

Super High Resolution Image

The two volume set LNCS 6938 and LNCS 6939 constitutes the refereed proceedings of the 7th International Symposium on Visual Computing, ISVC 2011, held in Las Vegas, NV, USA, in September 2011. The 68 revised full papers and 46 poster papers presented together with 30 papers in the special tracks were carefully reviewed and selected from more than 240 submissions. The papers of part I (LNCS 6938) are organized in computational bioimaging, computer graphics, motion and tracking, segmentation, visualization; mapping modeling and surface reconstruction, biomedical imaging, computer graphics, interactive visualization in novel and heterogeneous display environments, object detection and recognition. Part II (LNCS 6939) comprises topics such as immersive visualization, applications, object detection and recognition, virtual reality, and best practices in teaching visual computing.

This book constitutes the refereed proceedings of the 16th Conference on Image and Graphics Technologies and Applications, IGTA 2021, held in Beijing, China in June, 2021. The 21 papers presented were carefully reviewed and selected from 86 submissions. They provide a forum for sharing progresses in the areas of image processing technology; image analysis and understanding; computer vision and pattern recognition; big data mining, computer graphics and VR, as well as image technology applications. The volume contains the following thematic blocks: image processing and enhancement techniques (image information acquisition, image/video coding, image/video transmission, image/video storage, compression, completion, dehazing, reconstruction and display, etc.); biometric identification techniques (biometric identification and authentication techniques including face, fingerprint, iris and palm-print, etc.); machine vision and 3D reconstruction (visual information acquisition, camera calibration, stereo vision, 3D reconstruction, and applications of machine vision in industrial inspection, etc.); image/video big data analysis and understanding (object detection and recognition, image/video retrieval, image segmentation, matching, analysis and understanding); computer graphics (modeling, rendering, algorithm simplification and acceleration techniques, realistic scene generation, 3D reconstruction algorithm, system and application, etc.); virtual reality and human-computer interaction (virtual scene generation techniques, tracing and positioning techniques for large-scale space, augmented reality techniques, human-computer interaction techniques based on computer vision, etc.); applications of image and graphics (image/video processing and transmission, biomedical engineering applications, information security, digital watermarking, text processing and transmission, remote sensing, telemetering, etc.); other research works and surveys related to the applications of image and graphics technology.

This book constitutes the refereed proceedings of the 7th Chinese Conference on Biometric Recognition, CCBR 2012, held in Guangzhou, China, in December 2012. The 46 revised full papers were carefully reviewed and selected from 80 submissions. The papers address the problems in face, iris, hand biometrics, speaker, handwriting, gait, soft biometrics, security and other related topics, and contribute new ideas to research and development of reliable and practical solutions for biometric authentication.

This volume contains 85 papers presented at CSI 2013: 48th Annual Convention of Computer Society of India with the theme "ICT and Critical Infrastructure". The convention was held during 13th–15th December 2013 at Hotel Novotel Varun Beach, Visakhapatnam and hosted by Computer Society of India, Vishakhapatnam Chapter in association with Vishakhapatnam Steel Plant, the flagship company of RINL, India. This volume contains papers mainly focused on Data Mining, Data Engineering and Image Processing, Software Engineering and Bio-Informatics, Network Security, Digital Forensics and Cyber Crime, Internet and Multimedia Applications and E-Governance Applications.

11th International Conference, ICIG 2021, Haikou, China, August 6–8, 2021, Proceedings, Part III

Multimodal Brain Image Analysis and Mathematical Foundations of Computational Anatomy

Bulletin of Electrical Engineering and Informatics

Build scalable real-world projects to implement end-to-end neural networks on Android and iOS

Computational Methods and Data Engineering

Biometric Recognition

Recent Advances in Image and Video Coding

This book is a collection of selected papers presented at the First Congress on Intelligent Systems (CIS 2020), held in New Delhi, India, during September 5–6, 2020. It includes novel and innovative work from experts, practitioners, scientists, and decision-makers from academia and industry. It covers selected papers in the area of computer vision. This book covers new tools and technologies in some of the important areas of medical science like histopathological image analysis, cancer taxonomy, use of deep learning architecture in dental care, and many more. Furthermore, this book reviews and discusses the use of intelligent learning-based algorithms for increasing the productivity in agricultural domain.

Bulletin of Electrical Engineering and Informatics (Buletin Teknik Elektro dan Informatika) ISSN: 2089-3191, e-ISSN: 2302-9285 is open to submission from scholars and experts in the wide areas of electrical, electronics, instrumentation, control, telecommunication and computer engineering from the global world. The journal publishes original papers in the field of electrical, electronics, instrumentation & control, telecommunication, computer and informatics engineering. Table of Contents Study, Survey and Analysis for Media Selection Rinal Harshadkumar Doshi, Rajkumar A. Soni, Bijendra Agrawal, Ravindra L. Naik 1-6 Literature Review of Permanent Magnet AC Motors and Drive for Automotive Application Rakesh Ghanshyamlal Shrivastava, M.B. Diagavane, S.R. Vaishnav 7-14 Case Study: Satisfying Skills Needed of Engineering Graduates through a Course on Innovation Raj L Desai, M. David Papendick 15-22 Designing a Secure Object Oriented Software Using Software Security Life Cycle Mohammad Obaidullah Bokhari, Mahtab Alam 23-28 Design And Implementation Of Error Correcting Codes For Transmission in Binary Symmetric Channel Victor N. Papilaya 29-36 Discrete Design Optimization of Small Open Type Dry Transformers Raju Basak, Arabinda Das, Ajay Sensarma, Amar Nath Sanyal 37-42 Super Resolution Imaging Needs Better Registration for Better Quality Results Varsha Hemant Patil, Kharate G K, Kamlapur Snehal Mohan 43-50 A Secure Image Encryption Algorithm Based on Hill Cipher System S.K. Mutttoo, Deepika Aggarwal, Bhavya Ahuja 51-60 Solving Hashiwokakero Puzzle Game with Hashi Solving Techniques and Depth First Search Reza Firsandaya Malik, Rusdi Efendi, Eriska Amrina Pratiwi 61-68

The International Conference on Signals, Systems and Automation (ICSSA 2011) aims to spread awareness in the research and academic community regarding cutting-edge technological advancements revolutionizing the world. The main emphasis of this conference is on dissemination of information, experience, and research results on the current topics of interest through in-depth discussions and participation of researchers from all over the world. The objective is to provide a platform to scientists, research scholars, and industrialists for interacting and exchanging ideas in a number of research areas. This will facilitate communication among researchers in different fields of Electronics and Communication Engineering. The International Conference on Intelligent System and Data Processing (ICISD 2011) is organized to address various issues that will foster the creation of intelligent solutions in the future. The primary goal of the conference is to bring together worldwide leading researchers, developers, practitioners, and educators interested in advancing the state of the art in computational intelligence and data processing for exchanging knowledge that encompasses a broad range of disciplines among various distinct communities. Another goal is to promote scientific information interchange between researchers, developers, engineers, students, and practitioners working in India and abroad.

Learn how to deploy effective deep learning solutions on cross-platform applications built using TensorFlow Lite, ML Kit, and Flutter Key FeaturesWork through projects covering mobile vision, style transfer, speech processing, and multimedia processingCover interesting deep learning solutions for mobileBuild your confidence in training models, performance tuning, memory optimization, and neural network deployment through every projectBook Description Deep learning is rapidly becoming the most popular topic in the mobile app industry. This book introduces trending deep learning concepts and their use cases with an industrial and application-focused approach. You will cover a range of projects covering tasks such as mobile vision, facial recognition, smart artificial intelligence assistant, augmented reality, and more. With the help of eight projects, you will learn how to integrate deep learning processes into mobile platforms, iOS, and Android. This will help you to transform deep learning features into robust mobile apps efficiently. You'll get hands-on experience of selecting the right deep learning architectures and optimizing mobile deep learning models while following an application oriented-approach to deep learning on native mobile apps. We will later cover various pre-trained and custom-built deep learning model-based APIs such as machine learning (ML) Kit through Firebase. Further on, the book will take you through examples of creating custom deep learning models with TensorFlow Lite. Each project will demonstrate how to integrate deep learning libraries into your mobile apps, right from preparing the model through to deployment. By the end of this book, you'll have mastered the skills to build and deploy deep learning mobile applications on both iOS and Android. What you will learnCreate your own customized chatbot by extending the functionality of Google AssistantImprove learning accuracy with the help of features available on mobile devicesPerform visual recognition tasks using image processingUse augmented reality to generate captions for a camera feedAuthenticate users and create a mechanism to identify rare and suspicious user interactionsDevelop a chess engine based on deep reinforcement learningExplore the concepts and methods involved in rolling out production-ready deep learning iOS and Android applicationsWho this book is for This book is for data scientists, deep learning and computer vision engineers, and natural language processing (NLP) engineers who want to build smart mobile apps using deep learning methods. You will also find this book useful if you want to improve your mobile app's user interface (UI) by harnessing the potential of deep learning. Basic knowledge of neural networks and coding experience in Python will be beneficial to get started with this book.

15th International Conference Vietri Sul Mare, Italy, September 8-11, 2009 Proceedings

High-Resolution Microwave Imaging

Official Gazette of the United States Patent and Trademark Office

Motion-Free Super-Resolution

Fundamentals and Advances

14th International Conference, CAIP 2011, Seville, Spain, August 29-31, 2011, Proceedings, Part II

Image and Graphics

This book is devoted to the issue of image super-resolution—obtaining high-resolution images from single or multiple low-resolution images. Although there are numerous algorithms available for image interpolation and super-resolution, there's been a need for a common thread between the two processes. Filling this need, Image Super-Resolution and Applications presents image interpolation as a building block in the super-resolution reconstruction process. Instead of approaching image interpolation as either a polynomial inverse problem, this book breaks the mold and compares and contrasts the two approaches. It presents two directions for image super-resolution: super-resolution with a priori information and blind super-resolution reconstruction of images. It also devotes complementary steps used to obtain high-resolution images: image registration and image fusion. Details techniques for color image interpolation and interpolation for pattern recognition Analyzes image interpolation as an inverse problem Presents image registration Considers image fusion and its application in image super resolution Includes simulation experiments along with the required MATLAB® code Supplying complete coverage of image-super resolution and its applications, the book illustrates applications for image resolution in medical and satellite image processing. It uses MATLAB® programs to present various techniques, including polynomial image interpolation and adaptive polynomial image interpolation. MATLAB codes for most of the simulation experiments supplied included in the appendix.

Coupled with machine learning, the use of signal processing techniques for big data analysis, Internet of things, smart cities, security, and bio-informatics applications has witnessed explosive growth. This has been made possible via fast algorithms on data, processing with advanced GPU technology. This book presents an up-to-date tutorial and overview on learning technologies such as random forests, sparsity, and low-rank matrix estimation and cutting-edge visual/signal processing techniques, including face filtering, and multirate DSP. It discusses the applications that make use of deep learning, convolutional neural networks, random forests, etc. The applications include super-resolution imaging, fringe projection profilometry, human activities detection/capture language processing, cooperative networks, bioinformatics, DNA, and healthcare.

This three-volume set LNCS 12888, 12898, and 12890 constitutes the refereed conference proceedings of the 11th International Conference on Image and Graphics, ICIG 2021, held in Haikou, China, in August 2021.* The 198 full papers presented were selected focus on advances of theory, techniques and algorithms as well as innovative technologies of image, video and graphics processing and fostering innovation, entrepreneurship, and networking. *The conference was postponed due to the COVID-19 pandemic. With the exponential increase in computing power and broad proliferation of digital cameras, super-resolution imaging is poised to become the next "killer app." The growing interest in this technology has manifested itself in an explosion of literature on the Imaging consolidates key recent research contributions from eminent scholars and practitioners in this area and serves as a starting point for exploration into the state of the art in the field. It describes the latest in both theoretical and practical aspects of industry, providing a base of understanding for future progress. Features downloadable tools to supplement material found in the book Recent advances in camera sensor technology have led to an increasingly larger number of pixels being crammed into even smaller sensors, resulting in an overall decline in the visual quality of recorded content, necessitating improvement of images through the use of post-processing. Providing a snapshot of the cutting edge in super-resolution imaging, this book focuses on methods and techniques beyond the capabilities of the sensors that acquired them. It covers: History and future directions of super-resolution imaging Locally adaptive processing methods versus globally optimal methods Modern techniques for motion estimation How to integrate approaches Learning-based methods Applications in remote sensing and medicine Practical implementations and commercial products based on super-resolution The book concludes by concentrating on multidisciplinary applications of super-resolution for a wide range of super-resolution imaging implementation techniques, including variational, feature-based, multi-channel, learning-based, locally adaptive, and nonparametric methods. This versatile book can be used as the basis for short courses for engineers and graduate-level courses in image processing.

5th International Conference, ICIAR 2008, Póvoa de Varzim, Portugal, June 25-27, 2008, Proceedings

Artificial Intelligence Applications in Specialty Crops

Mobile Deep Learning with TensorFlow Lite, ML Kit and Flutter

Algorithms and Architectures for Parallel Processing

Iterative-Interpolation Super-Resolution Image Reconstruction

Image Analysis and Recognition

Optical and Digital Image Processing

This book gathers selected high-quality research papers from the International Conference on Computational Methods and Data Engineering (ICMDE 2020), held at SRM University, Sonipat, Delhi-NCR, India. Focusing on cutting-edge technologies and the most dynamic areas of computational intelligence and data engineering, the respective contributions address topics including collective intelligence, intelligent transportation systems, fuzzy systems, data privacy and security, data mining, data warehousing, big data analytics, cloud computing, natural language processing, swarm intelligence, and speech processing.

This book is part of a three-volume set that constitutes the refereed proceedings of the 11th International Conference on Knowledge-Based Intelligent Information and Engineering Systems, KES 2007. Coverage in this first volume includes artificial neural networks and connectionists systems, fuzzy and neuro-fuzzy systems, evolutionary computation, machine learning and classical AI, agent systems, and information engineering and applications in ubiquitous computing environments.

This book constitutes the refereed proceedings of the 15th International Conference on Image Analysis and Processing, ICIAP 2009, held in Vietri sul Mare, Italy, in September 2009. The 107 revised full papers presented together with 3 invited papers were carefully reviewed and selected from 168 submissions. The papers are organized in topical sections on computer graphics and image processing, low and middle level processing, 2D and 3D segmentation, feature extraction and image analysis, object detection and recognition, video analysis and processing, pattern analysis and classification, learning, graphs and trees, applications, shape analysis, face analysis, medical imaging, and image analysis and pattern recognition.

To my wife, Mitu - Vivek Bannore Preface Preface In many imaging systems, under-sampling and aliasing occurs frequently leading to degradation of image quality. Due to the limited number of sensors available on the digital cameras, the quality of images captured is also limited. Factors such as optical or atmospheric blur and sensor noise can also contribute further to the degradation of image quality. Super-Resolution is an image reconstruction technique that enhances a sequence of low-resolution images or video frames by increasing the spatial resolution of the images. Each of these low-resolution images contain only incomplete scene information and are geometrically warped, aliased, and under-sampled. Super-resolution technique intelligently fuses the incomplete scene information from several consecutive low-resolution frames to reconstruct a high-resolution representation of the original scene. In the last decade, with the advent of new technologies in both civil and military domain, more computer vision applications are being developed with a demand for high-quality high-resolution images. In fact, the demand for high-resolution images is exponentially increasing and the camera manufacturing technology is unable to cope up due to cost efficiency and other practical reasons.

Learning Approaches in Signal Processing

Fundamentals and Applications

Computer Analysis of Images and Patterns

Theory, Algorithms and Applications (II)

4th International Workshop, MBIA 2019, and 7th International Workshop, MFCA 2019, Held in Conjunction with MICCAI 2019, Shenzhen, China, October 17, 2019, Proceedings

Proceedings of Congress on Intelligent Systems 2020

Algorithm & SoC Design for Automotive Vision Systems

This volume constitutes the refereed proceedings of the Second International Conference on Geo-Informatics in Resource Management and Sustainable Ecosystem, GRMSE 2014, held in Ypsilanti, MI, China, in December 2014. The 73 papers presented were carefully reviewed and selected from 296 submissions. The papers are divided into topical sections on smart city in resource management and sustainable ecosystem; spatial data acquisition through RS and GIS in resource management and sustainable ecosystem; ecological and environmental data processing and management; advanced geospatial model and analysis for understanding ecological and environmental process; applications of geo-informatics in resource management and sustainable ecosystem.

Image super resolution is one of the most significant computer vision researches aiming to reconstruct high resolution images with realistic details from low resolution images. In the past years, a number of traditional methods intended to produce high resolution images.

Recently, Deep Convolutional Neural Networks (DCNNs) have developed rapidly and achieved impressive progress in the computer vision area. Benefiting from DCNNs, the performance of image super resolution has improved compared with traditional methods. However, there still exists a large gap between the results of current methods and the real-world high resolution quality. In this thesis, we leverage the techniques of DCNNs to develop image super resolution models for generating satisfactory high resolution images. There are several proposed methods in this thesis to satisfy different super resolution scenarios. Our proposed methods are based on Generative Adversarial Networks (GANs), leading to powerful generative ability and effective discriminative learning. To breakthrough current bottlenecks, we design novel architectures for generator and discriminator, and involve new optimization strategies to improve the learning stability of the models. In order to improve the generalization ability of proposed methods, we conduct two mainstream super resolution tasks, namely face image hallucination and natural image super resolution. All the proposed components of our methods result in promising super resolution performance for these tasks. Not only handling the supervised super resolution task, we also investigate the more challenging problem, namely the unsupervised image super resolution task where the paired high resolution image and low resolution image data are unavailable. To evaluate the performance of our methods in different scenarios, we conduct extensive experiments on several benchmark datasets to study each method separately. Compared to state-of-the-art methods, our methods are able to achieve superior performance both quantitatively and qualitatively.

This book constitutes the refereed joint proceedings of the 4th International Workshop on Multimodal Brain Image Analysis, MBAI 2019, and the 7th International Workshop on Mathematical Foundations of Computational Anatomy, MFCA 2019, held in conjunction with the 22nd International Conference on Medical Imaging and Computer-Assisted Intervention, MICCAI 2019, in Shenzhen, China, in October 2019. The 16 full papers presented at MBAI 2019 and the 7 full papers presented at MFCA 2019 were carefully reviewed and selected. The MBAI papers intend to move forward the state of the art in multimodal brain image analysis, in terms of analysis methodologies, algorithms, software systems, validation approaches, benchmark datasets, neuroscience, and clinical applications. The MFCA papers are devoted to statistical and geometrical methods for modeling the variability of biological shapes. The goal is to foster the interactions between the mathematical community around shapes and the MICCAI community around computational anatomy applications.

This book comprehensively describes high-resolution microwave imaging and super-resolution information processing technologies and discusses new theories, methods and achievements in the high-resolution microwave imaging fields. Its chapters, which include abundant research results and examples, systematically summarize the authors' main research findings in recent years. The book is intended for researchers, engineers and postgraduates in the fields of electronics systems, signal information processing and data analysis, microwave remote sensing and microwave imaging radar, as well as space technology, especially in the microwave remote sensing and airborne or space-borne microwave imaging radar fields.

Third Iberian Conference, IbPRIA 2007, Girona, Spain, June 6-8, 2007, Proceedings

Signal Processing and Performance Analysis for Imaging Systems

Knowledge-Based Intelligent Information and Engineering Systems

Advances in Visual Computing

International Conference, GRMSE 2014, Ypsilanti, USA, October 3-5, 2014, Proceedings

21st International Conference, ICA3PP 2021, Virtual Event, December 3–5, 2021, Proceedings, Part I

Proceedings of ICMDE 2020, Volume 1

This book contains some selected papers from the International Conference on Extreme Learning Machine 2015, which was held in Hangzhou, China, December 15-17, 2015. This conference brought together researchers and engineers to share both theoretical studies and practical applications of the Extreme Learning Machine (ELM) technique and brain learning. This book covers theories, algorithms and applications of ELM. It gives readers a glance of the most recent advances of ELM. Image Restoration: Fundamentals and Advances responds to the need to update most existing references on the subject, many of which were published decades ago. Providing a broad overview of image restoration, this book explores breakthroughs and their role in supporting real-world applications associated with various scientific and engineering fields. These include astronomical imaging, photo editing, and medical imaging, to name just a few. The book examines how such advances can be used to improve fundamental properties of image sources. Addressing the many advances in imaging, computing, and communications technologies, this reference strikes just the right balance of coverage between core fundamental principles and the latest developments. Designed based on the idea that the reproducibility of published works on algorithms makes it easier for researchers to build on each other's work, which often benefits the vitality of the technical community as a whole. For that reason, this book is freely available. Topics covered include: Image denoising and deblurring Different image restoration methods and recent advances such as nonlocality and sparsity Blind restoration under space-varying blur Super-resolution restoration Learning-based image restoration New possibilities using hybrid imaging systems Many existing references are scattered throughout the literature, and there is a significant gap between the cutting edge in image restoration and what we can learn from state-of-the-art that need but avoid a rehash of the many fine existing books on this subject, this reference focuses on algorithms rather than theories or applications. Giving readers access to a large amount of downloadable source code, the book illustrates the progress developed over the years, and the state of the art in image restoration. It is a valuable resource for readers at all levels of understanding.

The two volumes CCIS 546 and 547 constitute the refereed proceedings of the CCF Chinese Conference on Computer Vision, CCCV 2015, held in Xi'an, China, in September 2015. The total of 89 revised full papers presented in both volumes were selected from 176 submissions. The papers address issues such as computer vision, machine learning, pattern recognition, target recognition, object detection, target tracking, image segmentation, image restoration, face recognition, image classification, and video processing. The two volume set LNCS 6854/6855 constitutes the refereed proceedings of the International Conference on Computer Analysis of Images and Patterns, CAIP 2011, which took place in Seville, Spain, August 29-31, 2011. The 138 papers presented were carefully reviewed and selected from 286 submissions. The papers are organized in topical sections on: motion analysis, image and shape models, segmentation and grouping, shape recovery, kernel methods, medical imaging, structural pattern recognition, video processing, calibration; and tracking and stereo vision.

5th International Symposium, ISVC 2009, Las Vegas, NV, USA, November 30 - December 2, 2009, Proceedings, Part II

A Computationally Efficient Technique

Image Restoration

Super-Resolution Imaging

Image and Graphics Technologies and Applications

Geo-Informatics in Resource Management and Sustainable Ecosystem

Computer Vision, Graphics and Image Processing

Part of a two-volume set, this book constitutes the refereed proceedings of the Third Iberian Conference on Pattern Recognition and Image Analysis, IbPRIA 2007, held in Girona, Spain in June 2007. It covers pattern recognition, human language technology, special architectures and industrial applications, motion analysis, image analysis, biomedical applications, shape and texture analysis, 3D, and image coding and processing.

Motion-Free Super-Resolution is a compilation of very recent work on various methods of generating super-resolution (SR) images from a set of low-resolution images. The current literature on this topic deals primarily with the use of motion cues for the purpose of generating SR images. These cues have, it is shown, their advantages and disadvantages. In contrast, this book shows that cues other than motion can also be used for the same purpose, and addresses both the merits and demerits of these new techniques. Motion-Free Super-Resolution supersedes much of the lead author's previous edited volume, "Super-Resolution Imaging," and includes an up-to-date account of the latest research efforts in this fast-moving field. This sequel also features a style of presentation closer to that of a textbook, with an emphasis on teaching and explanation rather than scholarly presentation.

The three volume set LNCS 13155, 13156, and 13157 constitutes the refereed proceedings of the 21st International Conference on Algorithms and Architectures for Parallel Processing, ICA3PP 2021, which was held online during December 3-5, 2021. The total of 145 full papers included in these proceedings were carefully reviewed and selected from 403 submissions. They cover the many dimensions of parallel algorithms and architectures including fundamental theoretical approaches, practical experimental projects, and commercial components and systems. The papers were organized in topical sections as follows: Part I, LNCS 13155: Deep learning models and applications; software systems and efficient algorithms; edge computing and edge intelligence; service dependability and security algorithms; data science; Part II, LNCS 13156: Software systems and efficient algorithms; parallel and distributed algorithms and applications; data science; edge computing and edge intelligence; blockchain systems; deep learning models and applications; IoT; Part III, LNCS 13157: Blockchain systems; data science; distributed and network-based computing; edge computing and edge intelligence; service dependability and security algorithms; software systems and efficient algorithms.

Invited papers -- DIAR: Advances in degradation modeling and processing / Mohamed Cheriet and Reza Farrahi Moghaddam -- Analysis for video coding: Moving it from the encoder to the decoder / Fernando Pereira -- Image restoration and enhancement -- A fast scheme for multiscale signal denoising / Vittoria Bruni, Benedetto Piccoli, and Domenico Vitulano -- Color scratches removal using human perception / Vittoria Bruni, Paola Ferrara, and Domenico Vitulano -- Self-similarity of images in the fourier domain, with applications to MRI / G.S. Mayer, Edward R. Vrscay, M.L. Lauzon, B. G. Goodyear, and J. R. Mitchell -- A simple scaling algorithm based on areas pixels / Alain Horé, François Deschênes, and Djemel Ziou -- A new method for sharpening color images using fuzzy approach / M. Wilsy and Madhu S. Nair -- Wavelet noise reduction based on energy features / Guoyi Fu, Ali Hojjat, and Alan Colchester --

Proceedings of ELM-2015 Volume 2

Computer Vision

For Smart Safe Driving System

CCF Chinese Conference, CCCV 2015, Xi'an, China, September 18-20, 2015, Proceedings, Part I

ICT and Critical Infrastructure: Proceedings of the 48th Annual Convention of Computer Society of India- Vol II

Data Science for Nano Image Analysis

5th Indian Conference, ICVGIP 2006, Madurai, India, December 13-16, 2006, Proceedings

This book combines two distinctive topics: data science/image analysis and materials science. The purpose of this book is to show what type of nano material problems can be better solved by which set of data science methods. The majority of material science research is thus far carried out by domain-specific experts in material engineering, chemistry/chemical engineering, and mechanical & aerospace engineering. The book could benefit materials scientists and manufacturing engineers who were not exposed to systematic data science training while in schools, or data scientists in computer science or statistics disciplines who want to work on material image problems or contribute to materials discovery and optimization. This book provides in-depth discussions of how data science and operations research methods can help and improve nano image analysis, automating the otherwise manual and time-consuming operations for material engineering and enhancing decision making for nano material exploration. A broad set of data science methods are covered, including the representations of images, shape analysis, image pattern analysis, and analysis of streaming images, change points detection, graphical methods, and real-time dynamic modeling and object tracking. The data science methods are described in the context of nano image applications, with specific material science case studies.

The four-volume set LNCS 11070, 11071, 11072, and 11073 constitutes the refereed proceedings of the 21st International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2018, held in Granada, Spain, in September 2018. The 373 revised full papers presented were carefully reviewed and selected from 1068 submissions in a double-blind review process. The papers have been organized in the following topical sections: Part I: Image Quality and Artefacts; Image Reconstruction Methods; Machine Learning in Medical Imaging; Statistical Analysis for Medical Imaging; Image Registration Methods. Part II: Optical and Histology Applications: Optical Imaging Applications; Histology Applications; Microscopy Applications; Optical Coherence Tomography and Other Optical Imaging Applications. Cardiac, Chest and Abdominal Applications: Cardiac Imaging Applications: Colorectal, Kidney and Liver Imaging Applications; Lung Imaging Applications; Breast Imaging Applications; Other Abdominal Applications. Part III: Diffusion Tensor Imaging and Functional MRI: Diffusion Tensor Imaging; Diffusion Weighted Imaging; Functional MRI; Human Connectome. Neuroimaging and Brain Segmentation Methods: Neuroimaging; Brain Segmentation Methods. Part IV: Computer Assisted Intervention: Image Guided Interventions and Surgery; Surgical Planning, Simulation and Work Flow Analysis; Visualization and Augmented Reality. Image Segmentation Methods: General Image Segmentation Methods, Measures and Applications; Multi-Organ Segmentation; Abdominal Segmentation Methods; Cardiac Segmentation Methods; Chest, Lung and Spine Segmentation; Other Segmentation Applications.

Image Super-Resolution and ApplicationsCRC Press

An emerging trend in the automobile industry is its convergence with information technology (IT). Indeed, it has been estimated that almost 90% of new automobile technologies involve IT in some form. Smart driving technologies that improve safety as well as green fuel technologies are quite representative of the convergence between IT and automobiles. The smart driving technologies include three key elements: sensing of driving environments, detection of objects and potential hazards and the generation of driving control signals including warning signals. Although radar-based systems are primarily used for sensing the driving environments, the camera has gained importance in advanced driver assistance systems (ADAS). This book covers system-on-a-chip (SoC) designs—including both algorithms and hardware—related with image sensing and object detection by using the camera for smart driving systems. It introduces a variety of algorithms such as lens correction, super resolution, image enhancement and object detections from the images captured by low-cost vehicle camera. This is followed by implementation issues such as SoC architecture, hardware accelerator, software development environment and reliability techniques for automobile vision systems. This book is aimed for the new and practicing engineers in automotive and chip-design industries to provide some overall guidelines for the development of automotive vision systems. It will also help graduate students understand and get started for the research work in this field.

16th Chinese Conference on Image and Graphics Technologies, IGTA 2021, Beijing, China, June 6-7, 2021, Revised Selected Papers

Image Super-Resolution and Applications

Hosted by CSI Vishakapatnam Chapter

Patents

Deep Learning Based Image Super Resolution

Advances in Pattern Recognition ICAPR2003

21st International Conference, Granada, Spain, September 16-20, 2018, Proceedings, Part II

It is with great pleasure that we present the proceedings of the 5th International Symposium on Visual Computing (ISVC 2009), which was held in Las Vegas, Nevada. ISVC offers a common umbrella for the four main areas of visual computing including vision, graphics, visualization, and virtual reality. The goal is to provide a forum for researchers, scientists, engineers, and practitioners throughout the world to present their latest research findings, ideas, developments, and applications in the broader area of visual computing. This year, the program consisted of 16 oral sessions, one poster session, 7 special tracks, and 6 keynote presentations. Also, this year ISVC hosted the Third Semantic Robot Vision Challenge. The response to the call for papers was very good; we received over 320 submissions for the main symposium from which we accepted 97 papers for oral presentation and 63 papers for poster presentation. Special track papers were solicited separately through the Organizing and Program Committees of each track. A total of 40 papers were accepted for oral presentation and 15 papers for poster presentation in the special tracks. All papers were reviewed with an emphasis on potential to contribute to the state of the art in the field. Selection criteria included accuracy and originality of ideas, clarity and significance of results, and presentation quality. The review process was quite rigorous, involving two to three independent blind reviews followed by several days of discussion. During the discussion period we tried to correct anomalies and errors that might have existed in the initial reviews.

This book presents today's most powerful signal processing techniques together with methods for assessing imaging system performance when each of these techniques is applied. This multi-use book helps you make the most of sensor hardware through software enhancement, and evaluate system and algorithm performance. You also learn how to make the best hardware/software decisions in developing the next-generation of image acquisition and analysis systems.

This book is intended to attract the attention of practitioners and researchers in academia and industry interested in challenging paradigms of image and video coding algorithms with an emphasis on recent technological developments. All the chapters are well demonstrated by various researchers around the world covering the field of image and video processing. This book highlights the current research in the image and video processing area such as image fusion, image segmentation and classification, image compression, machine vision algorithms and video compression. The entire work available in the book is mainly focusing on researchers who can do quality research in the area of image and video processing and related fields. Each chapter is an independent research which will definitely motivate the young researchers to ponder into. These eleven chapters available in five sections will be an eye-opener for all who are doing systematic research in these fields.

In recent years, Moore's law has fostered the steady growth of the field of digital image processing, though the computational complexity remains a problem for most of the digital image processing applications. In parallel, the research domain of optical image processing has matured, potentially bypassing the problems digital approaches were suffering and bringing new applications. The advancement of technology calls for applications and knowledge at the intersection of both areas but there is a clear knowledge gap between the digital signal processing and the optical processing communities. This book covers the fundamental basis of the optical and image processing techniques by integrating contributions from both optical and digital research communities to solve current application bottlenecks, and give rise to new applications and solutions. Besides focusing on joint research, it also aims at disseminating the knowledge existing in both domains. Applications covered include image restoration, medical imaging, surveillance, holography, etc... "a very good book that deserves to be on the bookshelf of a serious student or scientist working in these areas." Source: Optics and Photonics News

Handbook of Image Engineering

Medical Image Computing and Computer Assisted Intervention - MICCAI 2018

7th Chinese Conference, CCBR 2012, Guangzhou, China, December 4-5, 2012, Proceedings

Vol 1, No 1: March 2012

Proceedings of the Multi-Conference 2011

7th International Symposium, ISVC 2011, Las Vegas, NV, USA, September 26-28, 2011. Proceedings, Part II

Image Analysis and Processing -- ICTAP 2009

This book constitutes the refereed proceedings of the Indian Conference on Computer Vision, Graphics and Image Processing, ICVGIP 2006, held in Madurai, India, December 2006. Coverage in this volume includes image restoration and super-resolution, image filtering, visualization, tracking and surveillance, face-, gesture-, and object-recognition, compression, content based image retrieval, stereo/camera calibration, and biometrics.

Image techniques have been developed and implemented for various purposes, and image engineering (IE) is a rapidly evolving, integrated discipline comprising the study of all the different branches of image techniques, and encompassing mathematics, physics, biology, physiology, psychology, electrical engineering, computer science and automation. Advances in the field are also closely related to the development of telecommunications, biomedical engineering, remote sensing, surveying and mapping, as well as document processing and industrial applications. IE involves three related and partially overlapping groups of image techniques: image processing (IP) (in its narrow sense), image analysis (IA) and image understanding (IU), and the integration of these three groups makes the discipline of image engineering an important part of the modern information era. This is the first handbook on image engineering, and provides a well-structured, comprehensive overview of this new discipline. It also offers detailed information on the various image techniques. It is a valuable reference resource for R&D professional and undergraduate students involved in image-related activities.

2nd International Conference on Signals, Systems & Automation (ICSSA 2011) & 1st International Conference on Intelligent Systems & Data Processing (ICISD 2011)

Pattern Recognition and Image Analysis

11th International Conference, KES 2007, Vietri sul Mare, Italy, September 12-14, 2007, Proceedings, Part I

Intelligent Learning for Computer Vision