Second Edition Multimedia Image And Video Processing

This second edition provides easy access to important concepts, issues and technology trends in the field of multimedia technologies, systems, techniques, and applications. Over 1,100 heavily-illustrated pages — including 80 new entries — present concise overviews of all aspects of software, systems, web tools and hardware that enable video, audio and developing media to be shared and delivered electronically.

This textbook introduces the "Fundamentals of Multimedia", addressing real issues commonly faced in the workplace. The essential concepts are explained in a practical way to enable students to apply their existing skills to address problems in multimedia. Fully revised and updated, this new edition now includes coverage of such topics as 3D TV, social networks, high-efficiency video compression and conferencing, wireless and mobile networks, and their attendant technologies. Features: presents an overview of the key concepts in multimedia, including color science; reviews lossless and lossy compression methods for image, video and audio data; examines the demands placed by multimedia communications on wired and wireless networks; discusses the impact of social media and cloud computing on information sharing and on multimedia content search and retrieval; includes study exercises at the end of each chapter; provides supplementary resources for both students and instructors at an associated website.

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

There are more than one billion documents on the Web, with the count continually rising at a pace of over one million new documents per day. As information increases, the motivation and interest in data warehousing and mining research and practice remains high in organizational interest. The Encyclopedia of Data Warehousing and Mining, Second Edition, offers thorough exposure to the issues of importance in the rapidly changing field of data warehousing and mining. This essential reference source informs decision makers, problem solvers, and data mining specialists in business, academia, government, and other settings with over 300 entries on theories, methodologies, functionalities, and applications.

First International Workshop, AMR 2003, Hamburg, Germany, September 15-16, 2003, Revised Selected and Invited Papers

Multimedia Foundations

Discrete Cosine Transform, Second Edition

Advances in Multimedia Modeling

Olympiad Champs Cyber Class 5 with Past Olympiad Questions 2nd Edition

Encyclopedia of Multimedia

Although verbal learning offers a powerful tool, Mayer explores ways of going beyond the purely verbal. Recent advances in graphics technology and information technology have prompted new efforts to understand the potential of multimedia learning as a means of promoting human understanding. In this second edition, Mayer includes double the number of experimental comparisons, 6 new principles- signalling, segmenting, pertaining, personalization, voice and image principles. The 12 principles of multimedia instructional design have been reorganized into three sections - reducing extraneous processing, managing essential processing and fostering generative processing. Finally an indication of the maturity of the field is that the second edition highlights boundary conditions for each principle research-based constraints on when a principle is likely or not likely to apply. The boundary conditions are interpreted in terms of the cognitive theory of multimedia learning, and help to enrich theories of multimedia learning.

Based on more than 10 years of teaching experience, Blanken and his coeditors have assembled all the topics that should be covered in advanced undergraduate or graduate courses on multimedia retrieval and multimedia databases. The single chapters of this textbook explain the general architecture of multimedia information retrieval systems and cover various metadata languages such as Dublin Core, RDF, or MPEG. The authors emphasize high-level features and show how these are used in mathematical models to support the retrieval process. For each chapter, there's detail on further reading, and additional exercises and teaching material is available online.

How to Build a Digital Library reviews knowledge and tools to construct and maintain a digital library, regardless of the size or purpose. A resource for individuals, agencies, and institutions wishing to put this powerful tool to work in their burgeoning information treasuries. The Second Edition reflects developments in the field as well as in the Greenstone Digital Library open source software. In Part I, the authors have added an entire new chapter on user groups, user support, collaborative browsing, user contributions, and so on. There is also new material on content-based queries, map-based queries, cross-media queries. There is an increased emphasis placed on multimedia by adding a "digitizing" section to each major media type. A new chapter has also been added on "internationalization," which will address Unicode standards, multi-language interfaces and collections, and issues with non-European languages (Chinese, Hindi, etc.). Part II, the software tools section, has been completely rewritten to reflect the new developments in Greenstone Digital Library Software, an internationally popular open source software tool with a comprehensive graphical facility for creating and maintaining digital libraries. Outlines the history of libraries on both traditional and digital Written for both technical and non-technical audiences and covers the entire spectrum of media, including text, images, audio, video, and related XML standards Web-enhanced with software documentation, color illustrations, full-text index, source code, and more

Stroboscopy and High-Speed Imaging of the Vocal Function, Second Edition presents a complete picture of the art and science of stroboscopy. This unique professional resource includes not only comprehensive coverage of the imaging process, but also the disease process that exists in benign lesions, cancer, and neuropathology. Comparisons of normal images with pathologies are included to enhance readers' diagnostic skills, and the use of stroboscopic images before and after therapy to determine results enhances their clinical skills. The book also covers the entire range of laryngeal imaging for diagnostics, including rigid endoscopy, videostroboscopy, fiberoptic laryngoscopy, and high-speed imaging. Written by a physician who works in a multidisciplinary environment, the book outlines the roles of the otolaryngologist, speech-language pathologist, voice scientist, and singing teacher in the clinical examination. Unparalleled full-color illustrations appear throughout. New to the Second Edition: * New chapter on High Speed Imaging * Updated imaging of vocal fold examination techniques * Many added images and illustrations with enhanced figures using video montage. * Fully updated to reflect the current research with many new references added from 2010 to 2020 * References are placed at the end of the relevant chapters. * High definition video examples of stroboscopy and high-speed imaging

13th International Multimedia Modeling Conference, MMM 2007, Singapore, January 9-12, 2007, Proceedings

The Greenwood Dictionary of Education, 2nd Edition

Theory and Practice, Second Edition

PrimeFaces Cookbook - Second Edition

Multimedia Data Mining and Knowledge Discovery

Multimedia Learning

A Decade of Extraordinary Growth The past decade has brought a surge of growth in the technologies for digital color imaging, multidimensional signal processing, and visual scene analysis. These advances have been crucial to developing new camera-driven applications and commercial products in digital photography. Single-Sensor Imaging: Methods and Applications for Digital Cameras embraces this extraordinary progress, comprehensively covering state-of-the-art systems, processing techniques, and emerging applications. Experts Address Challenges and Trends Single-Sensor Imaging: Methods and Applications for Digital Cameras presents leading experts elucidating their own accomplishments in developing the technologies reshaping this field. The editor invited renowned authorities to address specific research challenges and recent trends in their particular areas of expertise. The book discusses single-sensor digital color imaging fundamentals, including reusable embedded software platform, digital camera image processing chain, optical filter and color filter array designs. It also details the latest techniques and approaches in contemporary and traditional digital camera color image processing and analysis for various sophisticated applications, including: Demosaicking and color restoration White balancing and color transfer Color and exposure correction Image denoising and color enhancement Image resizing Video-demosaicking and superresolution imaging Image and video stabilization A Solid Foundation of Knowledge to Solve Problems Single-Sensor Imaging: Methods and Applications for Digital Cameras builds a strong fundamental understanding of theory and methods for solving many of today's most interesting and challenging problems in digital color image and video acquisition, analysis, processing, and storage. A broad survey of the existing solutions and relevant literature makes this book a valuable resource both for researchers and those applying rapidly evolving digital camera technologies.

"The book is intended to clarify the hype, which surrounds the concept of mobile multimedia through introducing the idea in a clear and understandable way, with a strong focus on mobile solutions and applications"--Provided by publisher.

Thoroughly revised to present the very latest in PACS-based multimedia in medical imaging informatics—from the electronic patient record to the full range of topics in digital medical imaging—this new edition by the founder of PACS and multimedia image informatics features even more clinically applicable material than ever before. It uses the framework of PACS-based image informatics, not physics or engineering principles, to explain PACS-based multimedia informatics and its application in clinical settings and labs. New topics include Data Grid and Cloud Computing, IHE XDS-I Workflow Profile (Integrating the Healthcare Enterprise Cross-enterprise Document Sharing for Imaging), extending XDS to share images, and diagnostic reports and related information across a group of enterprise health care sites. PACS-Based Multimedia Imaging Informatics is presented in 4 sections. Part 1 covers the beginning and history of Medical Imaging, PACS, and Imaging Informatics. The other three sections cover Medical Imaging, Industrial Guidelines, Standards, and Compliance; Informatics, Data Grid, Workstation, Radiation Therapy, Simulators, Molecular Imaging, Archive Server, and Cloud Computing; and multimedia Imaging Informatics, Computer-Aided Diagnosis (CAD), Image-Guide Decision Support, Proton Therapy, Minimally Invasive Multimedia Image-Assisted Surgery, BIG DATA. New chapter on Molecular Imaging Informatics Expanded coverage of PACS and eHR's (Electronic Health Record), with HIPPA compliance New coverage of PACS-based CAD (Computer-Aided Diagnosis) Reorganized and expanded clinical chapters discuss one distinct clinical application each Minimally invasive image assisted surgery in translational medicine Authored by the world's first and still leading authority on PACS and medical imaging PACS-Based Multimedia Imaging Informatics: Basic Principles and Applications, 3rd Edition is the single most comprehensive and authoritative resource that thoroughly covers the critical issues of PACS-based hardware and software design and implementation in a systematic and easily comprehensible manner. It is a must-have book for all those involved in designing, implementing, and using PACS-based Multimedia Imaging Informatics.

During the past 20 years, the field of mechanical engineering has undergone enormous changes. These changes have been driven by many factors, including: the development of computer technology worldwide competition in industry improvements in the flow of information satellite communication real time monitoring increased energy efficiency robotics automatic control increased sensitivity to environmental impacts of human activities advances in design and manufacturing methods These developments have put more stress on mechanical engineering education, making it increasingly difficult to cover all the topics that a professional engineer will need in his or her career. As a result of these developments, there has been a growing need for a handbook that can serve the professional community by providing relevant background and current information in the field of mechanical engineering. The CRC Handbook of Mechanical Engineering serves the needs of the professional engineer as a resource of information into the next century.

Encyclopedia of Information Science and Technology, Second Edition

Key Concepts in Media Studies

Managing Gigabytes

How to Build a Digital Library

Handbook of Image and Video Processing

Encyclopedia of Distance Learning, Second Edition

Many new DCT-like transforms have been proposed since the first edition of this book. For example, the integer DCT that yields integer transform coefficients, the directional DCT to take advantage of several directions of the image and the steerable DCT. The advent of higher dimensional frames such as UHDTV and 4K-TV demand for small and large transform blocks to encode small or large similar areas respectively in an efficient way. Therefore, a new updated book on DCT, adapted to the modern days, considering the new advances in this area and targeted for students, researchers and the industry is a necessity.

Advances in hardware, software, and audiovisual rendering technologies of recent years have unleashed a wealth of new capabilities and possibilities for multimedia applications, creating a need for a comprehensive, up-to-date reference. The Encyclopedia of Multimedia Technology and Networking provides hundreds of contributions from over 200 distinguished international experts, covering the most important issues, concepts, trends, and technologies in multimedia technology. This must-have reference contains over 1,300 terms, definitions, and concepts, providing the deepest level of understanding of the field of multimedia technology and networking for academicians, researchers, and professionals worldwide.

This book is for everybody who would like to learn modern Java web development based on PrimeFaces and is looking for a quick introduction to this matter. Prerequisites for this book are basic JSF, jQuery, and CSS skills.

"This book is the Bible for anyone who needs to manage large data collections. It's required reading for our search gurus at Infoseek. The authors have done an outstanding job of incorporating and describing the most significant new research in information retrieval over the past five years into this second edition." Steve Kirsch, Cofounder, Infoseek Corporation "The new edition of Witten, Moffat, and Bell not only has newer and better text search algorithms but much material on image analysis and joint image/text processing. If you care about search engines, you need this book: it is the only one with full details of how they work. The book is both detailed and enjoyable; the authors have combined elegant writing with top-grade programming." Michael Lesk, National Science Foundation "The coverage of compression, file organizations, and indexing techniques for full text and document management systems is unsurpassed. Students, researchers, and practitioners will all benefit from reading this book." Bruce Croft, Director, Center for Intelligent Information Retrieval at the University of Massachusetts In this fully updated second edition of the highly acclaimed Managing Gigabytes, authors Witten, Moffat, and Bell continue to provide unparalleled coverage of state-of-the-art techniques for compressing and indexing data. Whatever your field, if you work with large quantities of information, this book is essential reading--an authoritative theoretical resource and a practical guide to meeting the toughest storage and access challenges. It covers the latest developments in compression and indexing and their application on the Web and in digital libraries. It also details dozens of powerful techniques supported by mg, the authors' own system for compressing, storing, and retrieving text, images, and textual images. mg's source code is freely available on the Web.

Basic Principles and Applications

Fundamentals, Algorithms, and Standards, Second Edition

Making Media

Interactive Technologies and Autism, Second Edition

Adaptive Multimedia Retrieval

Introduction to Computing and Programming in Python, A Multimedia Approach, Second Edition

Welcome to the proceedings of the 5th Paci?c Rim Conference on Multimedia (PCM 2004) held in Tokyo Waterfront City, Japan, November 30–December 3, 2004. Following the success of the preceding conferences, PCM 2000 in Sydney, PCM 2001 in Beijing, PCM 2002 in Hsinchu, and PCM 2003 in Singapore, the ?fth PCM brought together the researchers, developers, practitioners, and educators in the ?eld of multimedia. Theoretical breakthroughs and practical systems were presented at this conference, thanks to the support of the IEEE Circuits and Systems Society, IEEE Region 10 and IEEE Japan Council, ACM SIGMM, IEICE and ITE. PCM 2004 featured a comprehensive program including keynote talks, regular paper presentations, posters, demos, and special sessions. We received 385 papers and the number of submissions was the largest among recent PCMs. Amongst such a large number of submissions, we accepted only 94 oral presentations and 176 poster presentations. Seven special sessions were also organized by world-leading researchers. We kindly acknowledge the great support provided in the reviewing of submissions by the program committee members, as well as the additional reviewers who generously gave their time. The many useful comments provided by the reviewing process must have been very valuable for the authors' work. This conference would never have happened without the help of many people. We greatly appreciate the support of our strong organizing committee chairs and advisory chairs. Among the chairs, special thanks go to Dr. Ichiro Ide and Dr. Takeshi Naemura who smoothly handled publication of the proceedings with Springer. Dr. Kazuya Kodama did a fabulous job as our Web master.

Computer Graphics & Applications

This book provides an in-depth review of the historical and state-of-the-art use of technology by and for individuals with autism. The design, development, deployment, and evaluation of interactive technologies for use by and with individuals with autism have been rapidly increasing over the last few decades. There is great promise for the use of these technologies to enrich lives, improve the experience of interventions, help with learning, facilitate communication, support data collection, and promote understanding. Emerging technologies in this area also have the potential to enhance assessment and diagnosis of autism, to understand the nature and lived experience of autism, and to help researchers conduct basic and applied research. The intention of this book is to give readers a comprehensive background for understanding what work has already been completed and its impact as well as what promises and challenges lie ahead. A large majority of existing technologies have been designed for autistic children, there is increased interest in technology's intersection with the lived experiences of autistic adults. By providing a classification scheme and general review, this book can help technology designers, researchers, autistic people, and their advocates better understand how technologies have been successful or unsuccessful, what problems remain open, and where innovations can further address challenges and opportunities for individuals with autism and the variety of stakeholders connected to them.

Making Media takes the media production process and deconstructs it into its most basic components. Students will learn the basic concepts of media production: frame, sound, light, time, motion, sequencing, etc., and be able to apply them to any medium they choose. They will also become well grounded in the digital work environment and the tools required to produce media in the digital age. The companion Web site provides interactive exercises for each chapter, allowing students to explore the process of media production. The text is heavily illustrated and complete with sidebar discussions of pertinent issues.

Multimedia Retrieval

Second Edition

Compressing and Indexing Documents and Images, Second Edition

Stroboscopy and High-Speed Imaging of the Vocal Function, Second Edition
A Practical Guide
Shape Classification and Analysis
This volume provides an overview of multimedia data mining and knowledge discovery and discusses the variety of hot topics in multimedia data mining research. It describes the objectives and current tendencies in multimedia data mining research and their applications. Each part contains an overview of its chapters and leads the reader with a structured approach through the diverse subjects in the field.
55% new material in the latest edition of this "must-have for students and practitioners of image & video processing! This Handbook is intended to serve as the basic reference point on image and video processing, in the field, in the research laboratory, and in the classroom. Each chapter has been written by carefully selected, distinguished experts specializing in that topic and carefully reviewed by the Editor, Al Bovik, ensuring that the greatest depth of understanding be communicated to the reader. Coverage includes introductory, intermediate and advanced topics and as such, this book serves equally well as classroom textbook as reference resource. • Provides practicing engineers and students with a highly accessible resource for learning and using image/video processing theory and algorithms • Includes a new chapter on image processing education, which should prove invaluable for those developing or modifying their curricula • Covers the various image and video processing standards that exist and are emerging, driving today's explosive industry • Offers an understanding of what images are, how they are modeled, and gives an introduction to how they are perceived • Introduces the necessary, practical background to allow engineering students to acquire and process their own digital image or video data • Culminates with a diverse set of applications chapters, covered in sufficient depth to serve as extensible models to the reader's own potential applications About the Editor... Al Bovik is the Cullen Trust for Higher Education Endowed Professor at The University of Texas at Austin, where he is the Director of the Laboratory for Image and Video Engineering (LIVE). He has published over 400 technical articles in the general area of image and video processing and holds two U.S. patents. Dr. Bovik was Distinguished Lecturer of the IEEE Signal Processing Society (2000), received the IEEE Signal Processing Society Meritorious Service Award (1998), the IEEE Third Millennium Medal (2000), and twice was a two-time Honorable Mention winner of the international Pattern Recognition Society Award. He is a Fellow of the IEEE, was Editor-in-Chief, of the IEEE Transactions on Image Processing (1996-2002), has served on and continues to serve on many other professional boards and panels, and was the Founding General Chairman of the IEEE International Conference on Image Processing which was held in Austin, Texas in 1994. * No other resource for image and video processing contains the same breadth of up-to-date coverage * Each chapter written by one or several of the top experts working in that area * Includes all essential mathematics, techniques, and algorithms for every type of image and video processing used by electrical engineers, computer scientists, internet developers, bioengineers, and scientists in various, image-intensive disciplines
Key words, chapter highlights, and chapter summaries make it easy to identify core concepts of each chapter --
Digital and online learning is more prevalent than ever, making multimedia learning a primary objective for many instructors. The Cambridge Handbook of Multimedia Learning examines cutting-edge research to guide creative teaching methods in online classrooms and training. Recognized as the field's major reference work, this research-based handbook helps define and shape this area of study. This third edition provides the latest progress report from the world's leading multimedia researchers, with forty-six chapters on how to help people learn from words and pictures, particularly in computer-based environments. The chapters demonstrate what works best and establishes optimized practices. It systematically examines well-researched principles of effective multimedia instruction and pinpoints exactly why certain practices succeed by isolating the boundary conditions. The volume is founded upon research findings in learning theory, giving it an informed perspective in explaining precisely how effective teaching practices achieve their goals or fail to engage.
Introduction To Computer Graphics And Mu
5th Pacific Rim Conference on Multimedia, Tokyo, Japan, November 30 - December 3, 2004, Proceedings
Image and Representation
Core Concepts for Digital Design
Encyclopedia of Multimedia Technology and Networking, Second Edition
The Cambridge Handbook of Multimedia Learning
Multimedia Journalism: A Practical Guide, Second edition builds on the first edition's expert guidance on working across multiple media platforms, and continues to explore getting started, building proficiency and developing professional standards in multimedia journalism. The second edition features new chapters including: getting started with social media live reporting building proficiency with Wordpress building apps for smartphones and tablets building a personal brand and developing a specialism long-form video journalism, audio and video news bulletins and magazine programmes. The new edition also includes an extensive range of new and updated materials essential for all aspects multimedia journalism today. New areas explored include editing video and slideshows for mobile and tablet devices, the advanced use of mobile devices for reporting, location-specific content creation and delivery, the use of video and audio slideshows, and live blogging. Other updates include more material on photojournalism as a storytelling technique, using and transferring digital images and sound, the use of Google Analytics, and practical guides to storytelling through infographics, timelines, interactive graphics and maps. The book fully engages with multimedia journalism in relation to range of social media and web publishing platforms, including Wordpress, Blogger, Tumblr, Twitter, Facebook, Google+, YouTube, Instagram, Pinterest, SoundCloud, AudioBoom and iTunes. The book is also be supported by fully updated online masterclasses at www.multimedia-journalism.co.uk.
Image and Representation is a clear and straight-talking introduction to two of the most important concepts in film and media studies. Exploring media language and representation throughout a variety of visual texts, the book offers a balanced, in-depth guide to the essential theories and key issues. The book begins by introducing the basic components of image analysis, including mise en scene, framing and anchorage. It then elaborates on these key ideas to provide the reader with a more advanced understanding of media language and representation. From the contribution of semiotics and debates around authorial intent, to ideas about hegemony and issues around propaganda, Nick Lacey offers approachable explanations of complex ideas and terms. The new edition is also now updated to reflect recent changes in the field, with particular attention paid to new media technologies. Each chapter is packed with memorable examples from a wider range of media and provides greater global perspective on today's media landscape. Gradually building up the reader's knowledge to encourage independent thinking, this is an essential resource for students taking courses in media, cultural, communication and film studies at school, college or university.
The two volume set LNCS 4351 and LNCS 4352 constitutes the refereed proceedings of the 13th International Multimedia Modeling Conference, MMM 2007, held in Singapore in January 2007. Based on rigorous reviewing, the program committee selected 123 carefully revised full papers of the main technical sessions and 33 revised full papers of four special sessions from a total of 392 submissions for presentation in two volumes.
Offers comprehensive coverage of the issues, concepts, trends, and technologies of distance learning.
Foundations of Sound and Image Production
A Computational Intelligence Perspective, Second Edition
The CRC Handbook of Mechanical Engineering, Second Edition
An Introduction to Digital Multimedia
Methods and Applications for Digital Cameras
Multimedia Journalism
This book defines over 3,000 terms from the field of education to assist those charged with teaching students to become global citizens in a rapidly changing, technological society. • 3,050 A- Z entries, including over 400 new and revised definitions • 128 contributors from a variety of specialized areas related to education • Three tables and graphs to illustrate specific aspects of mathematics and evaluation in education • An introduction on education terminology by editors John W. Collins and Nancy Patricia O'Brien, distinguished librarians in the study of education • Author attributions for each definition • An extensive, updated bibliography of sources that identify and explain terms used within education
Illustrating essential aspects of adaptive image processing from a computational intelligence viewpoint, the second edition of Adaptive Image Processing: A Computational Intelligence Perspective provides an authoritative and detailed account of computational intelligence (CI) methods and algorithms for adaptive image processing in regularization, edge detection, and early vision. With three new chapters and updated information throughout, the new edition of this popular reference includes substantial new material that focuses on applications of advanced CI techniques in image processing applications. It introduces new concepts and frameworks that demonstrate how neural networks, support vector machines, fuzzy logic, and evolutionary algorithms can be used to address new challenges in image processing, including low-level image processing, visual content analysis, feature extraction, and pattern recognition. Emphasizing developments in state-of-the-art CI techniques, such as content-based image retrieval, this book continues to provide educators, students, researchers, engineers, and technical managers in visual information processing with the up-to-date understanding required to address contemporary challenges in image content processing and analysis.
Second Edition Of The Book Is The Result Of A Fresh Study Of The Latest In The Technology And Syllabi Of Various Universities. Thus, It Intends To Make Students Up-To-Date In Knowledge, And To Make The Book More Comprehensive And Relevant At The All-India
In recent years, multimedia learning, or learning from words and images, has developed into a coherent discipline with a significant research base. The Cambridge Handbook of Multimedia Learning is unique in offering a comprehensive, up-to-date analysis of research and theory in the field, with a focus on computer-based learning. Since the first edition appeared in 2005, it has shaped the field and become the primary reference work for multimedia learning. Multimedia environments, including online presentations, e-courses, interactive lessons, simulation games, slideshows, and even textbooks, play a crucial role in education. This revised second edition incorporates the latest developments in multimedia learning and contains new chapters on topics such as drawing, video, feedback, working memory, learner control, and intelligent tutoring systems. It examines research-based principles to determine the most effective methods of multimedia instruction and considers research findings in the context of cognitive theory to explain how these methods work.
PACS-Based Multimedia Imaging Informatics
Encyclopedia of Data Warehousing and Mining, Second Edition
Advances in Multimedia Information Processing - PCM 2004
Adaptive Image Processing
Single-Sensor Imaging
Handbook of Research on Mobile Multimedia, Second Edition
Because the properties of objects are largely determined by their geometric features, shape analysis and classification are essential to almost every applied scientific and technological area. A detailed understanding of the geometrical features of real-world entities (e.g., molecules, organs, materials and components) can provide important clues about their origin and function. When properly and carefully applied, shape analysis offers an exceedingly rich potential to yield useful applications in diverse areas ranging from material sciences to biology and neuroscience. Get Access to the Authors' Own Cutting-Edge Open-Source Software Projects—and Then Actually Contribute to Them Yourself! The authors of Shape Analysis and Classification: Theory and Practice, Second Edition have improved the bestselling first edition by updating the tremendous progress in the field. This exceptionally accessible book presents the most advanced imaging techniques used for analyzing general biological shapes, such as those of cells, tissues, organs, and organisms. It implements numerous corrections and improvements—many of which were suggested by readers of the first edition—to optimize understanding and create what can truly be called an interactive learning experience. New Material in This Second Edition Addresses Graph and complex networks Dimensionality reduction Structural pattern recognition Shape representation using graphs Graphically reformulated, this edition updates equations, figures, and references, as well as slides that will be useful in related courses and general discussion. Like the popular first edition, this text is applicable to many fields and certain to become a favored addition to any library. Visit http://www.vision.ime.usp.br/~cesar/shape/ for Useful Software, Databases, and Videos
This book constitutes the thoroughly refereed post-proceedings of the First International Workshop on Adaptive Multimedia Retrieval, AMR 2003, held in Hamburg, Germany in September 2003. The 12 revised full papers presented were carefully selected during two rounds of reviewing and improvement. Also included are three invited papers by leading researchers in the area to provide introductory and background information and to complete coverage of the relevant aspects. The papers are organized in topical sections on retrieval systems, texts and ontologies, feature extraction from video, image retrieval, and sound.
Multimedia Image and Video ProcessingCRC Press
"As multimedia applications have become part of contemporary daily life, numerous paradigm-shifting technologies in multimedia processing have emerged over the last decade. Substantially updated with 21 new chapters, Multimedia Image and Video Processing, Second Edition explores the most recent advances in multimedia research and applications. This edition presents a comprehensive treatment of multimedia information mining, security, systems, coding, search, hardware, and communications as well as multimodal information fusion and interaction.Clearly divided into seven parts, the book begins with a section on standards, fundamental methods, design issues, and typical architectures. It then focuses on the coding of video and multimedia content before covering multimedia search, retrieval, and management. After examining multimedia security, the book describes multimedia communications and networking and explains the architecture design and implementation for multimedia image and video processing. It concludes with a section on multimedia systems and applications.Written by some of the most prominent experts in the field, this updated edition provides readers with the latest research in multimedia processing and equips them with advanced techniques for the design of multimedia systems"--
Image and Video Compression for Multimedia Engineering
Multimedia Image and Video Processing
Fundamentals of Multimedia
Multimedia hardware still cannot accommodate the demand for large amounts of visual data. Without the generation of high-quality video bitstreams, limited hardware capabilities will continue to stifle the advancement of multimedia technologies. Thorough grounding in coding is needed so that applications such as MPEG-4 and JPEG 2000 may come to fruition. Image and Video Compression for Multimedia Engineering provides a solid, comprehensive understanding of the fundamentals and algorithms that lead to the creation of new methods for generating high quality video bit streams. The authors present a number of relevant advances along with international standards. New to the Second Edition · A chapter describing the recently developed video coding standard, MPEG-Part 10 Advances Video Coding also known as H.264 · Fundamental concepts and algorithms of JPEG2000 · Color systems of digital video · Up-to-date video coding standards and profiles Visual data, image, and video coding will continue to enable the creation of advanced hardware, suitable to the demands of new applications. Covering both image and video compression, this book yields a unique, self-contained reference for practitioners tobuild a basis for future study, research, and development.
As multimedia applications have become part of contemporary daily life, numerous paradigm-shifting technologies in multimedia processing have emerged over the last decade. Substantially updated with 21 new chapters, Multimedia Image and Video Processing, Second Edition explores the most recent advances in multimedia research and applications. This edition presents a comprehensive treatment of multimedia information mining, security, systems, coding, search, hardware, and communications as well as multimodal information fusion and interaction. Clearly divided into seven parts, the book begins with a section on standards, fundamental methods, design issues, and typical architectures. It then focuses on the coding of video and multimedia content before covering multimedia search, retrieval, and management. After examining multimedia security, the book describes multimedia communications and networking and explains the architecture design and implementation for multimedia image and video processing. It concludes with a section on multimedia systems and applications. Written by some of the most prominent experts in the field, this updated edition provides readers with the latest research in multimedia processing and equips them with advanced techniques for the design of multimedia systems.