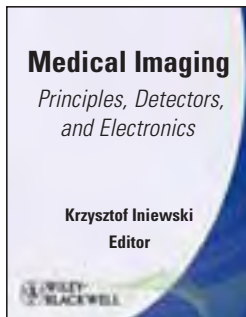


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Principles, Detectors, and Electronics

Krzysztof Iniewski, Univ. of Alberta in Edmonton, Canada; Editor

Addressing state-of-the-art integrated circuit design in the context of medical imaging of the human body, *Medical Imaging: Principles, Detectors, and Electronics* reviews a wide variety of new opportunities in ultra-sound, computer

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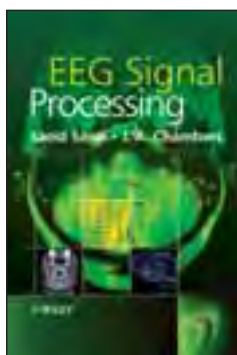
Quantitative Imaging Tools for Lung Cancer Drug Assessment

James L. Mulshine, Rush Univ. Medical Center USA; Thomas M. Baer, Stanford Univ., USA; Editors

This insightful treatment presents chapters written by leading clinical researchers in the field of lung cancer, where high resolution 3-D imaging technology appears to hold the greatest near-term promise, as well as contributions from recognized experts in CAD, medical information technology systems, regulatory procedure, x-ray standards development, and clinical trial design.

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EEG Signal Processing

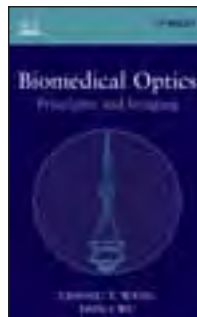
Saeid Sanei, J. A. Chambers, both of Cardiff Univ., UK

Developing and understanding advanced signal processing techniques for the analysis of EEG signals is crucial in the area of biomedical research. This book focuses on these techniques, providing expansive coverage of algorithms and tools from the field of digital signal processing. It discusses their applications to medical data, using graphs and topographic images

to show simulation results that assess the efficacy of the methods.

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Biomedical Optics

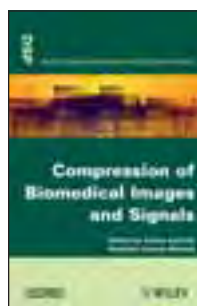
Principles and Imaging

Lihong V. Wang, Hsin-i Wu, both of Texas A&M Univ., USA

Covers: the fundamentals of photon transport in biological tissues, including Rayleigh and Mie scattering and Monte Carlo simulations; optical imaging techniques for biological tissues, including ballistic, quasi-ballistic, diffuse, and ultrasound-aided hybrid imaging; the physics and engineering of imaging modalities.

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Amine Nait-Ali, Univ. of Paris 12, France; Christine Cavaro-Menard, Univ. of Angers, France; Editors

With the expansion of image and signal compression for storage and transmission in the last decade, this book offers a timely overview of compression techniques applied to biomedical data, including physiological signals, MRI, X-ray, ultrasound

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Digital Signal Processing Using Matlab

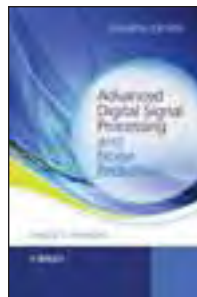
André Quinquis, *ENSIETA, France*

This text uses MATLAB as a computing tool to explore traditional DSP topics and solve problems. A large number of worked examples, computer simulations and applications are provided, along with theoretical aspects to gain essential understanding.

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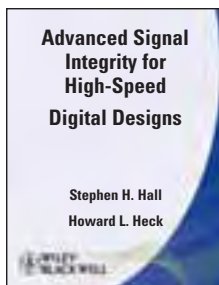
Roger Woods, *John McAllister, both of Queen's Univ., Belfast*; Ying Yi, *Univ. of Edinburgh*; Gaye Lightbody, *Univ. of Ulster*

Take an in-depth look at methods for implementing complex digital signal processing systems into programmable hardware using FPGA technology.

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Stephen H. Hall, Howard L. Heck, *both of Intel Corporation*

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communications, and microwave engineering and applies them to the field of high-speed digital design. This approach creates an optimal combination of theory and practice that is meaningful to practicing engineers and graduate students alike.

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Advanced Mixed Signal Communication Systems

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Joy Laskar, Sudipto Chakraborty, Manos M. Tantzaris, *all of Georgia Institute of Technology, USA*; Anh-Vu Pham, *Univ. of California, Davis, USA*

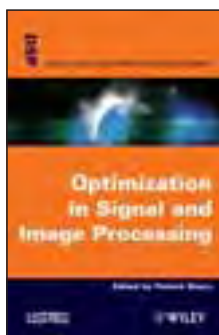
With its novel approach, *Advanced Mixed Signal Communication Systems* explains the synergistic nature of systems, circuits, and device fundamentals in designing a mixed

signal system. Unlike the current practice that views the separate functionalities as building blocks of the new system and concentrates on interfacing them, this text places emphasis on providing a fundamental understanding of the component parts of such a system.

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Optimization in Signal and Image Processing

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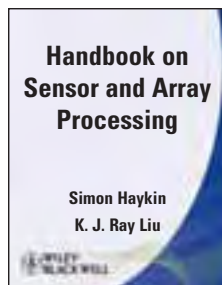
Patrick Siarry, Editor

This book describes the optimization methods most commonly encountered in signal and image processing: artificial evolution and Parisian approach; wavelets and fractals; information criteria; training and quadratic programming; Bayesian formalism; probabilistic modeling; Markovian approach; hidden Markov

models; and metaheuristics (genetic algorithms, ant colony algorithms, cross-entropy, particle swarm optimization, estimation of distribution algorithms, and artificial immune systems).

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Simon Haykin, *McMaster Univ., Canada*; K. J. Ray Liu, *Univ. of Maryland, USA*

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Adaptive Radar Signal Processing

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Simon Haykin, *McMaster Univ., Canada*; Editor

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Subband Adaptive Filtering

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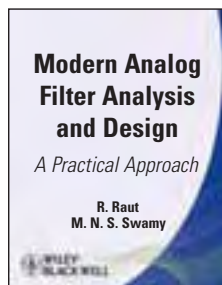
Theory and implementation

Kong-Aik Lee, *Institute For Infocomm Research*; Woon-Seng Gan, *Nanyang Technological Univ., Singapore*; Sen M. Kuo, *Northern Illinois Univ., USA*

This book provides an introductory but extensive guide to the theories behind various subband adaptive

filtering techniques. The authors provide MATLAB-based examples, applications, and exercises to demonstrate the basic principles underlying subband adaptive filter production for beginners. Additionally, the comprehensive coverage of recent developments such as multi-width tap-weight adaptation, delayless architectures, and filterbank design for band-edge effects enables advanced readers to keep up-to-date with the industry.

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R. Raut, M. N. S. Swamy, *both of Concordia Univ., Canada*

Starting from the fundamental details, this accessible text describes how to design filters and illustrates the single steps of application of these principles by using the necessary analysis and providing numerical

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Adaptive Filters

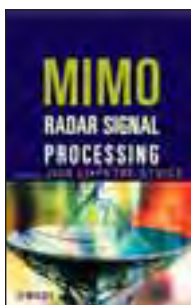
Ali H. Sayed, *Univ. of California, Los Angeles, USA*

A comprehensive, thorough, and up-to-date treatment of adaptive filtering with an extensive list of problems, appendices, computer projects, figures, simulations, and discussions on all the current topics. This book presents a number of useful concepts from linear algebra and matrix

theory, in addition to adaptive filtering coupled with applications to a variety of problems of practical relevance.

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MIMO Radar Signal Processing

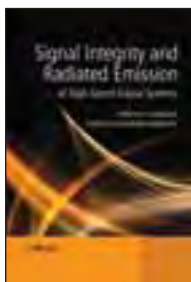
Jian Li, *Univ. of Florida, USA*;
Petre Stoica, *Uppsala Univ., Sweden*

Take a comprehensive look at this emerging field. This book introduces recent developments in MIMO radar in a tutorial manner to stimulate new concepts, theories, and applications and foster further cross-fertilization of ideas with MIMO communications. Topics include: adaptive

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Signal Integrity and Radiated Emission of High-Speed Digital Systems

Spartaco Caniggia, *Italtel (Retired)*;
Francescaromana Maradei, *La Sapienza Univ. of Rome, Italy*

This book investigates signal integrity problems, such as reflections, crosstalk, switching noises, and radiated emissions in high-speed digital systems for IT and telecoms applications by

using theory, models, and many experimental results for practice. After a short introduction to signaling and radiated interference in digital systems, the book provides a detailed characterization of logic families in terms of static and dynamic characteristic useful for modeling techniques.

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Discrete-Signal Analysis and Design

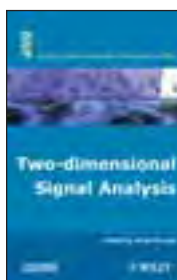
William E. Sabin, *Rockwell Collins Company (Retired)*

Provides a clear, step-by-step approach to the practical use of discrete-time and discrete-frequency signal processing, which is rapidly becoming an important way to design and analyze electronics projects of all kinds.

Hardcover w/CD-ROM 174 pages 2008 ISBN 978-0-470-18777-7

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Two-dimensional Signal Analysis

René Garello, *Ecole Nationale Supérieure des Télécommunications de Bretagne, France*;
Editor

This compelling study sets out to show that 2-D signal analysis has its own role to play alongside signal processing and image processing.

Concentrating its coverage on those 2-D signals coming from physical sensors (such as radars and sonars), the book explores a 2-D spectral

approach but develops the modeling of 2-D signals and proposes several data-oriented analysis techniques for dealing with them.

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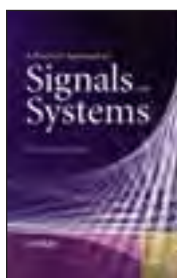
Modeling, Estimation and Optimal Filtration in Signal Processing

Mohamed Najim, *Univ. Bordeaux I, France*

This thorough resource provides traditional methods and more recent results for model-based approaches in signal processing. Discrete-time linear models, estimation approaches based on least squares methods and instrumental variable techniques, as well as optimal filters are covered.

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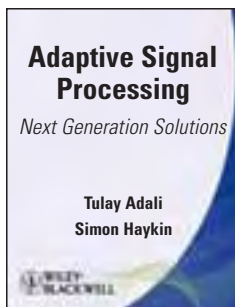
A Practical Approach to Signals and Systems

D. Sundararajan, *NewTech Software Pt. Ltd., India*

To aid understanding, this book details the discrete version, and then the continuous version for each topic. In addition to examples of typical applications of analysis methods, it also comprehensively covers transform methods, emphasizing practical methods of analysis and

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Adaptive Signal Processing

Next Generation Solutions

Tulay Adali, Univ. of Maryland, USA;
Simon Haykin, McMaster Univ., Canada

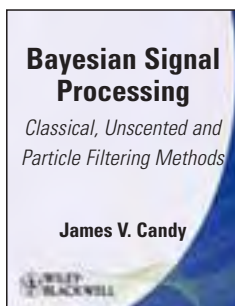
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This book presents the latest research results in adaptive signal processing with an emphasis on important applications and theoretical advancements. The seven most important topics in adaptive filtering that will define the next

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Bayesian Signal Processing

Classical, Unscented and Particle Filtering Methods

James V. Candy, Univ. of California, Lawrence Livermore National Laboratory, USA

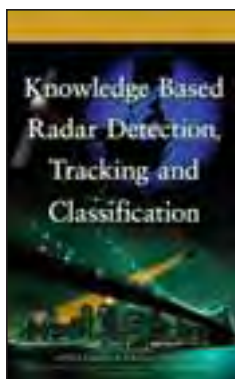
new

This book develops the "Bayesian approach" to statistical signal processing for a variety of useful model sets with an emphasis on nonlinear/non-Gaussian problems, as well as classical techniques. Current applications

and simple examples motivate the models and prepare the reader for developments in subsequent chapters. Although designed primarily as a graduate textbook, *Bayesian Signal Processing* is also useful to signal processing professionals and scientists.

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Knowledge Based Radar Detection, Tracking and Classification

Fulvio Gini, Univ. of Pisa, Italy; Muralidhar Rangaswamy, Air Force Research Laboratory (AFRL), Hanscom Air Force Base, USA

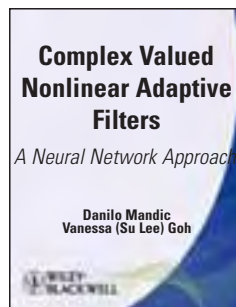
In response to the ever-increasing interest in the application of KB techniques to adaptive radar signal and data processing, this book covers the most relevant current research thrusts in the field. It is the first treatment in which several quintessential concepts inherent to the application of KBS for radar detection, tracking, classification, and scheduling are

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Complex Valued Nonlinear Adaptive Filters

A Neural Network Approach

Danilo Mandic, Imperial College, UK; Vanessa (Su Lee) Goh, Royal Dutch Shell plc, the Netherlands

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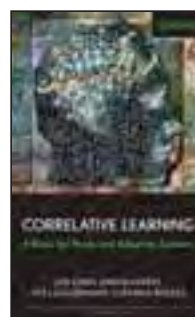
This text examines nonlinear adaptive filtering in the complex domain, providing theoretical and

computational principles for optimizing applications in a range of fields. Topics such as nonlinear adaptive prediction, forecasting through simulation, and a statistical framework for detecting the nature of complex random variables are covered.

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Zhe Chen, Massachusetts General Hospital/Harvard Medical School; Simon Haykin, Suzanna Becker, both of McMaster Univ.; Jos J. Eggermont

Bridging computational neuroscience, neural networks, and signal processing, this book presents the neuroscience background for engineers and the role of correlation in the human brain and

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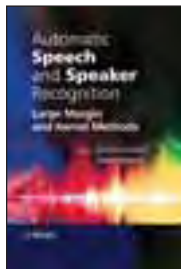
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Automatic Speech and Speaker Recognition

Large Margin and Kernel Methods

Joseph Keshet, IDIAP Research Centre, Switzerland; Editor

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Finally, research related to speech and speaker recognition based on recent advances in large margin and kernel methods is united. This key resource begins with a presentation of theoretical and practical foundations, from support vector machines to large margin methods for structured learning. Second, acoustic modeling of continuous speech recognizers are examined. The third part introduces large margin methods for discriminative language modeling. Lastly, applications of speaker verification and identification are discussed.

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Matthias Christ Woelfel, Univ. of Karlsruhe; John McDonough, Univ. des Saarlandes, Germany

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Digital Audio Broadcasting

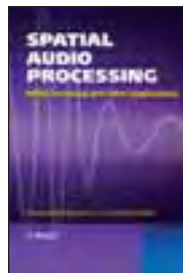
Principles and Applications of DAB, DAB+ and DMB

THIRD EDITION

Wolfgang Hoeg, Deutsche Telekom Berkom, Germany; Thomas Lauterbach, Univ. of Applied Science, Germany; Editors

The third edition of the "bible" in this field offers a comprehensive and fully updated overview of Digital Audio Broadcasting (DAB), its services, and applications. There are several new sections in this must-have handbook, as well as a new chapter on *Digital Multimedia Broadcasting* (DMB). The book also contains all the latest updates on standards, which would be otherwise difficult to locate from various sources.

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Spatial Audio Processing

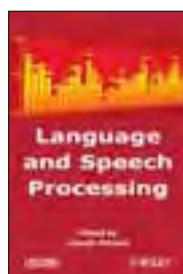
MPEG Surround and Other Applications

Jeroen Breebaart, Philips Research Laboratories; Christof Faller, EPFL

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Language and Speech Processing

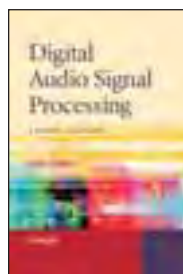
Joseph Mariani, French Ministry of Research; Editor

This book covers how to realize speech production and perception systems, how to synthesize and understand speech using state-of-the-art methods in signal processing, pattern recognition, stochastic modeling computational linguistics, and human factor studies.

Hardcover 416 pages 2009 ISBN 978-1-84821-031-8 USD \$195.00/CAD \$215.00/£115.00

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Digital Audio Signal Processing

SECOND EDITION

Udo Zölzer, Technical Univ. of Hamburg-Harburg, Germany

Assessing DASP's theoretical foundations and practical solutions, this valuable resource covers the latest signal processing algorithms for audio processing. Every chapter is completely revised with an easy-to-understand introduction into the basics and includes computer-based exercises.

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Online Book. See page 6 for more information. ISBN 978-0-470-68001-8



Advances in Digital Speech Transmission

Rainer Martin, RWTH Aachen Univ., Germany; Ulrich Heute, Univ. Kiel, Germany; Christiane Antweiler, RWTH Aachen Univ., Germany

Features contributions from many internationally recognized researchers covering speech quality assessment, adaptive algorithms in acoustic signal processing, speech coding for heterogeneous networks, joint source and channel coding, and more.

Hardcover 572 pages 2008 ISBN 978-0-470-51739-0 USD \$130.00/CAD \$142.99/£65.00/€89.90

Online Book. See page 6 for more information. ISBN 978-0-470-72718-8



Color Constancy

Marc Ebner, Julius-Maximilians-Univ. Würzburg, Germany

Color Constancy provides a detailed investigation into how understanding the human visual system can lead to the development of color constancy in a range of applications, from digital photography to object color recognition in robotics.

Hardcover 408 pages 2007 ISBN 978-0-470-05829-9 USD \$150.00/CAD \$164.99/£75.00/€99.90
Online Book. See page 6 for more information. ISBN 978-0-470-51049-0

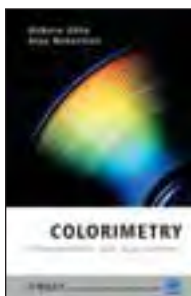


Color Gamut Mapping

Ján Morovič Hewlett Packard, Spain

This book provides a comprehensive treatment of color gamut mapping, including its current status and place in the wider context of imaging, and possible future developments. This book enables readers to evaluate and develop more advanced solutions and algorithms.

Hardcover 304 pages 2008 ISBN 978-0-470-03032-5 USD \$130.00/CAD \$143.00/£65.00/€89.90
Online Book. See page 6 for more information. ISBN 978-0-470-75892-2



Colorimetry

Fundamentals and Applications

Noboru Ohta, Rochester Institute of Technology, USA; Alan Robertson, National Research Council of Canada

Covering a wide range of colorimetric topics and their application to color engineering, this book provides a practical approach, which focuses on color measurement instruments, procedures, and standards.

Hardcover 350 pages 2006 ISBN 978-0-470-09472-3 USD \$130.00/CAD \$142.99/£65.00/€89.90
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The Reproduction of Colour

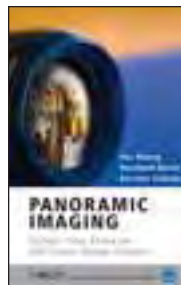
SIXTH EDITION

R. W. G. Hunt, Univ. of Derby, UK

"The book is beautifully written and superbly presented. It is a credit to both author and publisher, and deserves to be on the shelves of anyone who has any concern with the reproduction of colour."—**The Journal of Photographic Science**

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Fay Huang, National Ilan Univ., Taiwan; Reinhard Klette, The Univ. of Auckland, New Zealand; Karsten Scheibe, German Aerospace Center (DLR)

This book provides a comprehensive overview of techniques for capturing high-accuracy images and range data for visualizing and representing 3D scenes. Introductory material for a broad audience interested in the technology is combined with advanced material needed for the further study and understanding of the subject.

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Encoding Solutions

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Edward J. Giorgianni, Thomas E. Madden, both of Eastman Kodak Company (EJG)

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Online Book. See page 6 for more information. ISBN 978-0-470-99437-5



The JPEG 2000 Suite

Peter Schelkens, Vrije Univ. Brussel; Editor

Athanasios Skodras, Hellenic Open Univ.; Touradj Ebrahimi, EPFL; Co-Editors

Brimming with contributions from international specialists in industry and academia who have worked on the development of the JPEG2000 standard, *The JPEG 2000 Suite* provides a comprehensive reference on JPEG2000 and its extensions, examining current applications, and future perspectives.

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Mark D. Fairchild, Rochester Institute of Technology, USA

"Nowhere else is catalogued so completely or lucidly the color-appearance models of the past 40 years . . . I recommend that anyone interested in color appearance buy and read Fairchild's book."—**Color Research and Application**

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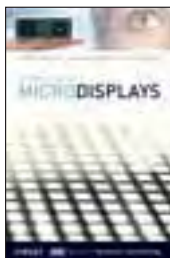
Fundamentals of Liquid Crystal Devices

Shin-Tson Wu, Univ. of Central Florida, USA; Deng-Ke Yang, Kent State Univ., USA

This comprehensive overview of LCDs includes liquid crystal physics, electro-optical properties, simulation techniques, and display and photonic applications. Featuring numerous examples and case studies, this book discusses the principles for designing advanced specialist transmissive, reflective, and transreflective liquid crystal displays.

Hardcover 394 pages 2006 ISBN 978-0-470-01542-1 USD \$140.00/CAD \$153.99/£70.00/€97.90

Online Book. See page 6 for more information. ISBN 978-0-470-03203-9



Introduction to Microdisplays

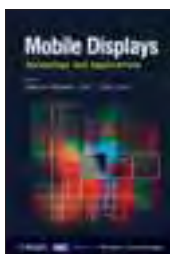
David Armitage; Ian Underwood, MicroEmissive Displays Ltd, UK; Shin-Tson Wu, Univ. of Central Florida, USA

Introduction to Microdisplays covers the structure and performance of microdisplays and their associated optical imaging systems. It provides a description of the evolution of current microdisplay technology and presents a strategy

for future developments and applications.

Hardcover 396 pages 2006 ISBN 978-0-470-85281-1 USD \$150.00/CAD \$164.99/£75.00/€99.90

Online Book. See page 6 for more information. ISBN 978-0-470-05705-6



Mobile Displays

Technology and Applications

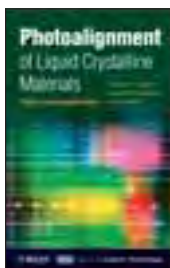
Achintya K. Bhowmik, Intel Corporation; Editor Zili Li, Motorola Inc.; Philip J. Bos, Kent State Univ.; Co-Editors

With contributions from well-known experts, this book presents a comprehensive coverage of the mobile display in a single volume. Chapters range from an in-depth analysis of the requirements

that the displays must meet, through current devices, to emerging technologies.

Hardcover 650 pages 2008 ISBN 978-0-470-72374-6 USD \$170.00/CAD \$186.99/£85.00/€119.00

Online Book. See page 6 for more information. ISBN 978-0-470-99464-1



Photoalignment of Liquid Crystalline Materials

Physics and Applications

Vladimir G. Chigrinov, Hoi-Sing Kwok, both of Hong Kong Univ. of Science and Technology; Vladimir M. Kozenkov, Moscow State Univ., Russia

This book aims to stimulate new research and development in the field of liquid crystalline

photoalignment to enable the technology to be used in large scale LCD production. State-of-the-art techniques and key applications, as well as the authors own diffusion model is covered.

Hardcover 248 pages 2008 ISBN 978-0-470-06539-6 USD \$130.00/CAD \$143.00/£65.00/€89.90

Online Book. See page 6 for more information. ISBN 978-0-470-75180-0



Projection Displays

SECOND EDITION

Matthew S. Brennesholtz, Insight Media; Edward H. Stupp, Stupp Associates, Inc., USA

Fully revised, this second edition provides up-to-date coverage of the optical and mechanical systems in electronic projection displays. Major new developments in the many technologies such as new image generating systems, including LCOS and scanned laser systems, are presented.

Hardcover 450 pages 2008 ISBN 978-0-470-51803-8 USD \$150.00/CAD \$165.00/£75.00/€99.90

Online Book. See page 6 for more information. ISBN 978-0-470-77089-4



Introduction to Flat Panel Displays

Jiun-Haw Lee, National Taiwan Univ.; David N. Liu, Univ. of Central Florida; Shin-Tson Wu, Electronics Research Service Organization (ERSO), Taiwan

This useful text describes the fundamental physics and materials of major flat panel display technologies, including LED, OLED, LCD, PDP, and FED and carbon nano-tubes. It contains a comparative analysis of the different display technologies in which detailed overviews of each technology are linked together.

Hardcover 280 pages 2009 ISBN 978-0-470-51693-5 USD \$110.00/CAD \$121.00/£55.00/€77.90

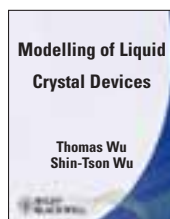


LCD Backlights

Shigeo Mikoshiba, Univ. of Electro-Communications, Japan; Editor Shunsuke Kobayashi, Tokyo Univ. of Science, Japan; Sungkyoo Lim, Dankook Univ., Korea; Co-Editors

Featuring contributions from world-renowned experts, this essential resource covers the design considerations and technical requirements for the multiple applications of LCD backlights, including the most up-to-date developments in both academia and industry.

Hardcover 320 pages 2009 ISBN 978-0-470-69967-6 USD \$140.00/CAD \$154.00/£70.00/€97.90



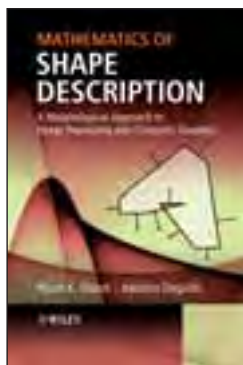
Modelling of Liquid Crystal Devices

Thomas Wu, School of Electrical Engineering; Shin-Tson Wu, School of Optics

This book teaches readers the most essential modelling techniques and methods, as well as optimization techniques for liquid crystal devices. It does not repeat the basic liquid crystal device physics discussed in other books, rather, these device functions will be used as examples and homework problems for illustrating the modelling methodologies.

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A Morphological Approach to Image Processing and Computer Graphics

Pijush K. Ghosh, Formerly of National Centre for Software Technology, India
Koichiro Deguchi, Tohoku Univ., Japan

- Explains the fundamental and advanced relationships between algebraic system and shape description through the set-theoretic approach
- Promotes interaction of image processing geochronology and mathematics in the field of algebraic geometry

- Offers a thorough and detailed discussion on the mathematical characteristics and significance of the Minkowski operators

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Encyclopedia of Imaging Science and Technology

TWO-VOLUME SET

Joseph P. Hornak, Rochester Institute of Technology, USA

"... provides coverage of imaging science and technology from a diverse range of applications, techniques, and fields of study... can assist scientists, engineers, and physicians to better understand the science behind... imaging techniques."

—Spectroscopy

This book presents comprehensive A-Z coverage of the entire field. Illustrated extensively with photographs, tables, and color images, it includes extensive cross-referencing, bibliographies, and a complete index.

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The H.264 Advanced Video Compression Standard

SECOND EDITION

Iain Richardson

The H.264 Advanced Video Compression Standard

SECOND EDITION

Iain Richardson, Hilton

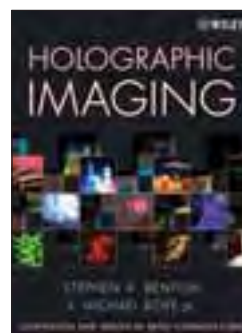
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This updated book reflects the growing importance and implementation of H.264. It provides a clear overview, covering the basic video coding concepts, formats, qualities, as well as the

extensions published since 2003. The book discusses the current work that is being performed on a scalable version of H.264 and the new implementation areas. Readers get a practical view of the standard, including case studies and comparisons with other popular standards.

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Online Book. See page 6 for more information. ISBN 978-0-470-98941-8



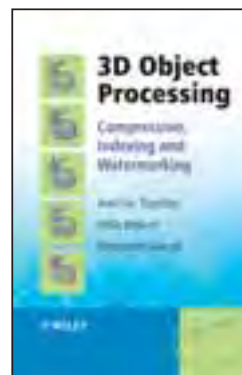
Holographic Imaging

Stephen A. Benton, V. Michael Bove Jr., both of Massachusetts Institute of Technology, USA

Covers the fundamental physical and optical principles of using diffraction to record and reconstruct images, human perception, and the history of holographic imaging with an approachable explanation of both basic and advanced holographic concepts.

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3D Object Processing

Compression, Indexing and Watermarking

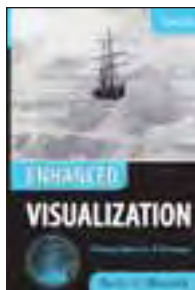
Jean-Luc Dugelay, Institut Eurécom, France; Editor

Atila Baskurt, Mohamed Daoudi, both of LNRS LIFL, France; Co-Editors

A systematic and comprehensive overview of 3D object processing, including compression, indexing and retrieval, and watermarking techniques. Start with an introduction to 3D processing, with information on 3D data exchange, representation and acquisition, and database and editing. The book then covers 3D compression techniques, analyzing polygonal representation, coding and scalability concepts, 3D indexing and retrieval, 3D watermarking, and common tools for diverse functionalities.

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Enhanced Visualization

Making Space for 3-D Images

Barry G. Blundell, Univ. of the American Virgin Islands

"... the book will give you both the scientific and factual basis to express the outcome of the visualisation process in the most effective way."

—British Computer Society Book Reviews

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Digital Image Processing

PIKS Scientific Inside

FOURTH EDITION

William K. Pratt, Univ. of Southern California, USA

This brand-new edition has been updated to account for new developments since the publication of the third in 2000. In addition, its accompanying software is based on PIKS Scientific rather than PIKS Core.

Hardcover w/CD-ROM 782 pages 2007 ISBN 978-0-471-76777-0

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Online Book. See page 6 for more information. ISBN 978-0-470-09743-4

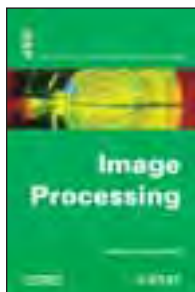


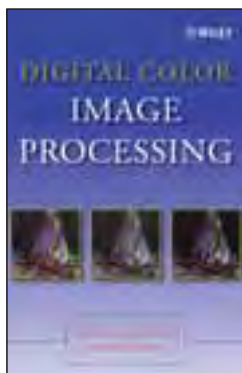
Image Processing

Henri Maitre, Ecole Nationale Supérieure des Télécommunications, France, Editor

Computer-aided automatic processing of images requires the control of a series of operations. Knowing the statistical properties of images, sampling them, restoring images in order to correct degradations—all these operations are explained here, together with the mathematical tools they require.

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Digital Color Image Processing

Andreas Koschan, Mongi A. Abidi, both of Univ. of Tennessee, USA

Organized in regard to advanced techniques for three-dimensional scene analysis in color images, *Digital Color Image Processing* is divided into four parts that cover the fundamentals and requirements for color image processing, techniques for preprocessing color images, three-dimensional scene analysis using color information, and the new increasing area of multi-spectral imaging. Two case studies on applications of color image processing are also included.

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\$159.99/£85.50/€119.00

Online Book. See page 6 for more information. ISBN 978-0-470-23036-7



Image Processing

Dealing with Texture

Maria Petrou, Imperial College, UK; Pedro Garcia Sevilla, Jaume I Univ., Spain

With a wholly practical approach and many worked examples, *Image Processing: Dealing with Texture* is a comprehensive guide to these techniques, including chapters on mathematical morphology,

fractals, Markov random fields, Gabor functions, and wavelets. Structured around a series of questions and answers, this book enables readers to easily locate information on specific problems.

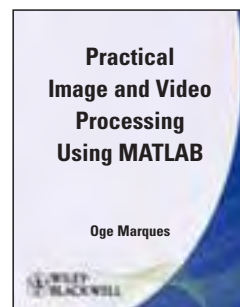
This book also:

- Provides detailed descriptions of methods used to analyze binary as well as grey texture images
- Presents information on two levels: an easy-to-follow narrative explaining the basics, and an advanced, in-depth study of mathematical theorems and concepts looks at "good" and "bad" image processing practice, with wrongly designed algorithms illustrating "what not to do"
- Includes accompanying Website, setting out all algorithms discussed within the text.

Hardcover 634 pages 2006 ISBN 978-0-470-02628-1

USD \$90.00/CAD \$98.99/£45.00/€62.90

Online Book. See page 6 for more information. ISBN 978-0-470-03534-4



Practical Image and Video Processing Using MATLAB

Oge Marques, Florida Atlantic Univ., USA

This book provides a practical introduction to the most important topics in image and video processing using

MATLAB (and its Image Processing Toolbox) as a tool to demonstrate the most important techniques and algorithms. The contents are presented in a clear, technically accurate, objective way, with just enough mathematical detail. The chapters are supported by illustrative problems, MATLAB scripts, Websites, computer projects, and many other useful tools to extend understanding.

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Character Recognition Systems

A Guide for Students and Practitioners

Mohamed Cheriet, Univ. of Quebec/ ÉTS, Canada; Nawwaf Kharma, Concordia Univ.; Cheng-Lin Liu, Institute of Automation at the Chinese Academy of Sciences, China; Ching Suen, Center for Pattern Recognition

In *Character Recognition Systems*, the authors provide practitioners and students with the fundamental principles and state-of-the-art

computational methods of reading printed texts and handwritten materials. The information presented is analogous to the stages of a computer recognition system, helping readers master the theory and latest methodologies used in character recognition in a meaningful way.

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Online Book. See page 6 for more information. ISBN 978-0-470-17653-5



Handbook of Machine Vision

Alexander Hornberg, Univ. of Applied Sciences of Esslingen, Germany; Editor

No doubt you're aware that machine vision is becoming an increasingly important issue. Written by experts from leading companies operating in the field, this handbook covers all aspects of image acquisition and image processing. Equipped with this reference,

you will not only be able to understand the latest systems for machine vision but will also be qualified to plan and evaluate such technology.

Hardcover 821 pages 2006 ISBN 978-3-527-40584-8 USD \$215.00/CAD \$236.99/€115.00/€149.00

Online Book. See page 6 for more information. ISBN 978-3-527-61013-6



Dictionary of Computer Vision and Image Processing

Robert Fisher, Univ. of Edinburgh, UK; Ken Dawson-Howe, Trinity College, Ireland; Andrew Fitzgibbon, Univ. of Oxford, UK; Craig Robertson, Glasgow School of Art, UK; Emanuele Trucco, Heriot-Watt Univ., UK

Capturing a snapshot of the subject through its vocabulary, this dictionary:

- Presents a comprehensive and authoritative reference for all computer-vision practitioners
- Contains more than 2,500 key terms and 400 illustrations on computer vision, image analysis, and image processing
- Provides extensive cross-referencing to guide the reader through new or less commonly encountered terms.

Paperback 364 pages 2005 ISBN 978-0-470-01526-1 USD \$80.00/CAD \$87.99/€39.95/€54.90

Online Book. See page 6 for more information. ISBN 978-0-470-01630-5



An Introduction to 3D Computer Vision Techniques and Algorithms

new

Boguslaw Cyganek, AGH-Univ. of Science and Tech, Poland; J. Paul Siebert, Univ. of Glasgow, UK

The use of algorithms makes it possible to take a collection of stereo-pair images of a scene and then automatically produce a photo-realistic, geometrically accurate digital 3D model. This book takes a novel approach

to 3D computer vision as it gives comprehensive coverage of methods and theory, but with a strong emphasis on practical algorithms and implementation issues. Almost every theoretical issue is underpinned with practical implementation or a working algorithm using pseudo-code and complete code written in C++ and MatLab®. Topics include computer vision basics, vision research, 2D and 3D vision and image analysis, image matching algorithms, scale-space vision, as well as space reconstruction and multi view integration.

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Online Book. See page 6 for more information. ISBN 978-0-470-69972-0



Template Matching Techniques in Computer Vision

new

Theory and Practice

Roberto Brunelli, Fondazione Bruno Kessler

This book presents a unified approach to pattern recognition techniques for face recognition and interpretation proposed so far by the computer vision community.

Template matching and employing the idea of projection to match image patterns on faces is emphasized, in order to illustrate general object recognition approaches.

- Presents "template matching" pattern analysis and interpretation techniques for the creation of computational models
- Provides sample algorithm implementation examples and image datasets on a supplementary Website
- Discusses techniques that can enable the creation of more complex vision systems
- Sets out theoretical information about the techniques discussed, as well as examining how to build a face recognition system from the ground up

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Online Book. See page 6 for more information. ISBN 978-0-470-74405-5



Advanced Mapping of Environmental Data/Geostatistics, Machine Learning and Bayesian Maximum Entropy

Mikhail Kanevski

Featuring numerous case studies, this up-to-the-minute study covers model dependent and data driven analysis techniques such as risk mapping, conditional stochastic simulations, descriptions of spatial uncertainty and variability, artificial neural networks (ANN) for spatial data, Bayesian maximum entropy (BME), and more.

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Business Site Selection, Location Analysis and GIS

Richard L. Church, *Univ. of California Santa Barbara, USA*; Alan T. Murray, *Ohio State Univ., USA*

This introductory text begins with chapters on GIS and model building fundamentals. Next, the use of models to analyze existing marketing and distribution systems as well as the siting of a single facility is explored. Lastly, the book examines designing a system while making multiple simultaneous siting decisions.

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Online Book. See page 6 for more information. ISBN 978-0-470-43276-1



Geo-Business

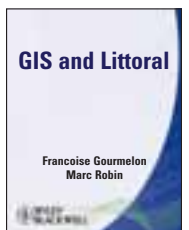
GIS in the Digital Organization

James B. Pick, *Professor of Business at the Univ. of Redlands, USA*

This is the first book to provide comprehensive coverage of GIS applications in the business and organizational environment. Going beyond a strictly geographical focus, this book sets GIS in the context of business information systems and other business subdisciplines.

Hardcover 416 pages 2008 ISBN 978-0-471-72998-3 USD \$100.00/CAD \$109.99/£60.00/€82.90

Online Book. See page 6 for more information. ISBN 978-0-470-25995-5



GIS and Littoral

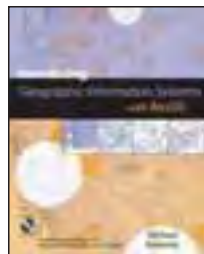
GIS and Littoral

Francoise Gourmelon, Marc Robin

This timely guide covers progresses concerning several topics drawing on the experience of several experts and practitioners. It illustrates the different stages of GIS implementation (inventory, analysis, and management applications) for coastal zone management.

Hardcover 2008 ISBN 978-1-84821-080-6 USD \$175.00/CAD \$193.00/£103.00/€145.00

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Introducing Geographic Information Systems with ArcGIS

Workbook Approach to Learning GIS

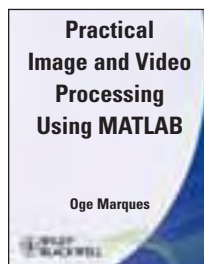
SECOND EDITION

Michael Kennedy, *Univ. of Kentucky, USA*

This all-in-one text is unique in its integration of a broad introduction to GIS with a software-specific workbook for ESRI's ArcGIS. Updated coverage includes webgis, shapefiles, and geodatabases, and the new edition sports new easy-to-use navigation and project-oriented exercises.

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Oge Marques

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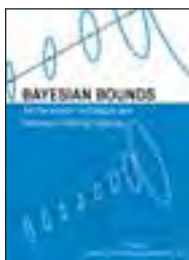
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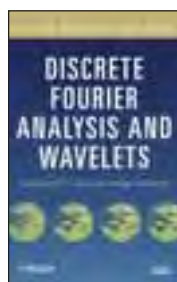
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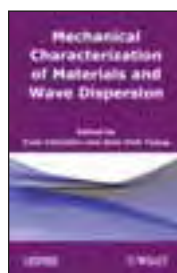
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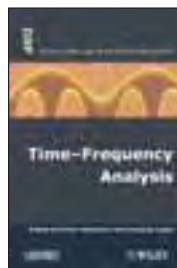
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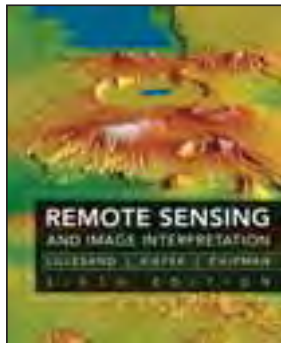
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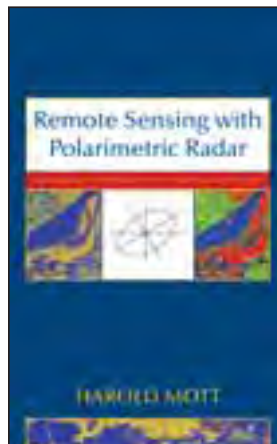
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