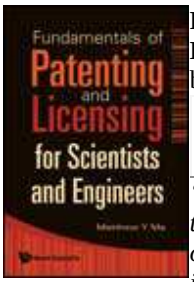
Monthly Highlights - May 2009

This month we recommend:

Business and Management



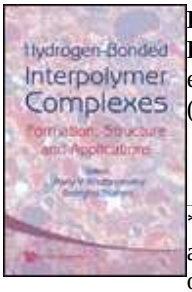
FUNDAMENTALS OF PATENTING AND LICENSING FOR SCIENTISTS AND ENGINEERS
by **Matthew Y Ma** (*Scientific Works, USA*)

292pp May 2009
ISBN 978-981-283-420-1

"Matthew Ma has a deep understanding of the world of patents from the legal, technology, and business perspective. However, the brilliance of his book is the reduction of these complex concepts into easy to understand language. As the title would indicate, it is great for Scientists and Engineers, but also a must read for technology business leaders."

James Billmaier
Founder, Patent Navigation Inc.

Chemistry



HYDROGEN-BONDED INTERPOLYMER COMPLEXES
Formation, Structure and Applications
edited by **Vitaliy V Khutoryanskiy** (*University of Reading, UK*) & **Georgios Staikos** (*University of Patras, Greece*)

376pp May 2009
ISBN 978-981-270-785-7

Noncovalent interactions play key roles in many natural processes leading to the self-assembly of molecules with the formation of supramolecular structures. This book focuses on the latest developments in the area of interpolymer complexation via hydrogen bonding. It represents a collection of original and review articles written by recognized experts from Germany, Greece, Kazakhstan, Poland, Romania, Russia, UK, Ukraine, and the USA.

Computer Science

New Frontiers in Robotics - Vol. 2

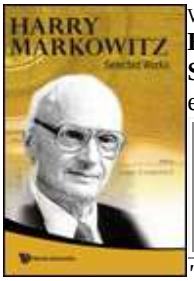
DYNAMICS AND ROBUST CONTROL OF ROBOT-ENVIRONMENT INTERACTION

by **Miomir Vukobratovic** (*"Mihajlo Pupin" Institute, Belgrade, Serbia*), **Dragoljub Surdilovic** (*Fraunhofer Institute for Production Systems & Design Technology IPK, Berlin, Germany*), **Yury Ekalo** (*St Petersburg Electrotechnical University, Russia*) & **Dusko Katic** (*"Mihajlo Pupin" Institute, Belgrade, Serbia*)

660pp May 2009
ISBN 978-981-283-475-1

This book covers the most attractive problem in robot control, dealing with the direct interaction between a robot and a dynamic environment, including the human-robot physical interaction. It provides comprehensive theoretical and experimental coverage of interaction control problems, starting from the mathematical modeling of robots interacting with complex dynamic environments, and proceeding to various concepts for interaction control design and implementation algorithms at different control layers. Focusing on the learning principle, it also shows the application of new and advanced learning algorithms for robotic contact tasks.

Economics and Finance



World Scientific-Nobel Laureate Series - Vol. 1

HARRY MARKOWITZ
Selected Works

edited by **Harry M Markowitz** (*University of California, San Diego, USA*)

716pp May 2009
ISBN 978-981-283-363-1
ISBN 978-981-283-364-8(pbk)

"As the founder of modern investment theory, Harry Markowitz has continued to move the field forward with one groundbreaking study after another over an amazing span of years. This volume is an invaluable guide for anyone who wants to learn what modern investment theory is all about!"

Martin Leibowitz
Managing Director, Morgan Stanley — Research, USA

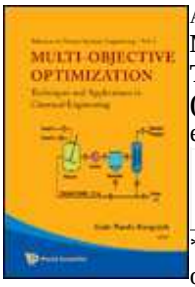
HEDGE FUND ALPHA
A Framework for Generating and Understanding Investment Performance

edited by John M Longo (*Rutgers University, USA*)

336pp May 2009
ISBN 978-981-283-465-2

Hedge funds are perhaps the hottest topic in finance today, but little material of substance to date has been written on the topic. This book will be invaluable to not only financial professionals, but anyone interested in learning about hedge funds and their future.

Engineering

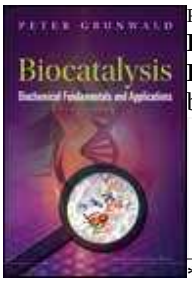


Advances in Process Systems Engineering - Vol. 1
MULTI-OBJECTIVE OPTIMIZATION
Techniques and Applications in Chemical Engineering
(With CD-ROM)
edited by **Gade Pandu Rangaiah** (*National University of Singapore*)

456pp May 2009
ISBN 978-981-283-651-9

Following a brief introduction and general review on the development of multi-objective optimization applications in chemical engineering since 2000, the book gives a description of selected multi-objective techniques and then goes on to discuss chemical engineering applications. These applications are from diverse areas within chemical engineering, and are presented in detail. All chapters will be of interest to researchers in multi-objective optimization and/or chemical engineering; they can be read individually and used in one's learning and research.

Life Science



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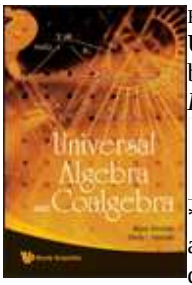
BIOCATALYSIS
Biochemical Fundamentals and Applications
by **Peter Grunwald** (*University of Hamburg, Germany*)

1052pp May 2009
ISBN 978-1-86094-744-5
ISBN 978-1-86094-771-1(pbk)

This book covers the fundamentals of the field of biocatalysis that are not treated in such detail in existing biocatalysis books or biochemistry textbooks. The topics covered ranges from basic enzyme chemistry (biosynthesis, structure, properties, interaction forces, kinetics) to a detailed description of catalytic mechanisms.

Mathematics



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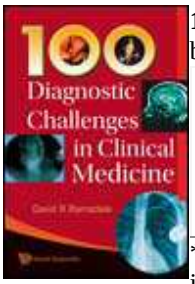
UNIVERSAL ALGEBRA AND COALGEBRA
by **Klaus Denecke** (*Universität Potsdam, Germany*) & **Shelly L Wismath** (*University of Lethbridge, Canada*)

292pp May 2009
ISBN 978-981-283-745-5

The purpose of this book is to study the structures needed to model objects in universal algebra, universal coalgebra and theoretical computer science. Universal algebra is used to describe different kinds of algebraic structures, while coalgebras are used to model state-based machines in computer science.

Medicine

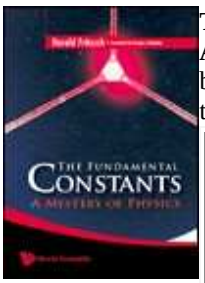


100 DIAGNOSTIC CHALLENGES IN CLINICAL MEDICINE
by **David R Ramsdale** (*The Cardiothoracic Centre, UK*)

256pp May 2009
ISBN 978-981-283-939-8
£43
ISBN 978-981-4271-74-5(pbk)

****100 Diagnostic Challenges in Clinical Medicine* is composed of one hundred well-illustrated clinical scenarios and their appropriate investigations. A wide variety of specialties are covered including cardiology, neurology, dermatology, endocrinology, tropical medicine, haematology, metabolic medicine, radiology, ophthalmology, venereology, and infectious diseases. Presenting the relevant investigations corresponding to each case in an interesting and easy-to-read Q&A format concerning diagnosis and management, this book serves as an ideal, and hopefully enjoyable, study aid for medical students and junior doctors who are preparing for clinical examinations in medicine.****

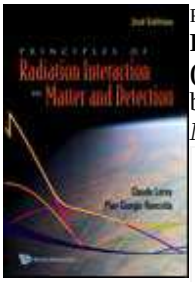
Physics



THE FUNDAMENTAL CONSTANTS
A Mystery of Physics
by **Harald Fritzsch** (*University of Munich, Germany*)
translated by **Gregory Stodolsky**

216pp May 2009
ISBN 978-981-281-819-5
£51
ISBN 978-981-283-432-4(pbk)

Physicist and author Harald Fritzsch invites the reader to explore the mystery of the fundamental constants of physics in the company of Isaac Newton, Albert Einstein, and a modern-day physicist. The conversation that the three scientists are imagined to have provides an entertaining introduction to the constants and covers topics ranging from atomic, nuclear, and particle physics to astrophysics and cosmology.



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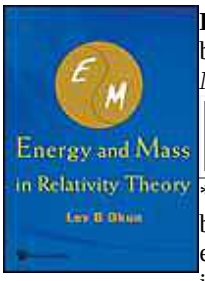
PRINCIPLES OF RADIATION INTERACTION IN MATTER AND DETECTION (2nd Edition)
by **Claude Leroy** (*Université de Montréal, Canada*) & **Pier-Giorgio Rancoita** (*Istituto Nazionale di Fisica Nucleare, Milan, Italy*)

952pp May 2009
ISBN 978-981-281-827-0
ISBN 978-981-281-828-7(pbk)

This book, like its first edition, addresses the fundamental principles of interaction between radiation and matter and the principle of particle detectors in a wide scope of fields, from low to high energy, including space physics and the medical environment. In this second edition, new sections dedicated to the following topics are included: space and high-energy physics radiation environment, non-ionizing energy loss (NIEL), displacement damage in silicon devices and detectors, single event effects, detection of slow and fast neutrons with silicon detectors, solar cells, pixel detectors, and additional material for dark matter detectors.



ENERGY AND MASS IN RELATIVITY THEORY

by **Lev B Okun** (*A I Alikhanov Institute of Theoretical and Experimental Physics, Moscow, Russia*)

324pp May 2009
ISBN 978-981-281-411-1

*******Energy and Mass in Relativity Theory* presents about 30 pedagogical papers published by the author over the last 20 years. They deal with concepts central to relativity theory: energy E, rest energy E0, momentum p, mass m, velocity v of particles of matter, including massless photons for which v = c. Other related subjects are also discussed.**