatment and reach the best possible treatment outcome, it is important to recognize these conditions at an early stage. This unique and comprehensive book is an up-to-date guide for all those treating pregnant patients. Lavishly illustrated, it covers both common and rare pregnancy-related dermatoses, and includes: clinical pictures, laboratory tests, histopathology, differential diagnosis, influence on mother and embryo, and treatment and prognosis. Each chapter ends with at least one representative case-report. This user-friendly, uniformly structured guide will help physicians confidently approach and successfully treat patients with pregnancy-related skin disease.

SELLING POINTS:
• Lavishly illustrated up-to-date guide for all those treating pregnant patients
• With helpful case-reports and treatment evaluations
• User-friendly and homogenously structured
• Supports physicians to confidently approach and successfully treat patients with pregnancy related skin disease

MARKET: Dermatologists, gynaecologists, paediatricians, and family physicians

SUBJECTS: Dermatology; Gynecology; Pediatrics

LOCATION IN BOOKSTORE: Medicine, Dermatology

RELATED TITLES:
Frosch, Contact Dermatitis (978-3-540-24471-4, 2006, $299)
Ring, Allergy in Practice (978-3-540-00219-2, 2005, $129)

COMPETITION:
Black, Obstetric and Gynecologic Dermatology with CD-ROM (Mosby, 072343445X, 2008, $139.00)
Roenigk, Surgical Dermatology: Advances in Current Practice (Informa HealthCare, 1853170615, 1993, $199.95)
TASER® Conducted Electrical Weapons: Physiology, Pathology, and Law

EDITORS: MARK W. KROLL, Mark Kroll & Associates, Polytechnic University, University of Minnesota, Crystal Bay, Minnesota, USA and JEFFREY D. HO, Hennepin County Medical Center, Department of Emergency Medicine, Minneapolis, Minnesota, USA

PAGES/ILLUS: approx. 460 p., 64 illus., 19 in color, Hardcover
PRICE: $119.00
AVAILABLE (US): January 2009

TASER® Conducted Electrical Weapons are rapidly replacing the club for law-enforcement control of violent subjects within many countries around the globe. A TASER CEW is a hand-held device that delivers a 400-volt pulse with a duration tuned to control the skeletal muscles without affecting the heart at a distance of up to 6.5 meters over tiny wires. If necessary, it begins with an arcing voltage of 50,000 V to penetrate thick clothing; the 50,000 V is never delivered to the body itself. Due to the widespread usage of these devices and the widespread misconceptions surrounding their operation, this book will have significant utility.

SELLING POINTS:
• Only text on Tasers
• Written by physicians, engineers and law enforcement agents

MARKET: Cardiologists, Medical Examiners, Police Medical Directors, Lawyers, Biomedical Engineers

SUBJECTS: Cardiology; Pathology; Medical Law

LOCATION IN BOOKSTORE: Medicine, Emergency Medicine

RELATED TITLES:
Ross, Sudden Deaths in Custody (978-1-58829-475-3, 2005, $104)

COMPETITION:
Williams, Taser Electronic Control Devices and Sudden In-custody Death: Separating Evidence from Conjecture (Charles C Thomas Pub Ltd, 0398077754, 2008, $59.95)
Schwartz, Tactical Emergency Medicine (LWW, 0781773326, 2007, $110.00)
Behavior Genetics is an interdisciplinary area combining behavioral sciences and genetics. The study of behavior genetics has been increasingly important as we are getting interested in finding genes of complex behavior disorders with advance in molecular genetic techniques. Therefore, this domain has now become a vast common ground for scientists from very diverse fields including psychology, psychiatry, neurology, endocrinology, biochemistry and genetics. However, there are not many textbooks or references to which students in Behavior Genetics can access for their research and class.

Unlike previous Behavior Genetics textbooks, this handbook will discuss current research and topics of interest to psychologists, psychiatrists, and geneticists. Utilizing methodologies and theories commonly used in Behavior Genetics, each chapter will begin with an overview of the selected topic in behavior genetics; current issues and research of the field will be discussed; and we will direct future research of the field at the end of the chapter.

SELLING POINTS:

- Handbook will cover the most current issues in behavior genetics such as schizophrenia, autism, alcoholism, smoking, and drug abuse and the role that behavioral genetics plays in these behaviors
- Contributors will be drawn from animal behaviorists and psychologists who will share their latest empirical findings, while utilizing the latest molecular techniques and methodologies that students can apply to future research

MARKET: Graduate and doctorate students in advanced behavior genetics courses, mostly in psychology and psychiatry departments

SUBJECTS: Human Genetics; Psychiatry; Biological Psychology

LOCATION IN BOOKSTORE: Medicine

RELATED TITLES:

COMPETITION:
Dilalla, Behavior Genetics Principles (APA, 1591470838, 2004, $59.95)
Plomin, Behavioral Genetics 4/e (Worth Publishers, 0716751593, 2000, $95.80)
Blum, Handbook of Psychiatric Genetics (CRC Press, 1996, 0849344867, 1996, $139.95)
Handbook of Psychiatric Measures (APA, 0890424152, 2000, $154.00)
Colorectal Surgery
Living Pathology in the Operating Room

AUTHOR:  Mark Killingback, Fairlight, NSW, Australia
PAGES/ILLUS:  XVIII, 260 p., 330 illus., 68 in color, Softcover
PRICE:  approx. $99.00
AVAILABLE (US):  January 2009

Colorectal Surgery: Living Pathology in the Operating Room is two books in one. First, it is an atlas in the classic definition: each chapter is a two-page spread discussing one case. Functionally, each chapter is a case study with both the surgical and pathological perspectives beautifully rendered and fully explained. Visually, every chapter presents the reader with operative and/or diagnostic photos, and anatomic line drawings by the author. The text, more extensive than in many atlases, provides a concise yet complete operative record: patient history/work up, anatomic anomalies, the procedure itself, pathologic findings, and follow up. Key teaching points emphasize the most important and unique aspects of every case. Residents, fellows, and even seasoned practitioners will gain valuable diagnostic and therapeutic insights from this material. The case study presentation provides an excellent review tool for the American Board of Colon and Rectal Surgery exam.

SELLING POINTS:
  • Provides detailed information about colorectal procedures
  • Each procedure is clearly presented in a two-page atlas spread
  • Features a case-study approach that uses text, operative and diagnostic images and beautifully rendered anatomic line drawings

MARKET:  Colorectal surgeons, pathologists, proctologists, and general surgeons

SUBJECTS:  Colorectal Surgery; General Surgery; Pathology

LOCATION IN BOOKSTORE:  Medicine, General Surgery

RELATED TITLES:
Westra, Surgical Pathology Dissection (978-0-387-95559-9, 2003, $74.95)

COMPETITION:
Jass, Atlas of Surgical Pathology of the Colon, Rectum, and Anus (Churchill Livingstone, 0443037388, 1989, from $239.45)
A crucial first step in equipping health professionals to make greater leadership contributions is to introduce them to the principles of effective leadership. What do leaders do? How do they do it? What features distinguish those who excel at leadership from those who fare poorly as leaders? How could health professions educational programs better prepare future health professionals to play a leadership role? How could continuing education programs in the health professions provide more education and support in leadership for practicing health professionals? Given that healthcare in the US has become a $2 trillion industry, there is a surprising dearth of books addressing these crucial questions.

SELLING POINTS:
- Opens up the fascinating world of leadership to health professionals
- Composed of insightful and thought-provoking essays on the crucial facets of leadership

MARKET: Healthcare educators, professional societies in medicine, all practitioners in positions of, or with aspirations to, group authority

SUBJECTS: Medicine/Public Health, general; Health Informatics; General Practice / Family Medicine

LOCATION IN BOOKSTORE: Medicine, Health Informatics

RELATED TITLES:
Bowman, Women in Medicine (978-0-387-95309-0, 2002, $49.95)
Gunderman, Achieving Excellence in Medical Education (978-1-84628-813-5, 2007, $79.95)

COMPETITION:
Prosser, Effective People: Leadership and Organisation Development in Healthcare (Radcliffe Publishing Ltd, 978-1857756944, 2005, $60.00)
Goodwin, Leadership in Healthcare (Routledge, 978-0415343282, $47.95, 2005)
While reflux disease, achalasia, esophageal esophageal spasm, gastroparesis and IBS include some of the most common disorders in all disease categories, the understanding of their pathophysiology has remained elusive. The field of clinical gastrointestinal motility has for decades relied on the measurement of intestinal movements for diagnosis and management of these difficult and enigmatic disorders of gut function. Although computers have increased the speed with which we can measure the movements of the gut, the devices to measure this movement have not changed in over 20 years.

In the last 2 years, a new technologic breakthrough has taken place in the measurement of intestinal movement. The technology is called high resolution manometry. Rather than the old 4 and 8 channels systems of measuring pressure, high resolution employees 36 closely spaced solid state pressure transducers. By using this technology, the resolution of gut motor activity is incredible. This allows for better ways of viewing motility using color as pressure. This technology makes for beautiful images of gut motility that we have never seen before. We have made diagnoses that would never have been appreciated with the old technology. High resolution manometry is taking over conventional manometry worldwide and represents a dramatic leap in a long time stagnant area.

SELLING POINTS:
- All illustrations in color
- Only book on high resolution manometry

MARKET: Pediatric and Adult Gastroenterologists

SUBJECT: Gastroenterology

LOCATION IN BOOKSTORE: Medicine, Internal Medicine

RELATED TITLES:
Skucas, Advanced Imaging of the Abdomen (978-1-85233-992-0, 2006, $399)
COMPETITION:
Castell, The Esophagus (LWW, 0781741998, 2003, $199.95)
Parkman, The Clinician's Guide to Acid/Peptic Disorders and Motility Disorders of the GI Tract (Slack, 1556427166, 2006, $71.95)
Cataract and Refractive Surgery

Progress III

EDITORS: THOMAS KOHNEN, University of Frankfurt, Department of Ophthalmology, Frankfurt, Germany and DOUGLAS D. KOCH, Baylor College of Medicine, Houston, TX, USA

PAGES/ILLUS: approx. 210 p., 50 illus. in color, Hardcover
PRICE: approx. $109.00
AVAILABLE (US): January 2009

Worldwide, the removal of the opaque crystalline lens is the most frequently performed surgical intervention in the human body and refractive surgery encompasses an increasing array of procedures. This volume covers cataract and refractive surgery, a realm of ophthalmic care that has undergone revolutionary changes in the past 10 years.

SELLING POINTS:
- Indispensable for continuous education and advanced training
- All editors with international reputation and contributing authors with great expertise in their topic
- Well-structured text and design, quick and easy to read
- Bridges the gap between primary literature and daily practice
- Each subject is covered with timely information about new developments in the specialized field

MARKET: Ophthalmologists in clinical and private practice, residents, ophthalmologists-in-training as well as optometrists and ophthalmic nurses

SUBJECT: Ophthalmology

LOCATION IN BOOKSTORE: Medicine, Ophthalmology

RELATED TITLES:
Kohnen, Cataract and Refractive Surgery (978-3-540-30795-2, 2006, $135)

COMPETITION:
Azar, Intraocular Lens in Cataract and Refractive Surgery (Elsevier, 0-7216-8699-0, 2001, from $148.49)
Combes, Cataract Surgery (BMJ Books, 0-7279-1201-1, 2003, $129.95)
Wallace, Refractive Surgery and Multifocal IOLs, (Slack, 1-55642-460-4, 2001, from $119.29)
Pediatric Ophthalmology
*Current Thought and A Practical Guide*

EDITORS: EDWARD M. WILSON, Medical University of South Carolina, SC, USA; RICHARD SAUNDERS, Medical University of South Carolina, SC, USA and TRIVEDI RUPAL, Medical University of South Carolina, SC, USA

PAGES/ILLUS: approx. 510 p., 222 illus., 196 in color, w/ DVD, Hardcover
PRICE: approx. $229.00
AVAILABLE (US): January 2009

Pediatric Ophthalmology: current thought and practice’ is written by renowned experts with many years of experience and perspective on the state-of-the-art recommendations. All chapters are consistent in format and style and have practical application to the daily practice of medical and surgical pediatric ophthalmology. Starting with a guide to the examination of children, it covers all important topics for all who care for children’s eyes regardless of their niche interests within the field of pediatric ophthalmology. Many techniques that have been learned over many years by experienced practitioners will be illustrated and explained to the reader. Added value is given with useful tables and charts that will likely get constant use in offices and operating rooms, for example: Important drug dosages and side-effects, nystagmus surgical charts, strabismus surgical tables, spectacle artifacts, and an intraocular lens nomogram. This practical guide will promote understanding and update and guide the novice and the expert to improve the flow of the examination and treatment outcome. It is one of the most informative and useful books ever written for the pediatric ophthalmologist and the general ophthalmologist who cares for children.

SELLING POINTS:
- All chapters are consistent in format and style, and have practical application to the daily practice of medical and surgical pediatric ophthalmology
- Written by renowned experts with many years of experience and perspective on the state-of-the-art recommendations
- Includes many techniques, tips and pearls learned over many years by experienced practitioners as well as guidelines to the eye examination of children
- Each of these pediatric ophthalmology chapters has new information presented in a readable format
- Chapters cut through the maze and give a bottom-line current position in the science of that subject
- This guide will help novice and expert to improve the flow of the examination and treatment outcome

MARKET: Ophthalmologists

SUBJECTS: Ophthalmology; Pediatrics
LOCATION IN BOOKSTORE: Medicine, Ophthalmology

RELATED TITLES:
Wright, Handbook of Pediatric Eye and Systemic Disease (978-0-387-27927-5, 2006, $64.95)
Lorenz, Pediatric Ophthalmology, Neuro-Ophthalmology, Genetics (978-3-540-22594-2, 2005, $135)
Coats, Strabismus Surgery and its Complications (978-3-540-32703-5, 2007, $199)
Schiefer, Clinical Neuro-Ophthalmology (978-3-540-32706-6, 2007, $229)

COMPETITION:
Nelson, Harleys Pediatric Ophthalmology (Lippincott, 9780781750837, 2005, $210.00)
Taylor, Pediatric Ophthalmology and Strabismus (Elsevier, 9780702027086, 2004, $449.00)
Demer, Pediatric Ophthalmology and Strabismus (Amer Academy of Ophthalmology, 9781560552802, 2003, $179.00)
This unique, outstanding and comprehensive book on diseases of the nose is unsurpassed in its kind. Rhinology covers and shows all relevant surgical steps and surgical procedures with unique step-by-step illustrations, including many in color. Written in extensive detail by the world’s leading authorities, this book will remain the benchmark for many years to come.

SELLING POINTS:
- The first comprehensive, dedicated book on diseases of the nose
- Covers theoretical as well as clinical applications
- Details surgical steps and surgical procedures
- Walks the beginner as well as the established surgeon through state of the art procedures
- Also includes nasal aesthetic/-plastic procedures
- Features many color illustrations
- All chapters written in extensive detail by world leading authorities
- Will be the standard benchmark for many years

MARKET: General ORL, ENT-surgeons, head and neck surgeons as well as plastic surgeons

SUBJECTS: Otorhinolaryngology; Head and Neck Surgery; Plastic Surgery

LOCATION IN BOOKSTORE: Medicine, Otorhinolaryngology

RELATED TITLES:
Kountakis, The Frontal Sinus (978-3-540-21143-3, 2005, $195)
Mang, Manual of Aesthetic Surgery 1 (978-3-540-66512-0, 2001, $339)
Meyer, Secondary Rhinoplasty (978-3-540-65884-9, 2001, $419)
Stamm, Micro-endoscopic Surgery of the Paranasal Sinuses and the Skull Base (978-3-540-66629-5, 2000, $229)

COMPETITION:
Scadding, Investigative Rhinology (Informa HealthCare, 1841841978, 2004, $199.95)
Kennedy, Rhinology and Nasal Allergy Year Book (OceanSide, 0936587121, 1998, $ 67.00)
Schaefer, Rhinology and Sinus Disease (Mosby, 0801678005, 1998, $101.00)
Telepathology

EDITORS: SAJEESH KUMAR, University of Pittsburgh, PA, USA and BRUCE E. DUNN, Clement J. Zablocki Veterans Affairs Medical Center, Milwaukee, WI, USA

PAGES/ILLUS: approx. 240 p., 167 illus., 82 in color, Hardcover
PRICE: $139.00
AVAILABLE (US): January 2009

Written by experts from around the globe "Telepathology" explains technical issues, digital information processing and collective experiences from practitioners in different parts of the world practicing a wide range of telepathology applications. This includes e.g. telepathology for gastrointestinal biopsy specimens, telepathology at the United States Veterans Health Administration, experience with teleneuropathology, applications of virtual microscopy, telepathology in micrographic surgery, dynamic and static robotic techniques for realtime telepathology, teleyctology, feasibility and diagnostic agreement in teledermatopathology, remote control of the scanning electron microscope, ultrastructural telepathology, remote EM-diagnostics, and telepathology for rapid diagnosis of neurosurgical specimens.

SELLING POINTS:
• Up-to-date and timely publication in the fast-growing field of telepathology
• Focus on telepathological procedures and practical implementations
• Overview on current status of technology and service in various specialties and its future implications
• Valuable reference source for specialists from all related disciplines

MARKET: Pathologists, general physicians, specialists from various sub specialities, general and specialist surgeons, medical and health informaticians, medical and computer science researchers, academicians, students, healthcare administrators, primary and remote healthcare providers and nurses

SUBJECTS: Pathology; Health Informatics; Medicine/Public Health, general

LOCATION IN BOOKSTORE: Medicine, Pathology

RELATED TITLES:
Kayser, Telepathology (978-3-540-65245-8, 1999, $95)
Kumar, Telesurgery (978-3-540-72998-3, 2007, $119)
Yogesan, Teleophthalmology (978-3-540-24337-3, 2006, $129)

COMPETITION:
Martinez, Telemedicine in the 21st Century (Nova, 1604566450, 2008, $129.00)
Wootton, Introduction to Telemedicine (Rittenhouse, 1853156779, 2006, $42.00)
Life After Residency
*A Career Planning Guide*

AUTHORS: MELISSA T. BERHOW, Assistant Professor, Department of Anesthesia, Stanford University Medical Center, Stanford, CA, USA; WILLIAM W. FEASTER, Clinical Professor, Department of Anesthesia, Stanford University Medical Center, Stanford, CA, USA and JOHN G. BROCK-UTNE, Professor, Department of Anesthesia, Stanford University Medical Center, Stanford, CA, USA

PAGES/ILLUS: approx. 165 p., 1 illus., Softcover
PRICE: $24.95
AVAILABLE (US): January 2009

*Life After Residency: A Career Planning Guide* is an insightful, step-by-step guide to achieving a successful and fulfilling career in medicine. As professors at Stanford University Medical Center, Drs. Melissa Berhow, William Feaster, and John Brock-Utne began running seminars to advise their residents not only on creating a curriculum vitae and landing a great job, but also on how to manage student loan payments and avoid pitfalls in the life of a physician. The immense success and ensuing demand for more seminars eventually gave rise to *Life After Residency*—a book which continues the seminar discussions in greater depth and magnitude, while maintaining a conversational writing style. Key topics covered include: preparing for a job interview, evaluating job offers and negotiating contracts, obtaining and maintaining the proper State license, applying for membership onto Medical Staffs, obtaining malpractice insurance, buying a house and investing for eventual retirement, and pursuing non-medical career options. Loaded with sage advice and practical wisdom, *Life After Residency* is an invaluable asset to every resident during the transition from residency to life thereafter.

SELLING POINTS:
- A resident’s guide to landing a job, building a career, and managing finances
- Step-by-step instruction and numerous insider tips take the guesswork out of career planning
- Based on a highly popular seminar on career planning at Stanford University Medical Center

MARKET: Residents and medical students

SUBJECT: Medicine/Public Health, general

LOCATION IN BOOKSTORE: Medicine

RELATED TITLES:
Florman, Portable Surgical Mentor (978-0-387-26139-3, 2005, $32.95)
COMPETITION:
Marcinko, Financial Planning for Physicians and Advisors (Jones and Bartlett, 0763745790 2004, $71.95)
Holliman, Resident’s Guide to Starting in Medical Practice (Lippincott Williams & Wilkins, 0-683-04125-8, 1995, Price N/K)
The Impact of Tumor Biology on Cancer Treatment and Multidisciplinary Strategies

EDITORS: MICHAEL MOLLS, Technical University of Munich, Germany; PETER VAUPEL, University of Mainz, Germany; CARSTEN NIEDER, University of Tromsø, Bodø, Norway

PAGES/ILLUS: approx. 310 p., 100 illus., Hardcover
PRICE: $149.00
AVAILABLE (US): February 2009

This book provides a detailed overview of the fundamentals of tumor biology and the influence of biologic factors on the design of therapeutic strategies and the outcome of established and emerging treatments. Particular attention is devoted to multidisciplinary combined modality therapy. The topics reviewed include tumorigenesis, cell proliferation, angiogenesis, physiology of malignant tissues, adhesion and invasion, development of metastases, and the role of the immune system. Subsequent chapters discuss the principles of chemotherapy, radiotherapy, and molecularly targeted therapy, explain treatment resistance, and provide strategies for rational combinations, including the design of translational studies. Furthermore, the principles and clinical implications of diverse new diagnostic and therapeutic approaches are presented.

SELLING POINTS:
• Provides a detailed overview of the fundamentals of tumor biology and the influence of various biologic factors on the design of therapeutic strategies and the outcome of established and emerging treatments
• Particular attention is devoted to multidisciplinary combined modality therapy
• All of the chapters written by basic scientists, clinical researchers, and cancer professionals

MARKET: Practitioners, professionals, scientists/researchers and clinicians in the fields of radiation oncology, oncology, cancer biology, surgical oncology, radiation biology, pathology.

SUBJECTS: Imaging / Radiology; Radiotherapy; Oncology

LOCATION IN BOOKSTORE: Medicine, Radiology

RELATED TITLES:
Nieder, Modification of Radiation Response (978-3-540-42231-0, 2003, $209)
Schulz, Molecular Biology of Human Cancers (978-1-4020-6559-0, 2007, $69.95)
Priestman, Cancer Chemotherapy in Clinical Practice (978-1-84628-989-7, 2007, $59.95)

COMPETITION:
Alon, An Introduction to Systems Biology (CRC, 1584886420, 2006, $54.95)
Osteomyelitis of the Jaws

EDITORS: MARC M. BALTENSPERGER, Winterthur, Switzerland and GEROLD K. EYRICH, Lachen, Switzerland

PAGES/ILLUS: approx. 325 p., 531 illus., 198 in color, Hardcover
PRICE: $249.00
AVAILABLE (US): January 2009

This is the first textbook of its kind covering exclusively all aspects of osteomyelitis of the jaws. It meticulously describes and illustrates clinical presentation and diagnosis, outlining radiological imaging for all types of osteomyelitis of the jaws. Each type is additionally described and illustrated in case reports, giving this book a very practical approach to the subject.

SELLING POINTS:
• Comprehensive overview
• Latest update of research findings
• Excellent didactic approach through classification underlying diagnosis and therapy

MARKET: Researchers and professionals in the fields of oral and maxillofacial surgery, head and neck surgery and otolaryngologists

SUBJECTS: Oral and Maxillofacial Surgery; Head and Neck Surgery; Otorhinolaryngology

LOCATION IN BOOKSTORE: Medicine, Surgery

RELATED TITLES:
Adler, Bone Diseases (978-3-540-65061-4, 2000, $259)
Mora, Nonunion of the long bones (978-88-470-0408-5, 2006, $119)

COMPETITION:
Waldvogel, Osteomyelitis; Clinical Features, Therapeutic Considerations, and Unusual Aspects (Thomas, B0006C5HW8, 1971, from $46.60)
Local Antibiotic Treatment in Osteomyelitis and Soft-tissue Infections: Proceedings of a Symposium, Amsterdam, October 25, 1980 (Excerpta Medica, 9021995115, 1981, from $112.54)
Office Urology
The Clinician's Guide
Second Edition

EDITORS:  ELROY D. KURSH, The Cleveland Clinic Foundation, Cleveland, OH, USA and JAMES C. ULCHAKER, The Cleveland Clinic Foundation, Cleveland, OH, USA

(Replaces ISBN: 978-0-89603-789-2)

PAGES/ILLUS:  Hardcover

PRICE:  approx. $175.00

AVAILABLE (US):  January 2009

Widespread changes in health care delivery and financing have led to a major increase in the level of office-based care provided by urologists. Office Urology: The Clinician's Guide was created to provide a fresh, practical, and concise survey of the key medical and management issues every practicing urologist faces in the office on a daily basis. Here the busy urologist will find easy-to-use clinical articles-written by physicians with demonstrated clinical expertise-that summarize the diagnostic procedures and treatments now widely provided in the office, including intravesical therapy for bladder cancer, minimally invasive treatment of benign prostatic obstruction, transrectal ultrasound and prostate biopsy, and office urodynamics. In addition, there are helpful discussions on marketing the practice, billing and coding techniques, advanced information systems, and important legal issues, as well as expert advice on such neglected topics as genital pain, managing geriatric incontinence, practical dermatology, and counseling patients on the optimal management of their problems.

SELLING POINTS:
• Authoritative and practical
• Offers every active urologist a gold-standard handbook of today's most appropriate treatments and successful office management techniques

MARKET:  Urologists, urologic and other surgical residents, and urologic nurses

SUBJECT:  Urology/Andrology

LOCATION IN BOOKSTORE:  Medicine, Urology & Proctology

RELATED TITLES:
Potts, Essential Urology (978-1-58829-109-7, 2004, $104)

COMPETITION:
Leslie, Urology Board Review (McGraw-Hill, 0071464549, 2005, $74.95)
Quantum Theory of Conducting Matter

*Superconductivity*

AUTHORS: Shigeji Fujita, University at Buffalo, New York, USA; Kei Ito, National Center for University Entrance Examinations, Tokyo, Japan and Salvador Godoy, Universidad Nacional Autónoma de México

PAGES/IllUS: approx. 320 p., 85 illus., Hardcover
PRICE: approx. $69.95
AVAILABLE (US): January 2009

Major superconducting properties including zero resistance, Meissner effect, sharp phase change, flux quantization, excitation energy gap, Josephson effects are covered and microscopically explained, using quantum statistical mechanical calculations. First treated are the 2D superconductivity and then the quantum Hall effects. Included are exercise-type problems for each section. Readers can grasp the concepts covered in the book by following the worked-through problems. Bibliographies are included in each chapter and a glossary and list of symbols are given in the beginning of the book.

SELLING POINTS:
- The microscopic theory of superconducting properties is explained with step-by-step calculations using quantum statistical methods
- Unlike competing works, this book shows how the Bose-Einstein Condensation Theory is applied to two-dimensional superconductors and quantum Hall systems
- Quantum statistical mechanics is used to explain superconductivity and quantum Hall Effect in a unified manner

MARKET: Scientists and researchers focused on condensed matter physics, solid state physics or electromagnetism; graduate students studying superconductivity and the Quantum Hall Effect

SUBJECTS: Quantum Physics; Quantum Computing, Information and Physics; Elementary Particles, Quantum Field Theory

LOCATION IN BOOKSTORE: Physics/Astronomy

RELATED TITLES:
Rössler, Solid State Theory (978-3-540-22244-6, 2004, $145)
Newton, Quantum Physics (978-0-387-95473-8, 2002, $89.95)

COMPETITION:
Ashcroft, Solid State Physics (Brooks Cole, 0030839939, 1976, $206.95)
Quantum Electrodynamics
Fourth Edition

AUTHORS: WALTER GREINER, University of Frankfurt/Main, Germany and JOACHIM REINHARDT, University of Frankfurt/Main, Germany

(Replaces ISBN: 978-3-540-44029-1)
PAGES/ILLUS: approx. 490 p., 167 illus., Softcover
PRICE: $119.00
AVAILABLE (US): January 2009

This textbook on Quantum Electrodynamics is a thorough introductory text providing all necessary mathematical tools together with many examples and worked problems. In their presentation of the subject the authors adopt a heuristic approach based on the propagator formalism. The latter is introduced in the first two chapters in both its nonrelativistic and relativistic versions. Subsequently, a large number of scattering and radiation processes involving electrons, positrons, and photons are introduced and their theoretical treatment is presented in great detail. Higher order processes and renormalization are also included. The book concludes with a discussion of two-particle states and the interaction of spinless bosons.

SELLING POINTS:
• This completely revised and corrected new edition provides several additions to enable deeper insight in formalism and application of quantum electrodynamics
• Several new examples and exercises

MARKET: Graduate students in physics and mathematics

SUBJECTS: Quantum Computing, Information and Physics; Quantum Physics; Elementary Particles, Quantum Field Theory

LOCATION IN BOOKSTORE: Physics/Astronomy

RELATED TITLES:
Scharf, Finite Quantum Electrody (978-3-540-51058-1, 1989, $49.50)

COMPETITION:
Kinoshita, Quantum Electrodynamics (World Scientific, 981020213X, 1990, $155.00)
Landau, Quantum Mechanics: Non-Relativistic Theory (Butterworth-Heinemann, 0750635398, 1981, $54.95)
Lecture Notes on the General Theory of Relativity
From Newton’s Attractive Gravity to the Repulsive Gravity of Vacuum Energy

AUTHOR: ØYVIND GRØN, Oslo University College, Oslo, Norway
PAGES/ILLUS: approx. 265 p., 93 illus., Hardcover
PRICE: approx. $69.95
AVAILABLE (US): January 2009

This book is the result of more than twenty years of lecturing a master course on the General Theory of Relativity at the University of Oslo, Norway, by Dr. Øyvind Grøn. The text has been continuously updated by Dr. Grøn and is written so students can follow the deductions all the way throughout the book. The conceptual content of the general theory of relativity is presented briefly but reasonably and completely. Both bachelor students and master students will find the text useful as the manuscript is organized to easily find the topics one wants to read about, with separate lists of contents, figures, definitions, examples, and an index.

SELLING POINTS:
• The text is a brief yet complete introduction to general relativity, continuously revised so that the lectures and the text should are as up to date as possible
• This book is the ideal student book for a course in general relativity, written by an author who has been complimented in several book reviews for writing comprehensive texts on general relativity
• The book is suited for self study of general relativity and is an understandable and comprehensive text on the subject

MARKET: Advanced undergraduate and graduate students in the field of The General Theory of Relativity; physicists and researchers working in Cosmology

SUBJECTS: Relativity and Cosmology; Mathematical Methods in Physics; Astronomy, Astrophysics and Cosmology

LOCATION IN BOOKSTORE: Physics/Astronomy

RELATED TITLES:
Ferraro, Einstein's Space-Time (978-0-387-69946-2, 2007, $79.95)
Khriplovich, General Relativity (978-0-387-25643-6, 2005, $74.95)

COMPETITION:
Plebanski, An Introduction to General Relativity and Cosmology (Cambridge University Press, 978-0521856232, 2006, $90.00)
The Biographical Encyclopedia of Astronomers

EDITORS: THOMAS HOCKEY, University of Northern Iowa, Cedar Falls, IA, USA
PAGES/ILLUS: XCIV, 1341 p. 325 illus., Softcover
PRICE: $89.95
AVAILABLE (US): January 2009

The Biographical Encyclopedia of Astronomers is a unique and valuable resource for historians and astronomers alike. The two volumes include approximately 1550 biographical sketches on astronomers from antiquity to modern times. It is the collective work of about 400 authors edited by an editorial board of 9 historians and astronomers, and provides additional details on the nature of an entry and some summary statistics on the content of entries. This new reference provides biographical information on astronomers and cosmologists by utilizing contemporary historical scholarship.

SELLING POINTS:
• A new resource for historians, astronomers, and the interested public that will provide biographical information on the next generation of astronomers beyond the Dictionary of Scientific Biography, and enhance the information on earlier periods by including more astronomers and by utilizing contemporary historical scholarship
• This encyclopedia is the collective work of about 400 authors drawn from 40 different countries and numerous institutions around the world, such as the Smithsonian and the Indian Institute of Astrophysics, as well as an editorial board of nine historians and astronomers
• Included are more than 1550 biographical sketches on astronomers broken down into four periods: Ancient-Medieval, Non-Western, Early Modern, and Modern
• Individual entries vary from 100 to 1500 words including the likes of Newton and Einstein as well as lesser-known astronomers like Galileo's acolyte, Mario Guiducci

MARKET: Historians of science, astronomers and professional astronomers, cosmologists, interested public

SUBJECTS: Astronomy; History of Physics; Astronomy, Astrophysics and Cosmology

LOCATION IN BOOKSTORE: Physics/Astronomy

RELATED TITLES:

COMPETITION:
Gillespie, Dictionary of Scientific Biography (Charles Scribner, 068480588X, 1981, $1890)
Porter, Biographical Dictionary of Scientists (OUP, 0195216636, 2000, $240)
Objects in the Kuiper belt represent, in some ways, the most "normal" objects in orbit around the Sun and the Earth and giant planets are unusual exceptions to this norm. This book examines the Kuiper belt, giving the up-to-date, unfiltered story from an expert scientist actively involved in its discovery.

SELLING POINTS:
- Covers one of the most exciting regions for exploration and scientific research in planetary science
- Illustrates basic and technical concepts with colorful analogies and metaphors
- Gives the up-to-date, unfiltered story from an expert scientist actively involved in the discovery of the Kuiper belt
- Introduces the most populous class of planetary bodies in the solar system
- Studies the unsolved and intriguing questions that motivate researchers

MARKET: Popular science enthusiasts

SUBJECTS: Astronomy; Popular Science in Astronomy; Planetology

LOCATION IN BOOKSTORE: Physics/Astronomy

RELATED TITLES:
Harland, The Big Bang (978-1-85233-713-1, 2003, $44.95)
Keel, The Sky at Einstein's Feet (978-0-387-26130-0, 2005, $34.95)
Jones, Life in the Solar System and Beyond (978-1-85233-101-6, 2004, $49.95)

COMPETITION:
Davies, Beyond Pluto (Cambridge University Press, 0521800196, $50.00, 2001)
Stern, Pluto and Charon: Ice Worlds on the Ragged Edge of the Solar System (Wiley-Interscience, 0471152978, $65.00, 1997)
Metaphors, generalizations and unifications are natural and desirable ingredients of the evolution of scientific theories and concepts. Physics, in particular, obviously walks along these paths since its very beginning. This book focuses on nonextensive statistical mechanics, a current generalization of Boltzmann-Gibbs (BG) statistical mechanics, one of the greatest monuments of contemporary physics. Conceived more than 130 years ago by Maxwell, Boltzmann and Gibbs, the BG theory exhibits uncountable – some of them impressive – successes in physics, chemistry, mathematics, and computational sciences, to name a few. Presently, more than two thousand publications, by over 1800 scientists around the world, have been dedicated to the nonextensive generalization. Remarkable applications have emerged, and its mathematical grounding is by now relatively well established.

SELLING POINTS:
- Generalization of the ubiquitous Boltzmann-Gibbs theory
- First pedagogical book on the subject, written by the proponent of the theory
- Many applications to interdisciplinary complex phenomena in virtually all sciences, ranging from physics to medicine, from economics to biology, through signal and image processing and others
- Detailed derivation of results
- Many detailed illustrations
- Brief presentation of Boltzmann-Gibbs statistical mechanics
- Detailed presentation of Nonextensive Statistical Mechanics (for the first time)

MARKET: Graduate students in physics, researchers of statistical mechanics

SUBJECTS: Complexity; Statistical Physics; Astrophysics

LOCATION IN BOOKSTORE: Physics/Astronomy

RELATED TITLES:
Schwabl, Statistical Mechanics (978-3-540-32343-3, 2006, $115)
Bratteli, Operator Algebras and Quantum Statistical Mechanics 2 (978-3-540-61443-2, 1997, $139)
COMPETITION:
McQuarrie, Statistical Mechanics (University Science Books, 1891389157, 2000, $98.00)
Kadanoff, Statistical Physics: Statics, Dynamics and Remoralization (World Scientific, 9810237588, 2000, $86.00)
Managing and Mining Uncertain Data

EDITOR: CHARU C. AGGARWAL, IBM T.J. Watson Research Center, Yorktown Heights, NY, USA

PAGES/ILLUS: approx. 450 p., 20 illus., Hardcover
PRICE: approx. $125.00
AVAILABLE (US): January 2009

Managing and Mining Uncertain Data, a survey with chapters by a variety of well known researchers in the data mining field, presents the most recent models, algorithms, and applications in the uncertain data mining field in a structured and concise way. This book is organized to make it more accessible to applications-driven practitioners for solving real problems. Also, given the lack of structurally organized information on this topic, Managing and Mining Uncertain Data provides insights which are not easily accessible elsewhere. Managing and Mining Uncertain Data is designed for a professional audience composed of researchers and practitioners in industry. This book is also suitable as a reference book for advanced-level students in computer science and engineering, as well as the ACM, IEEE, SIAM, INFORMS and AAAI Society groups.

SELLING POINTS:
• Survey information included with each chapter is unique in terms of introducing the different topics more comprehensively
• Includes case studies based on real-world examples

MARKET: Professionals; advanced-level students in computer science

SUBJECTS: Database Management; Artificial Intelligence (incl. Robotics)

LOCATION IN BOOKSTORE: Professional Computing

RELATED TITLES:
Aggarwal, Data Streams (978-0-387-28759-1, 2006, $89.95)
Pal, Advanced Techniques in Knowledge Discovery and Data Mining (978-1-85233-867-1, 2005, $109)
Cios, Data Mining (978-0-387-33333-5, 2007, $79.95)

COMPETITION:
Larose, Data Mining Methods and Modeling (Wiley, 0471666564, 2006, $101.50)
Han, Data Mining: Concepts and Techniques (Morgan Kaufmann, 1558609016, 2006, $64.95)
Shmuesli, Data Mining for Business Intelligence (Wiley, 0470084855, 2006, $105.95)
The Neuropsychology of Attention
Second Edition

AUTHOR: RONALD COHEN, University of Massachusetts Medical School, Worcester, MA, USA
(Replaces ISBN: 978-0-306-43953-7)
PAGES/ILLUS: approx. 500 p., Hardcover
PRICE: approx. $199.95
AVAILABLE (US): January 2009

It has been 15 years since the original publication of Neuropsychology of Attention. At the time of its publication, attention was a construct that had long been of theoretical interest in the field of psychology and was receiving increased research by cognitive scientists. Yet, attention was typically viewed as a nuisance variable; a factor that needed to be accounted for when assessing brain function, but of limited importance in its own right.

There is a need for a new edition of this book within Neuropsychology to present an updated and integrated review of what is know about attention, the disorders that affect it, and approaches to its clinical assessment and treatment. Such a book will provide perspectives for experimental neuropsychological study of attention and also provide clinicians with insights on how to approach this neuropsychological domain.

SELLING POINTS:
• Integrates current neuropsychological knowledge with research coming from cognitive and neuroscientific research
• Presents information derived from recent developments in the fields of functional and structural brain imaging

MARKET: Neuropsychologists, medical psychologists, neurologists, psychiatrists, and rehabilitation professionals.

SUBJECTS: Neuropsychology; Neurosciences; Neurology

LOCATION IN BOOKSTORE: Psychology

RELATED TITLES:
Gozal, Attention Deficit Hyperactivity Disorder (978-1-58829-312-1, 2005, $175)
Elbaum, Acquired Brain Injury (978-0-387-37574-8, 2007, $69.95)

COMPETITION:
Posner, Cognitive Neuroscience of Attention (Guilford Press, 1593850484, 2004, $80.00)
Hallowell, Ratey, Driven To Distraction (Touchstone, 0684801280, 1995, $16.00)
Barkley, Attention-Deficit Hyperactivity Disorder (Guilford Press, 1572302754, 1998, $15.00)
Assessing Impairment
From Theory to Practice

EDITORS:  
SAM GOLDSTEIN, University of Utah School of Medicine,  
Salt Lake City, UT, USA and JACK NAGLIERI, George  
Mason University, Centerville, VA, USA

PAGES/ILLUS: approx. 425 p., Hardcover
PRICE: approx. $59.95
AVAILABLE (US): January 2009

Impairment and disability are widely used terms, yet considerable disagreement exists as to their relationship—especially when impairment means different things to different professionals in the fields of mental health, medicine, and education. Although diagnostic criteria for various disorders are clearly detailed in the DSM-IV and elsewhere, criteria for impairment remain elusive. And patients with severe limitations but minimal symptoms, or the reverse, further complicate the discussion. The first in-depth treatment of the theory, definition, and evaluation of this core concept, Assessing Impairment: From Theory to Practice cuts through the confusion and cross-talk. Leading scholars and clinicians offer a robust evidence base for a much-needed reconceptualization of impairment within the context of diagnosis and disability, arguing for a wide-ranging quality-of-life perspective. This contextual approach to assessment goes beyond mere symptom counting, resulting in more accurate diagnosis, targeted interventions, and improved patient functioning.

SELLING POINTS:
- First comprehensive volume of its type on impairment
- A must-have companion volume to the lead editors’ Impairment Rating Scale
- Presents theory that is tied to scientific research and represents an important shift in the conceptualization of impairment in making diagnoses and designing treatment
- Edited by leading scholarly clinicians in this field

MARKET: Clinical child, school, and educational psychologists

SUBJECTS: Child & School Psychology; Clinical Psychology; Education (general)

LOCATION IN BOOKSTORE: Psychology

RELATED TITLES:
Goldstein, Handbook of Resilience in Children (0306485710, 2005, $150)
Kamphaus, Clinical Assessment of Child and Adolescent Intelligence (0387262997, 2005, $99)

COMPETITION:
Wodrich, Patterns of Learning Disorders (Guilford, 978-1-59385-201-6, 2006, $40.00)
Farmer, Treating Neurodevelopmental Disabilities (Guilford, 978-1-59385-246-7, 2006, $48.00)
Clinical psychologists and neuropsychologists are traditionally taught that cognition is mediated by the cortex and that subcortical brain regions mediate the coordination of movement. However, this argument can easily be challenged based upon the anatomic organization of the brain.

Cognitive neuroscience is entering a new era as we recognize the roles of subcortical structures in the modulation of cognition. The fields of neuropsychology, cognitive psychology, neuropsychiatry, and neurology are all developing in the direction of understanding the roles of subcortical structures in behavior. This book is informative while defining the need and direction for new paradigms and methodologies for neuropsychological assessment.

SELLING POINTS:
- There are no other books available that discuss the cognitive and emotional aspects of subcortical pathology at the level of clinical neuropsychology
- At the cutting edge of clinical research connecting subcortical processes to cognition and affect

MARKET: Neuropsychologists, rehabilitation specialists, cognitive neuroscientists, and psychiatrists

SUBJECTS: Neuropsychology; Psychiatry; Cognitive Psychology

LOCATION IN BOOKSTORE: Psychology

RELATED TITLES:

COMPETITION:
Vallar, The Neuropsychology of Subcortical Lesions (OUP, 978-0-198-54677-1, 1992, $168)
Bradshaw, Developmental Disorders of the Frontostriatal System (Psychology Press, 1841692271, 2002, $44.95)
Psychology, Religion, and Spirituality

AUTHOR: JAMES M. NELSON, Valparaiso University, Valparaiso, IN, USA
PAGES/ILLUS: approx. 595 p., Hardcover
PRICE: $49.95
AVAILABLE (US): January 2009

The past century has seen the relationship between psychology and religion progress from wary antagonists to strange bedfellows to complementary healing approaches. Psychology, Religion, and Spirituality follows this journey, illuminating the robust dialogue that continues to accompany it.

The elegant, accessible coverage ranges from early psychological critiques of religion and responses from major religious thinkers to positivist and constructivist philosophies; from Jung's archetypes to neurobiological research into the religious brain; from scientific constructs of prayer, meditation, and mindfulness to collaborative interventions for mental health.

SELLING POINTS:
• This comprehensive volume is being authored specifically for use as a standalone text, and may also be used in conjunction with a set of primary source readings
• This book is superior to other works on the psychology of religion in that it combines both theoretical work and empirical research (where as other focus on one and neglect the other), and provides a practical application of concepts and research findings

MARKET: Graduate and undergraduate level courses on the psychology of religion or spirituality, or courses that might treat major topics in the psychology of religion such as courses on adult development.
Graduate level courses on counseling or psychotherapy that intend to address the topic of spiritual issues in counseling.

SUBJECTS: Clinical Psychology; Religious Studies

LOCATION IN BOOKSTORE: Psychology

RELATED TITLES:
Freeman, Clinical Applications of Cognitive Therapy (978-0-306-48462-9, 2004, $74.95)
Dockett, Psychology and Buddhism (978-0-306-47412-5, 2003, $84.95)

COMPETITION:
Spilka, The Psychology of Religion (Guilford Press,1-572-30901-6, 2003, $79.00)
Nonlinear Regression with R

AUTHORS: CHRISTIAN RITZ, Royal Veterinary and Agricultural University, Frederiksberg, Denmark and JENS CARL STREIBIG, Royal Veterinary and Agricultural University, Taastrup, Denmark

PAGES/ILLUS: XII, 148 p., Softcover
PRICE: $54.95
AVAILABLE (US): October 2008

R is a rapidly evolving lingua franca of graphical display and statistical analysis of experiments from the applied sciences. Currently, R offers a wide range of functionality for nonlinear regression analysis, but the relevant functions, packages and documentation are scattered across the R environment. This book provides a coherent and unified treatment of nonlinear regression with R by means of examples from a diversity of applied sciences such as biology, chemistry, engineering, medicine and toxicology. Subsequent chapters explain the salient features of the main fitting function nls(), the use of model diagnostics, how to deal with various model departures, and carry out hypothesis testing. In the final chapter grouped-data structures, including an example of a nonlinear mixed-effects regression model, are considered.

SELLING POINTS:
• Unique because it approaches non-linear regression modeling through the functionality available in R
• Exhibits how analysis in many respects is carried out using the same commands and functions as would be used to analyze linear or generalized linear or other models in R

MARKET: Practitioners, students

SUBJECTS: Statistical Theory and Methods; Pharmacology/Toxicology; Numerical and Computational Methods in Engineering

LOCATION IN BOOKSTORE: Statistics

RELATED TITLES:
Huet, Statistical Tools for Nonlinear Regression (978-0-387-40081-5, 2003, $89.95)
Venables, Modern Applied Statistics with S (978-0-387-95457-8, 2002, $84.95)

COMPETITION:
Bates, Nonlinear Regression Analysis and Its Applications (Wiley, 0471816434, 1988, $94.95)
Faraway, Extending the Linear Model with R (ChapmanHall/CRC, 158488424X, 2005, $89.95)