

Advances In Intelligent Signal Processing And Data Mining Theory And Applications Studies In Computational Intelligence

Advances in Intelligent Signal Processing and Data Mining Theory and Applications Springer
This book constitutes the Proceeding of the Sixth International Conference on Intelligent Data Analysis and Applications, October 15–18, 2019, Arad, Romania. This edition is technically co-sponsored by “Aurel Vlaicu” University of Arad, Romania, Southwest Jiaotong University, Fujian University of Technology, Chang’an University, Shandong University of Science and Technology, Fujian Provincial Key Lab of Big Data Mining and Applications, and National Demonstration Center for Experimental Electronic Information and Electrical Technology Education (Fujian University of Technology), China, Romanian Academy, and General Association of Engineers in Romania - Arad Section. The book covers a range of topics: Machine Learning, Intelligent Control, Pattern Recognition, Computational Intelligence, Signal Analysis, Modeling and Visualization, Multimedia Sensing and Sensory Systems, Signal control, Imaging and Processing, Information System Security, Cryptography and Cryptanalysis, Databases and Data Mining, Information Hiding, Cloud Computing, Information Retrieval and Integration, Robotics, Control, Agents, Command, Control, Communication and Computers (C4), Swarming Technology, Sensor Technology, Smart cities. The book offers a timely, board snapshot of new development including trends and challenges that are yielding recent research directions in different areas of intelligent data analysis and applications. The book provides useful information to professors, researchers, and graduated students in area of intelligent data analysis and applications. *Intelligent Fault Diagnosis and Remaining Useful Life Prediction of Rotating Machinery* provides a comprehensive introduction of intelligent fault diagnosis and RUL prediction based on the current achievements of the author's research group. The main contents include multi-domain signal processing and feature extraction, intelligent diagnosis models, clustering algorithms, hybrid intelligent diagnosis strategies, and RUL prediction approaches, etc. This book presents fundamental theories and advanced methods of identifying the occurrence, locations, and degrees of faults, and also includes information on how to predict the RUL of rotating machinery. Besides experimental demonstrations, many application cases are presented and illustrated to test the methods mentioned in the book. This valuable reference provides an essential guide on

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machinery fault diagnosis that helps readers understand basic concepts and fundamental theories. Academic researchers with mechanical engineering or computer science backgrounds, and engineers or practitioners who are in charge of machine safety, operation, and maintenance will find this book very useful. Provides a detailed background and roadmap of intelligent diagnosis and RUL prediction of rotating machinery, involving fault mechanisms, vibration characteristics, health indicators, and diagnosis and prognostics Presents basic theories, advanced methods, and the latest contributions in the field of intelligent fault diagnosis and RUL prediction Includes numerous application cases, and the methods, algorithms, and models introduced in the book are demonstrated by industrial experiences

The book provides insights into International Conference on Intelligent Systems and Signal Processing (ISSP 2017) held at G.H. Patel College of Engineering & Technology, Gujarat, India during March 24-25, 2017. The book comprises contributions by the research scholars and academicians covering the topics in signal processing and communication engineering, applied electronics and emerging technologies, computer vision and machine learning, big data and cloud computing and advanced intelligent power electronics and drives systems. The main emphasis of the book is on dissemination of information, experience and research results on the current topics of interest through in-depth discussions and contribution of researchers from all over world. The book is useful for research community, academicians, industrialists and post graduate students across the globe.

Proceedings of 3rd ICSCSP 2020, Volume 2

Intelligent Signal Processing

Proceedings of 3rd ICSCSP 2020, Volume 1

Advances in Intelligent Information Hiding and Multimedia Signal Processing

Advances in Intelligent Vehicles

This book presents selected research papers on current developments in the fields of soft computing and signal processing from the Third International Conference on Soft Computing and Signal Processing (ICSCSP 2020). The book covers topics such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning and discusses various aspects of these topics, e.g., technological considerations, product implementation and application issues.

This book constitutes the refereed proceedings of the 5th International Symposium on Advances in Signal Processing and Intelligent Recognition Systems, SIRS 2019, held in Trivandrum, India, in December 2019. The 19 revised full papers and 8

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revised short papers presented were carefully reviewed and selected from 63 submissions. The papers cover wide research fields including information retrieval, human-computer interaction (HCI), information extraction, speech recognition.

The book includes research papers on current developments in the field of soft computing and signal processing, selected from papers presented at the International Conference on Soft Computing and Signal Processing (ICSCSP 2018). It features papers on current topics, such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning. It also discusses various aspects of these topics, like technologies, product implementation, and application issues.

The book presents selected papers from the Fifteenth International Conference on Intelligent Information Hiding and Multimedia Signal Processing, in conjunction with the Twelfth International Conference on Frontiers of Information Technology, Applications and Tools, held on July 18–20, 2019 in Jilin, China. Featuring the latest research, it provides valuable information on problem solving and applications for engineers in computer science-related fields, and is a valuable reference resource for academics, industry practitioners and students.

Intelligent Fault Diagnosis and Remaining Useful Life Prediction of Rotating Machinery

Proceedings of Third International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2017), September 13-16, 2017, Manipal, India

Proceedings of the International Conference on Intelligent Systems and Signal Processing

New Advances in Intelligent Signal Processing

Proceedings of the 15th International Conference on IIH-MSP in conjunction with the 12th International Conference on FITAT, July 18–20, Jilin, China, Volume 2

Machine Intelligence and Signal Processing

Intelligent Speech Signal Processing investigates the utilization of speech analytics across several systems and real-world activities, including sharing data analytics, creating collaboration networks between several participants, and implementing video-conferencing in different application areas. Chapters focus on the latest applications of speech data analysis and management tools across different recording systems. The book emphasizes the multidisciplinary nature of the field, presenting different applications and challenges with extensive studies on the design, development and management of intelligent systems, neural networks and related machine learning techniques for speech signal processing. Highlights different data analytics techniques in speech signal processing, including machine learning and data mining. Illustrates different applications and challenges across the design, implementation and management of intelligent systems and neural networks techniques for speech signal processing. Includes coverage of biomodal speech recognition, voice activity detection, spoken language and speech disorder identification, automatic speech to speech summarization, and convolutional neural networks.

This book features high-quality research papers presented at the 2nd International Conference on Intelligent Computing and Advances in Communication (ICAC 2019), held at Siksha ‘ O ’ Anusandhan Deemed to be University, Bhubaneswar, Odisha, India, in November 2019. Covering a wide variety of topics, including management of clean and smart energy systems and environmental challenges, it is a valuable resource for researchers and practicing engineers working in various fields of renewable energy generation, and clean and smart energy management.

The current volume “ New Advances in Intelligent Signal Processing ” contains extended works based on a careful selection of papers presented originally at the

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jubilee sixth IEEE International Symposium on Intelligent Signal Processing (WISP ' 2009), held in Budapest Hungary, August 26-28, 2009 - celebrating the 10 years anniversary of the WISP event series. The present book does not intent to be an overall survey on the fields of interest of the area, but tries to find topics which represent new, hot, and challenging problems. The book begins with papers investigating selected problems of Modeling, Identification, and Clustering such as fuzzy random variables, evolutionary multi-objective neural network models, a structural learning model of neural networks within a Boltzmann machine, a robust DNA-based clustering techniques, and the advances of combining multi-criteria analysis of signals and pattern recognition using machine learning principles. In the second part of the book Image Processing is treated. The carefully edited chapters deal with fuzzy relation based image enhancement, image contrast control technique based on the application of Ł ukasiewicz algebra operators, low complexity situational models of image quality improvement, flexible representation of map images to quantum computers, and object recognition in images. The last chapter presents an image processing application for elderly care, performing real-time 3D tracking based on a new evaluative multi-modal algorithm.

Although governments worldwide have invested significantly in intelligent sensor network research and applications, few books cover intelligent sensor networks from a machine learning and signal processing perspective. Filling this void, Intelligent Sensor Networks: The Integration of Sensor Networks, Signal Processing and Machine Learning focuses on the close integration of sensing, networking, and smart signal processing via machine learning. Based on the world-class research of award-winning authors, the book provides a firm grounding in the fundamentals of intelligent sensor networks, including compressive sensing and sampling, distributed signal processing, and intelligent signal learning. Presenting recent research results of world-renowned sensing experts, the book is organized into three parts: Machine Learning—describes the application of machine learning and other AI principles in sensor network intelligence—covering smart sensor/transducer architecture and data representation for intelligent sensors Signal Processing—considers the optimization of sensor network performance based on digital signal processing techniques—including cross-layer integration of routing and application-specific signal processing as well as on-board image processing in wireless multimedia sensor networks for intelligent transportation systems Networking—focuses on network protocol design in order to achieve an intelligent sensor networking—covering energy-efficient opportunistic routing protocols for sensor networking and multi-agent-driven wireless sensor cooperation Maintaining a focus on "intelligent" designs, the book details signal processing principles in sensor networks. It elaborates on critical platforms for intelligent sensor networks and illustrates key applications—including target tracking, object identification, and structural health monitoring. It also includes a paradigm for validating the extent of spatiotemporal associations among data sources to enhance data cleaning in sensor networks, a sensor stream reduction application, and also considers the use of Kalman filters for attack detection in a water system sensor network that consists of water level sensors and velocity sensors.

Proceeding of the 16th International Conference on IJHMSP in conjunction with the 13th international conference on FITAT, November 5-7, 2020, Ho Chi Minh City, Vietnam, Volume 1

Advances in Signal Processing

Advances in Signal Processing and Intelligent Recognition Systems

Recent Trends in Signal and Image Processing

Machine Intelligence and Signal Analysis

6th International Symposium, SIRS 2020, Chennai, India, October 14 – 17, 2020, Revised Selected Papers

This book provides insights into the Third International Conference on Intelligent Systems and Signal Processing (eISSP 2020) held By Electronics & Communication Engineering Department of G H Patel College of Engineering & Technology, Gujarat, India, during 28–30 December 2020. The book comprises contributions by the research scholars and academicians covering the topics in signal processing and communication engineering, applied electronics and emerging technologies, Internet of Things (IoT), robotics, machine learning, deep

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learning and artificial intelligence. The main emphasis of the book is on dissemination of information, experience and research results on the current topics of interest through in-depth discussions and contribution of researchers from all over world. The book is useful for research community, academicians, industrialists and postgraduate students across the globe.

The book covers the most recent developments in machine learning, signal analysis, and their applications. It covers the topics of machine intelligence such as: deep learning, soft computing approaches, support vector machines (SVMs), least square SVMs (LSSVMs) and their variants; and covers the topics of signal analysis such as: biomedical signals including electroencephalogram (EEG), magnetoencephalography (MEG), electrocardiogram (ECG) and electromyogram (EMG) as well as other signals such as speech signals, communication signals, vibration signals, image, and video. Further, it analyzes normal and abnormal categories of real-world signals, for example normal and epileptic EEG signals using numerous classification techniques. The book is envisioned for researchers and graduate students in Computer Science and Engineering, Electrical Engineering, Applied Mathematics, and Biomedical Signal Processing.

Power electronics and variable frequency drives are continuously developing multidisciplinary fields in electrical engineering and it is practically not possible to write a book covering the entire area by one individual specialist. Especially by taking account the recent fast development in the neighboring fields like control theory, computational intelligence and signal processing, which all strongly influence new solutions in control of power electronics and drives. Therefore, this book is written by individual key specialist working on the area of modern advanced control methods which penetrates current implementation of power converters and drives. Although some of the presented methods are still not adopted by industry, they create new solutions with high further research and application potential. The material of the book is presented in the following three parts: Part I: Advanced Power Electronic Control in Renewable Energy Sources (Chapters 1-4), Part II: Predictive Control of Power Converters and Drives (5-7), Part III: Neurocontrol and Nonlinear Control of Power Converters and Drives (8-11). The book is intended for engineers, researchers and students in the field of power electronics and drives who are interested in the use of advanced control methods and also for specialists from the control theory area who like to explore new area of applications.

In view of better results expected from examination of medical datasets (images) with hybrid (integration of thresholding and segmentation) image processing methods, this work focuses on implementation of possible hybrid image examination techniques for medical images. It describes various image thresholding and segmentation methods which are essential for the development of such a hybrid processing tool. Further, this book presents the essential details, such as test image preparation, implementation of a chosen thresholding operation, evaluation of threshold image, and implementation of segmentation procedure and its evaluation, supported by pertinent case studies. Aimed at researchers/graduate students in the medical image processing domain, image processing, and computer engineering, this book: Provides broad background on various image thresholding and segmentation techniques Discusses information on various assessment metrics and the confusion matrix Proposes integration of the thresholding technique with the bio-inspired algorithms Explores case studies including MRI, CT, dermoscopy, and ultrasound images Includes separate chapters on machine learning and deep learning for medical image processing
5th International Symposium, SIRS 2019, Trivandrum, India, December 18–21, 2019, Revised Selected Papers

Advances in Information and Communication

Proceedings of ICSCSP 2018, Volume 2

Neural Networks for Intelligent Signal Processing

Theories, Algorithms, and System Control

Data Analytics for Pandemics

This book presents selected papers from the Sixteenth International Conference on Intelligent Information Hiding and Multimedia Signal Processing, in conjunction with the Thirteenth International Conference on Frontiers of Information Technology, Applications and Tools, held on November 5–7, 2020, in Ho Chi Minh City, Vietnam. It is divided into two volumes and discusses the latest research outcomes in the field of Information Technology (IT) including information hiding, multimedia signal processing, big data, data mining, bioinformatics, database, industrial and Internet of things, and their applications.

This book comprises chapters on key problems in machine learning and signal processing arenas. The contents of the book are a result of a 2014 Workshop on Machine Intelligence and Signal Processing held at the Indraprastha Institute of Information Technology. Traditionally, signal processing and machine learning were considered to be separate areas of research. However in recent times the two communities are getting closer. In a very abstract fashion, signal processing is the study of operator design. The contributions of signal processing had been to device operators for restoration, compression, etc. Applied Mathematicians were more interested in operator analysis. Nowadays signal processing research is gravitating towards operator learning – instead of designing operators based on heuristics (for example wavelets), the trend is to learn these operators (for example dictionary learning). And thus, the gap between signal processing and machine learning is fast converging. The 2014 Workshop on Machine Intelligence and Signal Processing was one of the few unique events that are focused on the convergence of the two fields. The book is comprised of chapters based on the top presentations at the workshop. This book has three chapters on various topics of biometrics – two are on face detection and one on iris recognition; all from top researchers in their field. There are four chapters on different biomedical signal / image processing problems. Two of these are on retinal vessel classification and extraction; one on biomedical signal acquisition and the fourth one on region detection. There are three chapters on data analysis – a topic gaining immense popularity in industry and academia. One of these shows a novel use of compressed sensing in missing sales data interpolation. Another chapter is on spam detection and the third one is on simple one-shot movie rating prediction. Four other chapters cover various cutting edge miscellaneous topics on character recognition, software effort prediction, speech recognition and non-linear sparse recovery. The contents of this book will prove useful to researchers, professionals and students

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in the domains of machine learning and signal processing.

This book features selected high-quality research papers presented at the International Conference on Machine Intelligence and Signal Processing (MISP 2019), held at the Indian Institute of Technology, Allahabad, India, on September 7–10, 2019. The book covers the latest advances in the fields of machine learning, big data analytics, signal processing, computational learning theory, and their real-time applications. The topics covered include support vector machines (SVM) and variants like least-squares SVM (LS-SVM) and twin SVM (TWSVM), extreme learning machine (ELM), artificial neural network (ANN), and other areas in machine learning. Further, it discusses the real-time challenges involved in processing big data and adapting the algorithms dynamically to improve the computational efficiency. Lastly, it describes recent developments in processing signals, for instance, signals generated from IoT devices, smart systems, speech, and videos and addresses biomedical signal processing: electrocardiogram (ECG) and electroencephalogram (EEG).

This Edited Volume gathers a selection of refereed and revised papers originally presented at the Third International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS'17), held on September 13–16, 2017 in Manipal, India. The papers offer stimulating insights into biometrics, digital watermarking, recognition systems, image and video processing, signal and speech processing, pattern recognition, machine learning and knowledge-based systems. Taken together, they offer a valuable resource for all researchers and scientists engaged in the various fields of signal processing and related areas.

Advances in Computational Intelligence Techniques

Advances in Intelligent Signal Processing and Data Mining

Applications, Challenges, and the Road Ahead

Intelligent Sensor Networks

Recent Advances in Intelligent Information Hiding and Multimedia Signal Processing

Soft Computing and Signal Processing

The book presents some of the most efficient statistical and deterministic methods for information processing and applications in order to extract targeted information and find hidden patterns. The techniques presented range from Bayesian approaches and their variations such as sequential Monte Carlo methods, Markov Chain Monte Carlo filters, Rao Blackwellization, to the biologically inspired paradigm of Neural Networks and decomposition

techniques such as Empirical Mode Decomposition, Independent Component Analysis and Singular Spectrum Analysis. The book is directed to the research students, professors, researchers and practitioners interested in exploring the advanced techniques in intelligent signal processing and data mining paradigms.

Advances in Intelligent Vehicles presents recent advances in intelligent vehicle technologies that enhance the safety, reliability, and performance of vehicles and vehicular networks and systems. This book provides readers with up-to-date research results and cutting-edge technologies in the area of intelligent vehicles and transportation systems. Topics covered include virtual and staged testing scenarios, collision avoidance, human factors, and modeling techniques. The Series in Intelligent Systems publishes titles that cover state-of-the-art knowledge and the latest advances in research and development in intelligent systems. Its scope includes theoretical studies, design methods, and real-world implementations and applications. Provides researchers and engineers with up-to-date research results and state-of-the-art technologies in the area of intelligent vehicles and transportation systems Covers hot topics, including driver assistance systems; cooperative vehicle-highway systems; collision avoidance; pedestrian protection; image, radar and lidar signal processing; and V2V and V2I communications

This book presents high-quality research papers presented at the 3rd International Conference on Intelligent Computing and Advances in Communication (ICAC 2020) organized by Siksha 'O' Anusandhan Deemed to be University, Bhubaneswar, Odisha, India, in November 2020. This book brings out the new advances and research results in the fields of theoretical, experimental, and applied signal and image processing, soft computing, networking, and antenna research. Moreover, it provides a comprehensive and systematic reference on the range of alternative conversion processes and technologies.

This book features papers presented at IIH-MSP 2018, the 14th International Conference on Intelligent Information Hiding and Multimedia Signal Processing. The scope of IIH-MSP included information hiding and security, multimedia signal processing and networking, and bio-inspired multimedia technologies and systems. The book discusses subjects related to massive image/video compression and transmission for emerging networks, advances in

speech and language processing, recent advances in information hiding and signal processing for audio and speech signals, intelligent distribution systems and applications, recent advances in security and privacy for multimodal network environments, multimedia signal processing, and machine learning. Presenting the latest research outcomes and findings, it is suitable for researchers and students who are interested in the corresponding fields. IIH-MSP 2018 was held in Sendai, Japan on 26-28 November 2018. It was hosted by Tohoku University and was co-sponsored by the Fujian University of Technology in China, the Taiwan Association for Web Intelligence Consortium in Taiwan, and the Swinburne University of Technology in Australia, as well as the Fujian Provincial Key Laboratory of Big Data Mining and Applications (Fujian University of Technology) and the Harbin Institute of Technology Shenzhen Graduate School in China.

Proceedings of ICAC 2020

Recent Trends in Image and Signal Processing in Computer Vision

Proceedings of ICAC 2019

The Integration of Sensor Networks, Signal Processing and Machine Learning

Hybrid Image Processing Methods for Medical Image Examination

ISSP 2017

This book highlights recent advances and emerging technologies that utilize computational intelligence in signal processing, computing, imaging science, artificial intelligence, and their applications. It covers all branches of artificial intelligence and machine learning that are based on computation at some level, e.g. artificial neural networks, evolutionary algorithms, fuzzy systems, and automatic medical identification systems.

Exploring recent trends in research and applications, the book offers a valuable resource for professors, researchers, and engineers alike.

This book gathers selected papers presented at the Third International Symposium on Signal and Image Processing (ISSIP 2020), organized by the Department of Information Technology, RCC Institute of Information Technology, Kolkata, during March 18–19, 2020. It presents fascinating, state-of-the-art research findings in the field of signal and image processing. It includes conference papers covering a wide range of signal processing applications involving filtering, encoding, classification, segmentation, clustering, feature extraction, denoising, watermarking, object recognition, reconstruction and fractal analysis. It addresses various types of signals, such as image, video, speech, non-speech audio, handwritten text, geometric diagram, ECG and EMG signals; MRI, PET and CT scan images; THz signals; solar wind speed signals (SWS); and photoplethysmogram (PPG) signals, and demonstrates how new paradigms of intelligent computing, like quantum computing, can be applied to process and analyze signals precisely and effectively.

This book highlights recent advances in computational intelligence for signal processing, computing, imaging, artificial intelligence, and their applications. It offers support for researchers involved in designing decision support systems to promote the societal acceptance of ambient intelligence,

and presents the latest research on diverse topics in intelligence technologies with the goal of advancing knowledge and applications in this rapidly evolving field. As such, it offers a valuable resource for researchers, developers and educators whose work involves recent advances and emerging technologies in computational intelligence.

Epidemic trend analysis, timeline progression, prediction, and recommendation are critical for initiating effective public health control strategies, and AI and data analytics play an important role in epidemiology, diagnostic, and clinical fronts. The focus of this book is data analytics for COVID-19, which includes an overview of COVID-19 in terms of epidemic/pandemic, data processing and knowledge extraction. Data sources, storage and platforms are discussed along with discussions on data models, their performance, different big data techniques, tools and technologies. This book also addresses the challenges in applying analytics to pandemic scenarios, case studies and control strategies. Aimed at Data Analysts, Epidemiologists and associated researchers, this book: discusses challenges of AI model for big data analytics in pandemic scenarios; explains how different big data analytics techniques can be implemented; provides a set of recommendations to minimize infection rate of COVID-19; summarizes various techniques of data processing and knowledge extraction; enables users to understand big data analytics techniques required for prediction purposes.

A COVID-19 Case Study

Advanced and Intelligent Control in Power Electronics and Drives

Proceedings of the 15th International Conference on IHH-MSP in Conjunction with the 12th International Conference on FITAT, July 18-20, Jilin, China. Volume 2

Proceedings of International Conference, MISIP 2019

Intelligent Speech Signal Processing

Proceedings of the 2021 Future of Information and Communication Conference (FICC), Volume 1

This edited volume contains a selection of refereed and revised papers originally presented at the International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2014), March 13-15, 2014, Trivandrum, India. The program committee received 134 submissions from 11 countries. Each paper was peer reviewed by at least three or more independent referees of the program committee and the 52 papers were finally selected. The papers offer stimulating insights into Pattern Recognition, Machine Learning and Knowledge-Based Systems; Signal and Speech Processing; Image and Video Processing; Mobile Computing and Applications and Computer Vision. The book is directed to the researchers and scientists engaged in various field of signal processing and related areas.

This book aims to provide an international forum for scholarly researchers, practitioners and academic communities to explore the role of information and communication technologies and its applications in technical and scholarly development. The conference attracted a total of 464 submissions, of which 152 submissions (including 4 poster papers) have been selected after a double-blind review process. Academic pioneering researchers, scientists, industrial engineers and students will find this series useful to gain insight into the current research and next-generation information science and communication technologies. This book discusses

the aspects of communication, data science, ambient intelligence, networking, computing, security and Internet of things, from classical to intelligent scope. The authors hope that readers find the volume interesting and valuable; it gathers chapters addressing state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

This book constitutes the refereed proceedings of the 6th International Symposium on Advances in Signal Processing and Intelligent Recognition Systems, SIRS 2020, held in Chennai, India, in October 2020. Due to the COVID-19 pandemic the conference was held online. The 22 revised full papers and 5 revised short papers presented were carefully reviewed and selected from 50 submissions. The papers cover wide research fields including information retrieval, human-computer interaction (HCI), information extraction, speech recognition. Intelligent signal processing (ISP) differs fundamentally from the classical approach to statistical signal processing in that the input-output behavior of a complex system is modeled by using an artificial intelligence capable of optimizing results.

Proceeding of the Sixth Euro-China Conference on Intelligent Data Analysis and Applications, 15-18 October 2019, Arad, Romania

Proceedings of the 15th International Conference on IIH-MSP in conjunction with the 12th International Conference on FITAT, July 18-20, Jilin, China, Volume 1

Proceeding of the 16th International Conference on IIHMSMSP in conjunction with the 13th international conference on FITAT, November 5-7, 2020, Ho Chi Minh City, Vietnam, Volume 2

Advances in Intelligent Computing and Communication

Proceedings of the International e-Conference on Intelligent Systems and Signal Processing Theory and Applications

This book attempts to improve algorithms by novel theories and complex data analysis in different scopes including object detection, remote sensing, data transmission, data fusion, gesture recognition, and medical image processing and analysis. The book is directed to the Ph.D. students, professors, researchers, and software developers working in the areas of digital video processing and computer vision technologies. Machine Learning in Signal Processing: Applications, Challenges, and the Road Ahead offers a comprehensive approach toward research orientation for familiarizing signal processing (SP) concepts to machine learning (ML). ML, as the driving force of the wave of artificial intelligence (AI), provides powerful solutions to many real-world technical and scientific challenges. This book will present the most recent and exciting advances in signal processing for ML. The focus is on understanding the contributions of signal processing and ML, and its aim to solve some of the biggest challenges in AI and ML. FEATURES Focuses on addressing the missing connection between signal processing and ML Provides a one-stop guide reference for readers Oriented toward material and flow with regards to general introduction and technical aspects Comprehensively elaborates on the material with examples and diagrams This book is a complete resource designed exclusively for

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advanced undergraduate students, post-graduate students, research scholars, faculties, and academicians of computer science and engineering, computer science and applications, and electronics and telecommunication engineering.

Advances in Intelligent Data Analysis and Applications

ISSIP 2020

e-ISSP 2020

Machine Learning in Signal Processing

Proceeding of the Fourteenth International Conference on Intelligent Information Hiding and Multimedia Signal Processing, November, 26-28, 2018, Sendai, Japan. Volume 2