Image Processing Using Pulse Coupled Neural Networks Applications In Python Biological And Medical Physics Biomedical Engineering

The volume LNCS 9377 constitutes the refereed proceedings of the 12th International Symposium on Neural Networks, ISNN 2015, held in Jeju, South Korea in October 2015. The 55 revised full papers presented were carefully reviewed and selected from 97 submissions. These papers cover many topics of neural network-related research including intelligent control, neurodynamic analysis, memristive neurodynamics, computer vision, signal processing, machine learning, and optimization.

This book constitutes the refereed proceedings of the 8th Mexican Conference on Pattern Recognition, MCPR 2016, held in Guanajuato, Mexico, in June 2016. The 34 revised full papers presented were carefully reviewed and selected from 60 submissions. The papers are organized in topical sections on computer vision and image analysis; pattern recognition and artificial intelligent techniques; signal processing and analysis; and applications of pattern recognition.

PRINT/ONLINE PRICING OPTIONS AVAILABLE UPON REQUEST ATe-reference@taylorandfrancis.com

"Applications of Pulse-Coupled Neural Networks" explores the fields of image processing, including image filtering, image segmentation, image fusion, image coding, image retrieval, and biometric recognition, and the role of pulse-coupled neural networks in these fields. This book is intended for researchers and graduate students in artificial intelligence, pattern recognition, electronic engineering, and computer science. Prof. Yide Ma conducts research on intelligent information processing, biomedical image processing, and embedded system development at the School of Information Science and Engineering, Lanzhou University, China.

Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications

ICVGIP 2016 Satellite Workshops, WCVA, DAR, and MedImage, Guwahati, India, December 19, 2016 Revised Selected Papers

Information Processing for Remote Sensing

21st International Conference on Artificial Neural Networks, Espoo, Finland, June 14-17, 2011, Proceedings, Part I

Computer Imaging

Intelligence Science and Big Data Engineering

Speech, Audio, Image and Biomedical Signal Processing using Neural Networks

This two volume set LNCS 6791 and LNCS 6792 constitutes the refereed proceedings of the 21th International Conference on Artificial Neural Networks, ICANN 2011, held in Espoo, Finland, in June 2011. The 106 revised full or poster papers presented were carefully reviewed and selected from numerous submissions. ICANN 2011 had two basic tracks: brain-inspired computing and machine learning research, with strong cross-disciplinary interactions and applications.

Image processing algorithms based on the mammalian visual cortex are powerful tools for extraction information and manipulating images. This book reviews the neural theory and translates them into digital models. Applications are given in areas of image recognition, foveation, image fusion and information extraction. The third edition reflects renewed international interest in pulse image processing with updated sections presenting several newly developed applications. This edition also introduces a suite of Python scripts that assist readers in replicating results presented in the text and to further develop their own applications.

This book highlights recent advances in the design of hybrid intelligent systems based on nature-inspired optimization and their application in areas such as intelligent control and robotics, pattern recognition, time series prediction, and optimization of complex problems. The book is divided into seven main parts, the first of which addresses theoretical aspects of and new concepts and algorithms based on type-2 and intuitionistic fuzzy logic systems. The second part focuses on neural network theory, and explores the applications of neural networks in diverse areas, such as time series prediction and pattern recognition. The book's third part presents enhancements to meta-heuristics based on fuzzy logic techniques and describes new nature-inspired optimization algorithms that employ fuzzy dynamic adaptation of parameters, while the fourth part presents diverse applications of nature-inspired optimization algorithms. In turn, the fifth part investigates applications of fuzzy logic in diverse areas, such as time series prediction and pattern recognition. The sixth part examines new optimization algorithms and their applications. Lastly, the seventh part is dedicated to the design and application of different hybrid intelligent systems.

This book gives a concise and comprehensive overview of non-cooperative target tracking, fusion and control. Focusing on algorithms rather than theories for non-cooperative targets including air and space-borne targets, this work explores a number of

advanced techniques, including Gaussian mixture cardinalized probability hypothesis density (CPHD) filter, optimization on manifold, construction of filter banks and tight frames, structured sparse representation, and others. Containing a variety of illustrative and computational examples, Non-cooperative Target Tracking, Fusion and Control will be useful for students as well as engineers with an interest in information fusion, aerospace applications, radar data processing and remote sensing.
Algorithms for Image Processing and Computer Vision
Artificial Neural Networks
Bio-Inspired Computational Intelligence and Applications
Practical Image and Video Processing Using MATLAB
19th International Conference, Limassol, Cyprus, September 14-17, 2009, Proceedings
22nd International Conference on Artificial Neural Networks, Lausanne, Switzerland, September 11-14, 2012, Proceedings, Part I
Soft Computing as Transdisciplinary Science and Technology

This book constitutes the proceedings of the 7th International Conference on Intelligence Science and Big Data Engineering, IScIDE 2017, held in Dalian, China, in September 2017.The 48 full papers and 14 short papers presented in this volume were carefully reviewed and selected from 121 submissions. They deal with statistics and learning; deep neural networks; faces and people; objects; classification and clustering; imaging; biomedical signal processing; and recommendation.

Computer Imaging: Digital Image Analysis and Processing brings together analysis and processing in a unified framework, providing a valuable foundation for understanding both computer vision and image processing applications. Taking an engineering approach, the text integrates theory with a conceptual and application-oriented style, allowing you to immediately understand how each topic fits into the overall structure of practical application development. Divided into five major parts, the book begins by introducing the concepts and definitions necessary to understand computer imaging. The second part describes image analysis and provides the tools, concepts, and models required to analyze digital images and develop computer vision applications. Part III discusses application areas for the processing of images, emphasizing human visual perception. Part IV delivers the information required to apply a CVIPtools environment to algorithm development. The text concludes with appendices that provide supplemental imaging information and assist with the programming exercises found in each chapter. The author presents topics as needed for understanding each practical imaging model being studied. This motivates the reader to master the topics and also makes the book useful as a reference. The CVIPtools software integrated throughout the book, now in a new Windows version, provides practical examples and encourages you to conduct additional exploration via tutorials and programming exercises provided with each chapter.

MSEC2011 is an integrated conference concentrating its focus upon Multimedia ,Software Engineering, Computing and Education. In the proceeding, you can learn much more knowledge about Multimedia, Software Engineering ,Computing and Education of researchers all around the world. The main role of the proceeding is to be used as an exchange pillar for researchers who are working in the mentioned field. In order to meet high standard of Springer, AISC series ,the organization committee has made their efforts to do the following things. Firstly, poor quality paper has been refused after reviewing course by anonymous referee experts. Secondly, periodically review meetings have been held around the reviewers about five times for exchanging reviewing suggestions. Finally, the conference organization had several preliminary sessions before the conference. Through efforts of different people and departments, the conference will be successful and fruitful.

This book constitutes the refereed conference proceedings of the ICVGIP 2016 Satellite Workshops, WCVA, DAR, and MedImage, held in Guwahati, India, in December 2016. The papers presented are extended versions of the papers of three of the four workshops: Computer Vision Applications, Document Analysis and Recognition and Medical Image Processing. The Computer Vision Application track received 52 submissions and after a rigorous review process, 18 papers were presented. The focus is mainly on industrial applications of computer vision and related technologies. The Document Analysis and Recognition track received 10 submissions from which 7 papers were selected. The MedImage workshops focuses on problems in medical image computing and received 14 papers from which 9 were accepted for presentation in this book.

Fundamentals of Digital Image Processing
Image Processing Using Pulse-Coupled Neural Networks
4th International Symposium on Neural Networks, ISNN 2007 Nanjing, China, June 3-7, 2007. Proceedings, Part III
Applications of Pulse Coupled Neural Networks

For Facial Recognition, Object Detection, and Pattern Recognition Using Python
Pattern Recognition
International Conference on Life System Modeling, and Simulation, LSMS 2007, Shanghai, China, September 14-17, 2007. Proceedings

This is the first book to explain and demonstrate the tremendous ability of Pulse-Coupled Neural Networks (PCNNs) when applied to the field of image processing. PCNNs and their derivatives are biologically inspired models that are powerful tools for extracting texture, segments, and edges from images. As these attributes form the foundations of most image processing tasks, the use of PCNNs facilitates traditional tasks such as recognition, foveation, and image fusion. PCNN technology has also paved the way for new image processing techniques such as object isolation, spiral image fusion, image signatures, and content-based image searches. This volume contains examples of several image processing applications, as well as a review of hardware implementations.

Image Processing Using Pulse-Coupled Neural NetworksSpringer Science & Business Media

Soft computing embraces various methodologies for the development of intelligent systems that have been successfully applied to a large number of real-world problems. This text contains a collection of papers that were presented at the 6th On-line World Conference on Soft Computing in Industrial Applications that was held in September 2001. It provides a comprehensive overview of recent theoretical developments in soft computing as well as of successful industrial applications. It is divided into seven parts covering material on: keynote papers on various subjects ranging from computing with autopoietic systems to the effects of the Internet on education intelligent control classification, clustering and optimization image and signal processing agents, multimedia and Internet theoretical advances prediction, design and diagnosis. The book is aimed at researchers and professional engineers who develop and apply intelligent systems in computer engineering.

The three volume set LNCS 4232, LNCS 4233, and LNCS 4234 constitutes the refereed proceedings of the 13th International Conference on Neural Information Processing, ICONIP 2006, held in Hong Kong, China in October 2006. The 386 revised full papers presented were carefully reviewed and selected from 1175 submissions.

12th International Symposium on Neural Networks, ISNN 2015, Jeju, South Korea, October 15-18, 2015, Proceedings
Neural Information Processing
Artificial Neural Networks: Biological Inspirations - ICANN 2005
Digital Image Analysis and Processing
Soft Computing and Industry
Advances in Neural Networks - ISNN 2007
Artificial Neural Networks and Machine Learning - ICANN 2011

This book, is the most competitive book in the field of neural network I have ever seen. It reports the latest progress in the application to image processing. These include, image denoising, image segmentation, image enhancement, and etc. In this book the readers can get (1) the basic principles of pulsed coupled neural network; (2) how to apply PCNN on image processing; (3) the state-of-the-art techniques and algorithms. Let us join the pulse coupled neural network specially those who are doing image processing jobs.

UP-TO-DATE, TECHNICALLY ACCURATE COVERAGE OF ESSENTIAL TOPICS IN IMAGE AND VIDEO PROCESSING This is the first book to combine image and video processing with a practical MATLAB®-oriented approach in order to demonstrate the most important image and video techniques and algorithms. Utilizing minimal math, the contents are presented in a clear, objective manner, emphasizing and encouraging experimentation. The book has been organized into two parts. Part I: Image Processing begins with an overview of the field, then introduces the fundamental concepts, notation, and terminology associated with image representation and basic image processing operations. Next, it discusses MATLAB® and its Image Processing Toolbox with the start of a series of chapters with hands-on activities and step-by-step tutorials. These chapters cover image acquisition and digitization; arithmetic, logic, and geometric operations; point-based, histogram-based, and neighborhood-based image enhancement techniques; the Fourier Transform and relevant frequency-domain image filtering techniques; image restoration; mathematical morphology; edge detection techniques; image segmentation; image compression and coding; and feature extraction and representation. Part II: Video Processing presents the main concepts and terminology associated with analog video signals and systems, as well as digital video formats and standards. It then describes the technically involved problem of standards conversion, discusses motion estimation and compensation techniques, shows how video sequences can be filtered, and concludes with an example of a solution to object detection and tracking in video sequences using MATLAB®. Extra features of this book include: More than 30 MATLAB® tutorials, which consist of step-by-step guides toexploring image and video processing techniques using MATLAB® Chapters supported by figures, examples, illustrative problems, and exercises Useful websites and an extensive list of bibliographical references This accessible text is ideal for upper-level undergraduate and graduate students in digital image and video processing courses, as well as for engineers, researchers, software developers, practitioners, and anyone who wishes to learn about these increasingly popular topics on their own.

The two volume set LNCS 6443 and LNCS 6444 constitutes the proceedings of the 17th International Conference on Neural Information Processing, ICONIP 2010, held in Sydney, Australia, in November 2010. The 146 regular session papers presented were carefully reviewed and selected from 470 submissions. The papers of part I are organized in topical sections on neurodynamics, computational neuroscience

and cognitive science, data and text processing, adaptive algorithms, bio-inspired algorithms, and hierarchical methods. The second volume is structured in topical sections on brain computer interface, kernel methods, computational advance in bioinformatics, self-organizing maps and their applications, machine learning applications to image analysis, and applications.

The two volumes contain the papers presented at the ICONIP 2008 conference of the Asia Paci?c Neural Network Assembly, held in Auckland, New Zealand, November 25–28, 2008. ICONIP 2008 attracted around 400 submissions, with approx. 260 pres- tations accepted, many of them invited. ICONIP 2008 covered a large scope of topics in the areas of: methods and techniques of arti?cial neural networks, n- rocomputers, brain modeling, neuroscience, bioinformatics, pattern recognition, intelligent information systems, quantum computation, and their numerous - plications in almost all areas of science, engineering, medicine, the environment, and business. One of the features of the conference was the list of 20 plenary and invited speakers, all internationally established scientists, presenting their recent work. Amongthem: ProfessorsShun-ichiAmari,RIKENBrainScience Institute;Shiro Usui, RIKEN Brain Science Institute, Japan; Andrzej Cichocki, RIKEN Brain Science Institute; Takeshi Yamakawa, Kyushu Institute of Technology; Kenji Doya, Okinawa Institute of Science and Technology; Youki Kadobayashi, - tional Institute of Information and Communications Technology, Japan; Sung- Bae Cho, Yonsei University, Korea; Alessandro Villa, University of Grenoble, France; Danilo Mandic, Imperial College, UK; Richard Duro, Universidade da Coruna,Spain,AndreasKo ̈nig,TechnischeUniversit ̈ atKaiserslautern,Germany; Yaochu Jin, Honda Research Institute Europe, Germany; Bogdan Gabrys, U- versityofBournemouth,UK;JunWang,ChineseUniversityofHongKong;Mike Paulin, Otago University, New Zealand; Mika Hirvensalo, University of Turku, Finland;LeiXu,ChineseUniversityofHongKongandBeijingUniversity,China; Wlodzislaw Duch, Nicholaus Copernicus University, Poland; Gary Marcus, New York University, USA.

Applications of Pulse-Coupled Neural Networks
Image Processing Via Pulse Coupled Neural Network
Advances in Neuro-Information Processing
Computer Vision, Graphics, and Image Processing
Serials of Applications on PCNN
Mathematical and Computational Methods
Nature-Inspired Design of Hybrid Intelligent Systems

Gain insights into image-processing methodologies and algorithms, using machine learning and neural networks in Python. This book begins with the environment setup, understanding basic image-processing terminology, and exploring Python concepts that will be useful for implementing the algorithms discussed in the book. You will then cover all the core image processing algorithms in detail before moving onto the biggest computer vision library: OpenCV. You'll see the OpenCV algorithms and how to use them for image processing. The next section looks at advanced machine learning and deep learning methods for image processing and classification. You'll work with concepts such as pulse coupled neural networks, AdaBoost, XG boost, and convolutional neural networks for image-specific applications. Later you'll explore how models are made in real time and then deployed using various DevOps tools. All the concepts in Practical Machine Learning and Image Processing are explained using real-life scenarios. After reading this book you will be able to apply image processing techniques and make machine learning models for customized application. What You Will LearnDiscover image-processing algorithms and their applications using Python Explore image processing using the OpenCV library Use TensorFlow, scikit-learn, NumPy, and other libraries Work with machine learning and deep learning algorithms for image processing Apply image-processing techniques to five real-time projects Who This Book Is For Data scientists and software developers interested in image processing and computer vision.

* Weitere Angaben Verfasser: Thomas Lindblad is a professor at the Royal Institute of Technology (Physics) in Stockholm. Working and teaching nuclear and environmental physics his main interest is with sensors, signal processing and intelligent data analysis of torrent data from experiments on-line accelerators, in space, etc. Jason Kinser is an associate professor at George Mason University. He has developed a plethora of image processing applications in the medical, military, and industrial fields. He has been responsible for the conversion of PCNN theory into practical applications providing many improvements in both speed and performance

Artificial neural networks may probably be the single most successful technology in the last two decades which has been widely used in a large variety of applications in various areas. The purpose of this book is to provide recent advances of artificial neural networks in biomedical applications. The book begins with fundamentals of artificial neural networks, which cover an introduction, design, and optimization. Advanced architectures for biomedical applications, which offer improved performance and desirable properties, follow. Parts continue with biological applications such as gene, plant biology, and stem cell, medical applications such as skin diseases, sclerosis, anesthesia, and physiotherapy, and clinical and other applications such as clinical outcome, telecare, and pre-med student failure prediction. Thus, this book will be a fundamental source of recent advances and applications of artificial neural networks in biomedical areas. The target audience includes professors and students in engineering and medical schools, researchers and engineers in biomedical industries, medical doctors, and healthcare professionals.

This book presents the proceedings of the Fourth International Workshop on Soft Computing as Transdisciplinary Science and Technology (WSTST '05), May 25-27, 2005, Muroran, Japan. It brings together the original work of international soft computing/computational intelligence researchers, developers, practitioners, and users. This proceedings provide contributions to all areas of soft computing including intelligent hybrid systems, agent-based systems, intelligent data mining, decision support systems, cognitive and reactive distributed artificial intelligence (AI), internet modelling, human interface, and applications in science and technology.

Proceedings of the 2011 MESC International Conference on Multimedia, Software Engineering and Computing, November 26-27, Wuhan, China
Non-Cooperative Target Tracking, Fusion and Control
Image Processing using Pulse-Coupled Neural Networks
17th International Conference, ICONIP 2010, Sydney, Australia, November 21-25, 2010, Proceedings, Part I
Advances in Electrical and Computer Technologies
Foundations of Intelligent Systems
Artificial Neural Networks and Machine Learning -- ICANN 2012

The two-volume set LNCS 7552 + 7553 constitutes the proceedings of the 22nd International Conference on Artificial Neural Networks, ICANN 2012, held in Lausanne, Switzerland, in September 2012. The 162 papers included in the proceedings were carefully

reviewed and selected from 247 submissions. They are organized in topical sections named: theoretical neural computation; information and optimization; from neurons to neuromorphism; spiking dynamics; from single neurons to networks; complex firing patterns; movement and motion; from sensation to perception; object and face recognition; reinforcement learning; bayesian and echo state networks; recurrent neural networks and reservoir computing; coding architectures; interacting with the brain; swarm intelligence and decision-making; mulitlayer perceptrons and kernel networks; training and learning; inference and recognition; support vector machines; self-organizing maps and clustering; clustering, mining and exploratory analysis; bioinformatics; and time weries and forecasting.

In neuroscience, a neural network is a bit of conceptual juggernaut: the conceptual transition from neuroanatomy, a rigorously descriptive discipline of observed structure, to the designation of the parameters delimiting a 'network' can be problematic. In outline a neural network describes a population of physically interconnected neurons or a group of disparate neurons whose inputs or signalling targets define a recognisable circuit. Communication between neurons often involves an electrochemical process. The interface through which they interact with surrounding neurons usually consists of several dendrites (input connections), which are connected via synapses to other neurons, and one axon (output connection). If the sum of the input signals surpasses a certain threshold, the neuron sends an action potential (AP) at the axon hillock and transmits this electrical signal along the axon. This important book presents the latest research in this field.

This book is part of a three volume set that constitutes the refereed proceedings of the 4th International Symposium on Neural Networks, ISNN 2007, held in Nanjing, China in June 2007. Coverage includes neural networks for control applications, robotics, data mining and feature extraction, chaos and synchronization, support vector machines, fault diagnosis/detection, image/video processing, and applications of neural networks.

This volume is part of the two-volume proceedings of the 19th International Conf- ence on Artificial Neural Networks (ICANN 2009), which was held in Cyprus during September 14-17, 2009. The ICANN conference is an annual meeting sp- sored by the European Neural Network Society (ENNS), in cooperation with the - ternational Neural Network Society (INNS) and the Japanese Neural Network Society (JNNS). ICANN 2009 was technically sponsored by the IEEE Computational Intel- gence Society. This series of conferences has been held annually since 1991 in various European countries and covers the field of neurocomputing, learning systems and related areas. Artificial neural networks provide an information-processing structure inspired by biological nervous systems. They consist of a large number of highly interconnected processing elements, with the capability of learning by example. The field of artificial neural networks has evolved significantly in the last two decades, with active partici- tion from diverse fields, such as engineering, computer science, mathematics, artificial intelligence, system theory, biology, operations research, and neuroscience. Artificial neural networks have been widely applied for pattern recognition, control, optimization, image processing, classification, signal processing, etc.

Applications in Python
8th Mexican Conference, MCPR 2016, Guanajuato, Mexico, June 22-25, 2016. Proceedings
Recent Applications
7th International Conference, IScIDE 2017, Dalian, China, September 22-23, 2017, Proceedings
A Dissertation
13th International Conference, ICONIP 2006, Hong Kong, China, October 3-6, 2006 : Proceedings
Proceedings of the Sixth International Conference on Intelligent Systems and Knowledge Engineering, Shanghai, China, Dec 2011 (ISKE 2011)

A cookbook of algorithms for common image processing applications Thanks to advances in computer hardware and software, algorithms have been developed that support sophisticated image processing without requiring an extensive background in mathematics. This bestselling book has been fully updated with the newest of these, including 2D vision methods in content-based searches and the use of graphics cards as image processing computational aids. It's an ideal reference for software engineers and developers, advanced programmers, graphics programmers, scientists, and other specialists who require highly specialized image processing. Algorithms now exist for a wide variety of sophisticated image processing applications required by software engineers and developers, advanced

programmers, graphics programmers, scientists, and related specialists This bestselling book has been completely updated to include the latest algorithms, including 2D vision methods in content-based searches, details on modern classifier methods, and graphics cards used as image processing computational aids Saves hours of mathematical calculating by using distributed processing and GPU programming, and gives non-mathematicians the shortcuts needed to program relatively sophisticated applications. Algorithms for Image Processing and Computer Vision, 2nd Edition provides the tools to speed development of image processing applications.

This book provides the most comprehensive study of information processing techniques and issues in remote sensing. Topics covered include image and signal processing, pattern recognition and feature extraction for remote sensing, neural networks and wavelet transforms in remote sensing, remote sensing of ocean and coastal environment, SAR image filtering and segmentation, knowledge-based systems, software and hardware issues, data compression, change detection, etc. Emphasis is placed on environmental issues of remote sensing.With 58 color illustrations.

The two volume set LNCS 3696 and LNCS 3697 constitutes the refereed proceedings of the 15th International Conference on Artificial Neural Networks, ICANN 2005, held in Warsaw, Poland in September 2005. The over 600 papers submitted to ICANN 2005 were thoroughly reviewed and carefully selected for presentation. The first volume includes 106 contributions related to Biological Inspirations; topics addressed are modeling the brain and cognitive functions, development of cognitive powers in embodied systems spiking neural networks, associative memory models, models of biological functions, projects in the area of neuroIT, evolutionary and other biological inspirations, self-organizing maps and their applications, computer vision, face recognition and detection, sound and speech recognition, bioinformatics, biomedical applications, and information- theoretic concepts in biomedical data analysis. The second volume contains 162 contributions related to Formal Models and their Applications and deals with new neural network models, supervised learning algorithms, ensemble-based learning, unsupervised learning, recurent neural networks, reinforcement learning, bayesian approaches to learning, learning theory, artificial neural networks for system modeling, decision making, optimalization and control, knowledge extraction from neural networks, temporal data analysis, prediction and forecasting, support vector machines and kernel-based methods, soft computing methods for data representation, analysis and processing, data fusion for industrial, medical and environmental applications, non-linear predictive models for speech processing, intelligent multimedia and semantics, applications to natural language processing, various applications, computational intelligence in games, and issues in hardware implementation.

Proceedings of the Sixth International Conference on Intelligent System and Knowledge Engineering presents selected papers from the conference ISKE 2011, held December 15-17 in Shanghai, China. This proceedings doesn't only examine original research and approaches in the broad areas of intelligent systems and knowledge engineering, but also present new methodologies and practices in intelligent computing paradigms. The book introduces the current scientific and technical advances in the fields of artificial intelligence, machine learning, pattern recognition, data mining, information retrieval, knowledge-based systems, knowledge representation and reasoning, multi-agent systems, natural-language processing, etc. Furthermore, new computing methodologies are presented, including cloud computing, service computing and pervasive computing with traditional intelligent methods. The proceedings will be beneficial for both researchers and practitioners who want to utilize intelligent methods in their specific research fields. Dr. Yinglin Wang is a professor at the Department of Computer Science and Engineering, Shanghai Jiao Tong University, China; Dr. Tianrui Li is a professor at the School of Information Science and Technology, Southwest Jiaotong University, China.

Artificial Neural Networks – ICANN 2009

Pulse Coupled Neural Network for Image Processing

14th Iberoamerican Conference on Pattern Recognition, CIARP 2009, Guadalajara, Jalisco, México, November 15-18, 2009. Proceedings

15th International Conference, ICONIP 2008, Auckland, New Zealand, November 25-28, 2008, Revised Selected Papers

Advances in Multimedia, Software Engineering and Computing Vol.1

Encyclopedia of Optical Engineering: Abe-Las, pages 1-1024

Humans are remarkable in processing speech, audio, image and some biomedical signals. Artificial neural networks are proved to be successful in performing several cognitive, industrial and scientific tasks. This peer reviewed book presents some recent advances and surveys on the applications of artificial neural networks in the areas of speech, audio, image and biomedical signal processing. It chapters are prepared by some reputed researchers and practitioners around the globe.

This authoritative text (the second part of a complete MSc course) provides mathematical methods required to describe images, image formation and different imaging systems, coupled with the principle techniques used for processing digital images. It is based on a course for postgraduates reading physics, electronic engineering, telecommunications engineering, information technology and computer science. This book relates the methods of processing and interpreting digital images to the 'physics' of imaging systems. Case studies reinforce the methods discussed, with examples of current research themes. Provides mathematical methods required to describe images, image formation and different imaging systems Outlines the principle techniques used for processing digital images Relates the methods of processing and interpreting digital images to the 'physics' of imaging systems

This book comprises select proceedings of the International Conference on Advances in Electrical and Computer Technologies 2020 (ICAECT 2020). The papers presented in this book are peer-reviewed and

cover latest research in electrical, electronics, communication and computer engineering. Topics covered include smart grids, soft computing techniques in power systems, smart energy management systems, power electronics, feedback control systems, biomedical engineering, geo informative systems, grid computing, data mining, image and signal processing, video processing, computer vision, pattern recognition, cloud computing, pervasive computing, intelligent systems, artificial intelligence, neural network and fuzzy logic, broad band communication, mobile and optical communication, network security, VLSI, embedded systems, optical networks and wireless communication. The volume can be useful for students and researchers working in the different overlapping areas of electrical, electronics and communication engineering.

This book is part of a two-volume work that constitutes the refereed proceedings of the International Conference on Life System Modeling and Simulation, LSMS 2007, held in Shanghai, China, September 2007. Coverage includes advanced neural network theory, advanced evolutionary computing theory, ant colonies and particle swarm optimization, intelligent modeling, monitoring, and control of complex nonlinear systems, as well as biomedical signal processing, imaging and visualization.

Neuronal Network Research Horizons

Digital Image Processing

Algorithms and Advances

Neural Information Processing. Theory and Algorithms

Advances in Neural Networks – ISNN 2015

Methodological Advances and Biomedical Applications

15th International Conference, Warsaw, Poland, September 11-15, 2005, Proceedings

The 14th Iberoamerican Congress on Pattern Recognition (CIARP 2009, C- gresoIberoAmericanodeReconocimientodePatrones)formedthelatestofanow longseriesofsuccessfulmeetingsarrangedbytherapidlygrowingIberoamerican pattern recognition community. The conference was held in Guadalajara, Jalisco, Mexico and organized by the Mexican Association for Computer Vision, Neural Computing and Robotics (MACVNR). It was sponsodred by MACVNR and ?ve other Iberoamerican PR societies. CIARP 2009 was like the previous conferences in the series supported by the International Association for Pattern Recognition (IAPR). CIARP 2009 attracted participants from all over the world presenting sta- of-the-artresearchon mathematical methods and computing techniques for p- tern recognition, computer vision, image and signal analysis, robot vision, and speech recognition, as well as on a wide range of their applications. This time the conference attracted participants from 23 countries,9 in Ibe- america, and 14 from other parts of the world. The total number of submitted papers was 187, and after a serious review process 108 papers were accepted, all of them with a scienti?c quality above overall mean rating. Sixty-four were selected as oral presentations and 44 as posters. Since 2008 the conference is almost single track, and therefore there was no real grading in quality between oral and poster papers. As an acknowledgment that CIARP has established itself as a high-quality conference, its proceedings appear in the Lecture Notes in Computer Science series. Moreover, its visibility is further enhanced by a selection of a set of papers that will be published in a special issue of the journal Pattern Recognition Letters.
Practical Machine Learning and Image Processing
Select Proceedings of ICAECT 2020
Proceedings of the fourth IEEE International Workshop WSTST ?05