

2017 7th International Conference On Biomedical

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Digital Heritage. Progress in Cultural Heritage: Documentation, Preservation, and Protection

- Marinos Ioannides 2018-10-15

This two-volume set LNCS 11196 and LNCS 11197 constitutes the refereed proceedings of the 7th International Conference on Digital Heritage, EuroMed 2018, held in Nicosia, Cyprus, in October/November 2018. The 21 full papers, 47 project papers, and 29 short papers presented were carefully reviewed and selected from 537 submissions. The papers are organized in topical sections on 3D Digitalization, Reconstruction, Modeling, and HBIM; Innovative Technologies in Digital Cultural Heritage; Digital Cultural Heritage -Smart Technologies; The New Era of Museums and Exhibitions; Digital Cultural Heritage Infrastructure; Non Destructive Techniques in Cultural Heritage Conservation; E-Humanities; Reconstructing the Past; Visualization, VR and AR Methods and Applications; Digital Applications for Materials Preservation in Cultural Heritage; and Digital Cultural Heritage Learning and Experiences.

Sensors for Gait, Posture, and Health Monitoring Volume 1 - Thurmon Lockhart 2020-06-17

In recent years, many technologies for gait and posture assessments have emerged. Wearable sensors, active and passive in-house monitors, and many combinations thereof all promise to provide accurate measures of physical activity, gait, and posture parameters. Motivated by

market projections for wearable technologies and driven by recent technological innovations in wearable sensors (MEMs, electronic textiles, wireless communications, etc.), wearable health/performance research is growing rapidly and has the potential to transform future healthcare from disease treatment to disease prevention. The objective of this Special Issue is to address and disseminate the latest gait, posture, and activity monitoring systems as well as various mathematical models/methods that characterize mobility functions. This Special Issue focuses on wearable monitoring systems and physical sensors, and its mathematical models can be utilized in varied environments under varied conditions to monitor health and performance

The 16th International Conference on Biomedical Engineering

- James Goh 2017-04-04

This volume presents the proceedings of the 16th ICMBE held from 4th to 7th December 2016, Singapore. Topics of the proceedings include 6 tracks: BioImaging and BioSignals, Bio-Micro/Nano Technologies BioRobotics and Medical Devices, Biomaterials and Regenerative Medicine.- BioMechanics and Mechanobiology., Engineering/Synthetic Biology.

Wearables in Healthcare - Paolo Perego 2021-05-04

This book constitutes the refereed post-

conference proceedings of the Second EAI International Conference on Wearables in Healthcare, HealthWear 2020. Due to COVID-19 pandemic the conference was held virtually. The 16 revised full papers were carefully reviewed and selected from 40 submissions. They focus on wearable devices and systems for healthcare and wellbeing. The papers are organized in topical sections as follows: PPG and algorithms focusing on photoplethysmography, PPG monitoring and cardiorespiratory measurement. The next section focus on IoT and smart sensors on the use of wearable devices and systems for Internet of Medical Things application. The third section is a new session introducing wearable applications. This track focuses on the intrinsic multidisciplinary of wearable devices, and includes works on methodology and design aspect of wearable research.

Proceedings of 6th International Conference and Exhibition on Cell and Gene Therapy 2018 - ConferenceSeries

Mar 27-28, 2017 Madrid, Spain Key Topics : Cell Therapy, Cellular Therapy Technologies, Cell Therapy of Cardiovascular Disorders, Cell Therapy for Cancer, Cell Culture & Bioprocessing:, Cell Science & Stem Cell Research:, Cell Line Development, Tissue Science & Regenerative Medicine, Gene Therapy, Viral gene therapy, Diabetes Gene Therapy, Vectors for Gene Therapy, Molecular Epigenetics, Genetics & Genomic Medicine, Gene Therapy Commercialization, Clinical trials in cell and gene therapy, Gene Therapy for rare & Common Diseases, Gene Editing Technology, Cell Therapy for Neurological Disorders, Ethical Issues in Cell & Gene Therapy, Regulatory & Safety Aspects of Cell & Gene Therapy, Clinical Trails on Cell & Gen Therapy, Markets & Future Prospects for Cell & Gene Therapy, Cell & Gene Therapy Products,

System Innovation in a Post-Pandemic World - Artde Donald Kin-Tak Lam 2022-04-01 System Innovation in a Post-Pandemic World contains the papers presented at the IEEE 7th International Conference on Applied System Innovation (ICASI 2021, Alishan, Taiwan, September 24-25, 2021). The conference received more than 200 submitted papers from 11 different countries, whereby roughly one third of these papers was selected by the

committees and invited to present at ICASI 2021. The book provides an integrated communication platform for researchers from a wide range of disciplines including information technology, communication science, applied mathematics, computer science, advanced material science, and engineering. Hopefully, interdisciplinary collaborations between science and engineering technologists in the domains of academia and industry will be enhanced via this unique international network.

Proceedings of 10th International Conference on Chinese Medicine, Ayurveda & Acupuncture 2017 - ConferenceSeries
May 18-19, 2017 Munich, Germany Key Topics : Traditional Chinese Medicine, Acupuncture, Holistic Medicine, Acupressure, Alternative Medicine, Herbal medicine, Ayurveda: Body, Mind & Soul, Homeopathy Medicine, The Ayurvedic System of Healing and Marma Therapy, Important Milestones in development of TCM Diagnostics, The Modernization of Chinese Medical Genre, Source of Innovations in Chinese Medicine,

ICOST 2019 - Sri Harini 2020-06-14
We are delighted to introduce the proceeding of the first edition of the International Conference on Science and Technology (ICoST) that was held in Claro Hotel, May 2-3, 2019. It was organized by Faculty of Science and Technology, Universitas Islam Negeri Alauddin Makassar in partnership with Forum Dekan Fakultas Sains dan Teknologi PTKIN. The theme of the ICoST is "Roles and Challenges of Science and Technology in Guaranteeing Halal Products in the Industrial Revolution 4.0". The Indonesian government has begun to respond this industrial change by launching the roadmap of 'Making Indonesia 4.0' as a strategy to ease Indonesia's steps to become one of the new powers in Asia in April 2018. This roadmap provides a clear direction for the movement of the national industry in the future, including a focus on developing priority sectors that will become Indonesia's strength towards Industry 4.0. The proceeding of ICoST contains the scientific research, written by the academicians, researchers, practitioners, and government elements who have the same thoughts about the effort to develop the society's ability to adapt the advancement of science and technology in the

global competition to face the industrial revolution 4.0. We are also very grateful to all keynote speakers and committee members, willing to act as referee for their time and efforts to keep our conference going well. In the future, we expect the ICoST will be able to provide another scientific atmosphere and stimulate more participants to join this conference.

Neural Information Processing - Tom Gedeon
2019-12-12

The three-volume set of LNCS 11953, 11954, and 11955 constitutes the proceedings of the 26th International Conference on Neural Information Processing, ICONIP 2019, held in Sydney, Australia, in December 2019. The 173 full papers presented were carefully reviewed and selected from 645 submissions. The papers address the emerging topics of theoretical research, empirical studies, and applications of neural information processing techniques across different domains. The first volume, LNCS 11953, is organized in topical sections on adversarial networks and learning; convolutional neural networks; deep neural networks; feature learning and representation; human centred computing; human centred computing and medicine; hybrid models; and artificial intelligence and cybersecurity.

Computer Vision for Assistive Healthcare - Leo Marco 2018-05-15

Computer Vision for Assistive Healthcare describes how advanced computer vision techniques provide tools to support common human needs, such as mental functioning, personal mobility, sensory functions, daily living activities, image processing, pattern recognition, machine learning and how language processing and computer graphics cooperate with robotics to provide such tools. Users will learn about the emerging computer vision techniques for supporting mental functioning, algorithms for analyzing human behavior, and how smart interfaces and virtual reality tools lead to the development of advanced rehabilitation systems able to perform human action and activity recognition. In addition, the book covers the technology behind intelligent wheelchairs, how computer vision technologies have the potential to assist blind people, and about the computer vision-based solutions recently employed for safety and health monitoring. Gives the state-of-

the-art computer vision techniques and tools for assistive healthcare Includes a broad range of topic areas, ranging from image processing, pattern recognition, machine learning to robotics, natural language processing and computer graphics Presents a wide range of application areas, ranging from mobility, sensory substitution, and safety and security, to mental and physical rehabilitation and training Written by leading researchers in this growing field of research Describes the outstanding research challenges that still need to be tackled, giving researchers good indicators of research opportunities

7th International Conference on the Development of Biomedical Engineering in Vietnam (BME7) - Vo Van Toi 2019-06-05

This volume presents the proceedings of the 7th International Conference on the Development of Biomedical Engineering in Vietnam which was held from June 27-29, 2018 in Ho Chi Minh City. The volume reflects the progress of Biomedical Engineering and discusses problems and solutions. It aims to identify new challenges, and shaping future directions for research in biomedical engineering fields including medical instrumentation, bioinformatics, biomechanics, medical imaging, drug delivery therapy, regenerative medicine and entrepreneurship in medical devices.

Advances in Data Science and Management - Samarjeet Borah 2022

This book includes high-quality papers presented at the Second International Conference on Data Science and Management (ICDSM 2021), organized by the Gandhi Institute for Education and Technology, Bhubaneswar, from 19 to 20 February 2021. It features research in which data science is used to facilitate the decision-making process in various application areas, and also covers a wide range of learning methods and their applications in a number of learning problems. The empirical studies, theoretical analyses and comparisons to psychological phenomena described contribute to the development of products to meet market demands.

Recent Developments in Mechatronics and Intelligent Robotics - Kevin Deng 2018-10-04

This book is a collection of proceedings of the International Conference on Mechatronics and

Intelligent Robotics (ICMIR2018), held in Kunming, China during May 19–20, 2018. It consists of 155 papers, which have been categorized into 6 different sections: Intelligent Systems, Robotics, Intelligent Sensors & Actuators, Mechatronics, Computational Vision and Machine Learning, and Soft Computing. The volume covers the latest ideas and innovations both from the industrial and academic worlds, as well as shares the best practices in the fields of mechanical engineering, mechatronics, automatic control, IOT and its applications in industry, electrical engineering, finite element analysis and computational engineering. The volume covers key research outputs, which delivers a wealth of new ideas and food for thought to the readers.

Proceedings of IAC in Budapest 2020 - Group of Authors 2020-11-19

International Academic Conference on Global Education, Teaching and Learning
International Academic Conference on Management, Economics, Business and Marketing
International Academic Conference on Engineering, Transport, IT and AI

HCI International 2021 -- Posters - Constantine Stephanidis

The three-volume set CCIS 1419, CCIS 1420, and CCIS 1421 contains the extended abstracts of the posters presented during the 23rd International Conference on Human-Computer Interaction, HCII 2021, which was held virtually in July 2021. HCII 2021 received a total of 6326 submissions, of which 1439 papers and 238 posters were accepted for publication in the pre-conference proceedings after a careful reviewing process. The 238 poster papers presented in these three volumes are organized in topical sections as follows: Part I: HCI theory and methods; perceptual, cognitive and psychophysiological aspects of interaction; designing for children; designing for older people; design case studies; dimensions of user experience; information, language, culture and media. Part II: interaction methods and techniques; eye-tracking and facial expressions recognition; human-robot interaction; virtual, augmented and mixed reality; and privacy issues in HCI; AI and machine learning in HCI. Part III: interacting and learning; interacting and playing; interacting and driving; digital

wellbeing, eHealth and mHealth; interacting and shopping; HCI, safety and sustainability; HCI in the time of pandemic.

Distributed, Ambient and Pervasive Interactions - Norbert Streitz 2019-07-10

This book constitutes the refereed proceedings of the 7th International Conference on Distributed, Ambient and Pervasive Interactions, DAPI 2019, held as part of the 21st International Conference on Human-Computer Interaction, HCII 2019, in Orlando, Florida, USA, in July 2019. A total of 1274 papers and 209 posters have been accepted for publication in the HCII 2019 proceedings from a total of 5029 submissions. The 36 papers included in this volume were organized in topical sections on IoT and big data; smart cities and built environments; perception and emotion in DAPI; and DAPI for health and learning.

Innovative Data Communication Technologies and Application - Jennifer S. Raj 2020-01-30

This book presents emerging concepts in data mining, big data analysis, communication, and networking technologies, and discusses the state-of-the-art in data engineering practices to tackle massive data distributions in smart networked environments. It also provides insights into potential data distribution challenges in ubiquitous data-driven networks, highlighting research on the theoretical and systematic framework for analyzing, testing and designing intelligent data analysis models for evolving communication frameworks. Further, the book showcases the latest developments in wireless sensor networks, cloud computing, mobile network, autonomous systems, cryptography, automation, and other communication and networking technologies. In addition, it addresses data security, privacy and trust, wireless networks, data classification, data prediction, performance analysis, data validation and verification models, machine learning, sentiment analysis, and various data analysis techniques.

Computer Vision and Robotics - Jagdish Chand Bansal 2022-03-14

This book consists of a collection of the high-quality research articles in the field of computer vision and robotics which are presented in the International Conference on Computer Vision and Robotics (CVR 2021), organized by BBD

University Lucknow, India, during 7-8 August 2021. The book discusses applications of computer vision and robotics in the fields like medical science, defence, and smart city planning. The book presents recent works from researchers, academicians, industry, and policy makers.

Cybernetics and Mathematics Applications in Intelligent Systems - Radek Silhavy
2017-04-07

This book presents new methods for and approaches to real-world problems as well as exploratory research describing novel mathematics and cybernetics applications in intelligent systems. It focuses on modern trends in selected fields of technological systems and automation control theory. It also introduces new algorithms, methods and applications of intelligent systems in automation, technological and industrial applications. This book constitutes the refereed proceedings of the Cybernetics and Mathematics Applications in Intelligent Systems Section of the 6th Computer Science On-line Conference 2017 (CSOC 2017), held in April 2017.

Selfie Biometrics - Ajita Rattani 2019-09-21

This book highlights the field of selfie biometrics, providing a clear overview and presenting recent advances and challenges. It also discusses numerous selfie authentication techniques on mobile devices. Biometric authentication using mobile devices is becoming a convenient and important means of verifying identity for secured access and services such as telebanking and electronic transactions. In this context, face and ocular biometrics in the visible spectrum has gained increased attention from the research community. However, device mobility and operation in uncontrolled environments mean that facial and ocular images captured with mobile devices exhibit substantial degradation as a result of adverse lighting conditions, specular reflections and motion and defocus blur. In addition, low spatial resolution and the small sensor of front-facing mobile cameras further degrade the sample quality, reducing the recognition accuracy of face and ocular recognition technology when integrated into smartphones. Presenting the state of the art in mobile biometric research and technology, and offering an overview of the

potential problems in real-time integration of biometrics in mobile devices, this book is a valuable resource for final-year undergraduate students, postgraduate students, engineers, researchers and academics in various fields of computer engineering.

Advances in Internet, Data & Web Technologies
- Leonard Barolli 2018-02-23

This book presents original contributions on the theories and practices of emerging Internet, data and Web technologies and their applicability in businesses, engineering and academia, focusing on advances in the life-cycle exploitation of data generated from the digital ecosystem data technologies that create value, e.g. for businesses, toward a collective intelligence approach. The Internet has become the most proliferative platform for emerging large-scale computing paradigms. Among these, data and web technologies are two of the most prominent paradigms and are found in a variety of forms, such as data centers, cloud computing, mobile cloud, and mobile Web services. These technologies together create a digital ecosystem whose cornerstone is the data cycle, from capturing to processing, analyzing and visualizing. The investigation of various research and development issues in this digital ecosystem are made more pressing by the ever-increasing requirements of real-world applications that are based on storing and processing large amounts of data. The book is a valuable resource for researchers, software developers, practitioners and students interested in the field of data and web technologies.

Advances in Biomedical Engineering and Technology - Albert A. Rizvanov 2020-09-28

This book comprises select peer-reviewed papers presented at the International Conference on Biomedical Engineering Science and Technology: Roadway from Laboratory to Market (ICBEST 2018) organized by Department of Biomedical Engineering, National Institute of Technology Raipur, Chhattisgarh, India. The book covers latest research in a wide range of biomedical technologies ranging from biomechanics, biomaterials, biomedical instrumentation to tele-medicine, internet of things, bioinformatics, medical signal and image processing. The contents aim to bridge the gap between laboratory research and feasible

market products by identifying potential technologies to enhance functionalities of diagnostic and therapeutic devices. The book will be of use to researchers, biomedical engineers, as well as medical practitioners.

Emergent Converging Technologies and Biomedical Systems - N. Marriwala 2022-03-23

The book contains peer-reviewed proceedings of the International Conference on Emergent Converging Technologies and Biomedical Systems 2021. It includes papers on wireless multimedia networks, green wireless networks, electric vehicles, biomedical signal processing and instrumentation, wearable sensors for health care monitoring, biomedical imaging, & bio-materials, modeling and simulation in medicine biomedical and health informatics. The book will serve as a useful guide for educators, researchers, and developers working in the area of signal processing, imaging, computing, instrumentation, artificial intelligence, and their related applications. This book will also provide support and aid to the researchers involved in designing the latest advancements in healthcare technologies.

Advances in Power Systems and Energy Management - Neeraj Priyadarshi 2021-01-20

This book comprises select proceedings of the international conference ETAEERE 2020, and focuses on contemporary issues in energy management and energy efficiency in the context of power systems. The contents cover modeling, simulation and optimization based studies on topics like medium voltage BTB system, cost optimization of a ring frame unit in textile industry, rectenna for RF energy harvesting, ecology and energy dimension in infrastructural designs, study of AGC in two area hydro thermal power system, energy-efficient and reliable depth-based routing protocol for underwater wireless sensor network, and power line communication. This book can be beneficial for students, researchers as well as industry professionals.

Advances and Applications in Deep Learning - 2020-12-09

Artificial Intelligence (AI) has attracted the attention of researchers and users alike and is taking an increasingly crucial role in our modern society. From cars, smartphones, and airplanes to medical equipment, consumer applications,

and industrial machines, the impact of AI is notoriously changing the world we live in. In this context, Deep Learning (DL) is one of the techniques that has taken the lead for cognitive processes, pattern recognition, object detection, and machine learning, all of which have played a crucial role in the growth of AI. As such, this book examines DL applications and future trends in the field. It is a useful resource for researchers and students alike.

Proceedings of 3rd International Conference and Expo on Ceramics and Composite Materials 2017 - Conference Series

June 26-27, 2017 Madrid, Spain Key Topics : Ceramics and Glasses, Advanced Ceramic Materials, Ceramics and Composites, Composite Ceramic Materials, Ceramic Coatings, Advanced Materials and Technologies, Materials and Innovative Processing Ideas, Nanostructured Ceramics, Porous Ceramics, Sintering, Crystalline Materials, Ceramics Applications, Bioceramics and Medical Applications, Functional Ceramics and Inorganics, Ultra-High Temperature Ceramics, Entrepreneurs Investment Meet, Ceramic Compounds: Ceramic Materials, Ceramics in Biology and Medicine, Ceramic Industry and Environment, Non-oxide Ceramics, Nuclear Ceramics, Sols, Gels and Organic Chemistry,

Optimization in Machine Learning and Applications - Anand J. Kulkarni 2019-11-29

This book discusses one of the major applications of artificial intelligence: the use of machine learning to extract useful information from multimodal data. It discusses the optimization methods that help minimize the error in developing patterns and classifications, which further helps improve prediction and decision-making. The book also presents formulations of real-world machine learning problems, and discusses AI solution methodologies as standalone or hybrid approaches. Lastly, it proposes novel metaheuristic methods to solve complex machine learning problems. Featuring valuable insights, the book helps readers explore new avenues leading toward multidisciplinary research discussions.

Computational Science - ICCS 2020 - Valeria V. Krzhizhanovskaya 2020-06-19

The seven-volume set LNCS 12137, 12138,

12139, 12140, 12141, 12142, and 12143 constitutes the proceedings of the 20th International Conference on Computational Science, ICCS 2020, held in Amsterdam, The Netherlands, in June 2020.* The total of 101 papers and 248 workshop papers presented in this book set were carefully reviewed and selected from 719 submissions (230 submissions to the main track and 489 submissions to the workshops). The papers were organized in topical sections named: Part I: ICCS Main Track Part II: ICCS Main Track Part III: Advances in High-Performance Computational Earth Sciences: Applications and Frameworks; Agent-Based Simulations, Adaptive Algorithms and Solvers; Applications of Computational Methods in Artificial Intelligence and Machine Learning; Biomedical and Bioinformatics Challenges for Computer Science Part IV: Classifier Learning from Difficult Data; Complex Social Systems through the Lens of Computational Science; Computational Health; Computational Methods for Emerging Problems in (Dis-)Information Analysis Part V: Computational Optimization, Modelling and Simulation; Computational Science in IoT and Smart Systems; Computer Graphics, Image Processing and Artificial Intelligence Part VI: Data Driven Computational Sciences; Machine Learning and Data Assimilation for Dynamical Systems; Meshfree Methods in Computational Sciences; Multiscale Modelling and Simulation; Quantum Computing Workshop Part VII: Simulations of Flow and Transport: Modeling, Algorithms and Computation; Smart Systems: Bringing Together Computer Vision, Sensor Networks and Machine Learning; Software Engineering for Computational Science; Solving Problems with Uncertainties; Teaching Computational Science; UNcErtainty QUAntIficatiOn for ComputatiOnAL modeLs *The conference was canceled due to the COVID-19 pandemic.

Artificial Intelligence Technologies for Computational Biology - Ranjeet Kumar Rout 2022-11-10

This text emphasizes the importance of artificial intelligence techniques in the field of biological computation. It also discusses fundamental principles that can be applied beyond bio-inspired computing. It comprehensively covers important topics including data integration, data

mining, machine learning, genetic algorithms, evolutionary computation, evolved neural networks, nature-inspired algorithms, and protein structure alignment. The text covers the application of evolutionary computations for fractal visualization of sequence data, artificial intelligence, and automatic image interpretation in modern biological systems. The text is primarily written for graduate students and academic researchers in areas of electrical engineering, electronics engineering, computer engineering, and computational biology. This book: • Covers algorithms in the fields of artificial intelligence, and machine learning useful in biological data analysis. • Discusses comprehensively artificial intelligence and automatic image interpretation in modern biological systems. • Presents the application of evolutionary computations for fractal visualization of sequence data. • Explores the use of genetic algorithms for pair-wise and multiple sequence alignments. • Examines the roles of efficient computational techniques in biology.

Advanced Machine Intelligence and Signal Processing - Deepak Gupta 2022-07-27

This book covers the latest advancements in the areas of machine learning, computer vision, pattern recognition, computational learning theory, big data analytics, network intelligence, signal processing, and their applications in real world. The topics covered in machine learning involve feature extraction, variants of support vector machine (SVM), extreme learning machine (ELM), artificial neural network (ANN), and other areas in machine learning. The mathematical analysis of computer vision and pattern recognition involves the use of geometric techniques, scene understanding and modeling from video, 3D object recognition, localization and tracking, medical image analysis, and so on. Computational learning theory involves different kinds of learning like incremental, online, reinforcement, manifold, multitask, semi-supervised, etc. Further, it covers the real-time challenges involved while processing big data analytics and stream processing with the integration of smart data computing services and interconnectivity. Additionally, it covers the recent developments to network intelligence for analyzing the

network information and thereby adapting the algorithms dynamically to improve the efficiency. In the last, it includes the progress in signal processing to process the normal and abnormal categories of real-world signals, for instance signals generated from IoT devices, smart systems, speech, videos, etc., and involves biomedical signal processing: electrocardiogram (ECG), electroencephalogram (EEG), magnetoencephalography (MEG), and electromyogram (EMG).

Proceedings of 7th Global Experts Meeting on Neuropharmacology 2017 - Conference Series 2017-07-25

July 31-Aug 02, 2017 Milan, Italy Key Topics : Neuroimmunology and Neuroinflammation, Molecular Neuropharmacology, Clinical Neuropharmacology, Psychopharmacology, Neurochemical Transmission, Behavioral and Addiction Neuropharmacology, Neurotechnology, Neuroendocrinology, Alzheimer's Disease and Dementia, Parkinson's Disease, Neuroethics, Future Aspects of Neuropharmacology, Case Study Reports, Neural Stem Cell,

Emotion and Stress Recognition Related Sensors and Machine Learning Technologies - Kyandoghere Kyamakya 2021-09-01

This book includes impactful chapters which present scientific concepts, frameworks, architectures and ideas on sensing technologies and machine learning techniques. These are relevant in tackling the following challenges: (i) the field readiness and use of intrusive sensor systems and devices for capturing biosignals, including EEG sensor systems, ECG sensor systems and electrodermal activity sensor systems; (ii) the quality assessment and management of sensor data; (iii) data preprocessing, noise filtering and calibration concepts for biosignals; (iv) the field readiness and use of nonintrusive sensor technologies, including visual sensors, acoustic sensors, vibration sensors and piezoelectric sensors; (v) emotion recognition using mobile phones and smartwatches; (vi) body area sensor networks for emotion and stress studies; (vii) the use of experimental datasets in emotion recognition, including dataset generation principles and concepts, quality insurance and emotion elicitation material and concepts; (viii) machine

learning techniques for robust emotion recognition, including graphical models, neural network methods, deep learning methods, statistical learning and multivariate empirical mode decomposition; (ix) subject-independent emotion and stress recognition concepts and systems, including facial expression-based systems, speech-based systems, EEG-based systems, ECG-based systems, electrodermal activity-based systems, multimodal recognition systems and sensor fusion concepts and (x) emotion and stress estimation and forecasting from a nonlinear dynamical system perspective. This book, emerging from the Special Issue of the Sensors journal on "Emotion and Stress Recognition Related Sensors and Machine Learning Technologies" emerges as a result of the crucial need for massive deployment of intelligent sociotechnical systems. Such technologies are being applied in assistive systems in different domains and parts of the world to address challenges that could not be addressed without the advances made in these technologies.

Emerging Research in Computing, Information, Communication and Applications - N. R. Shetty 2021-11-15

This book presents the proceedings of International Conference on Emerging Research in Computing, Information, Communication and Applications, ERCICA 2020. The conference provides an interdisciplinary forum for researchers, professional engineers and scientists, educators and technologists to discuss, debate and promote research and technology in the upcoming areas of computing, information, communication and their applications. The book discusses these emerging research areas, providing a valuable resource for researchers and practicing engineers alike.

Information Technology in Biomedicine - Ewa Pietka 2020-09-02

The rapid and continuous growth in the amount of available medical information and the variety of multimodal content has created demand for a fast and reliable technology capable of processing data and delivering results in a user-friendly manner, whenever and wherever the information is needed. Multimodal acquisition systems, AI-powered applications, and biocybernetic support for medical procedures,

physiotherapy and prevention have opened up exciting new avenues in terms of optimizing the healthcare system for the benefit of patients. This book presents a comprehensive study on the latest advances in medical data science and gathers carefully selected articles written by respected experts on information technology. Pursuing an interdisciplinary approach and addressing both theoretical and applied aspects, it chiefly focuses on: Artificial Intelligence Image Analysis Sound and Motion in Physiotherapy and Physioprevention Modeling and Simulation Medical Data Analysis Given its scope, the book offers a valuable reference tool for all scientists who deal with problems of designing and implementing information processing tools employed in systems that assist in patient diagnosis and treatment, as well as students who want to learn more about the latest innovations in quantitative medical data analysis, data mining, and artificial intelligence.

Intelligent Information and Database Systems: Recent Developments - Maciej Huk 2019-03-05

This book presents research reports selected to indicate the state of the art in intelligent and database systems and to promote new research in this field. It includes 34 chapters based on original research presented as posters at the 11th Asian Conference on Intelligent Information and Database Systems (ACIIDS 2019), held in Yogyakarta, Indonesia on 8-11 April 2019. The increasing use of intelligent and database systems in various fields, such as industry, medicine and science places those two elements of computer science among the most important directions of research and application, which currently focuses on such key technologies as machine learning, cloud computing and processing of big data. It is estimated that further development of intelligent systems and the ability to gather, store and process enormous amounts of data will be needed to solve a number of crucial practical and theoretical problems. The book is divided into five parts: (a) Sensor Clouds and Internet of Things, (b) Machine Learning and Decision Support Systems, (c) Computer Vision Techniques and Applications, (d) Intelligent Systems in Biomedicine, and (e) Applications of Intelligent Information Systems. It is a valuable

resource for researchers and practitioners interested in increasing the synergy between artificial intelligence and database technologies, as well as for graduate and Ph.D. students in computer science and related fields.

Artificial Neural Networks and Machine Learning - ICANN 2018 - Věra Kůrková 2018-10-02

This three-volume set LNCS 11139-11141 constitutes the refereed proceedings of the 27th International Conference on Artificial Neural Networks, ICANN 2018, held in Rhodes, Greece, in October 2018. The papers presented in these volumes was carefully reviewed and selected from total of 360 submissions. They are related to the following thematic topics: AI and Bioinformatics, Bayesian and Echo State Networks, Brain Inspired Computing, Chaotic Complex Models, Clustering, Mining, Exploratory Analysis, Coding Architectures, Complex Firing Patterns, Convolutional Neural Networks, Deep Learning (DL), DL in Real Time Systems, DL and Big Data Analytics, DL and Big Data, DL and Forensics, DL and Cybersecurity, DL and Social Networks, Evolving Systems - Optimization, Extreme Learning Machines, From Neurons to Neuromorphism, From Sensation to Perception, From Single Neurons to Networks, Fuzzy Modeling, Hierarchical ANN, Inference and Recognition, Information and Optimization, Interacting with The Brain, Machine Learning (ML), ML for Bio Medical systems, ML and Video-Image Processing, ML and Forensics, ML and Cybersecurity, ML and Social Media, ML in Engineering, Movement and Motion Detection, Multilayer Perceptrons and Kernel Networks, Natural Language, Object and Face Recognition, Recurrent Neural Networks and Reservoir Computing, Reinforcement Learning, Reservoir Computing, Self-Organizing Maps, Spiking Dynamics/Spiking ANN, Support Vector Machines, Swarm Intelligence and Decision-Making, Text Mining, Theoretical Neural Computation, Time Series and Forecasting, Training and Learning.

Advances in Multidisciplinary Medical Technologies - Engineering, Modeling and Findings - Abdeldjalil Khelassi 2020-11-07

This book collects the proceedings of the International Congress on Health Sciences and Medical Technologies (ICHSMT), held in

Tlemcen, Algeria, from December 5 to 7, 2019. The proceedings present a forum for the latest projects and research in scientific and technological development with an emphasis on smart healthcare system design and future technologies. ICHSMT brings together researchers, students, and professionals from the healthcare, corporate, and academic sectors. It includes a far-reaching program supported by a variety of technical tracks that seek to promote medical technologies and innovation at a nationwide level.

7th International Conference on Advancements of Medicine and Health Care Through Technology - Simona Vlad 2021

This book gathers the proceedings of the 7th International Conference on Advancements of Medicine and Health Care through Technology, held virtually on 13-15 October 2020, from Cluj-Napoca, Romania. It reports on both theoretical and practical developments fostering the use of cutting-edge technology in clinical settings, telemedicine, and biological research. Chapters mainly deal with medical devices, measurements and instrumentation, medical imaging and biological signal processing and health care information systems. Further topics include modeling, simulation and biomechanics, as well as innovative (bio-)materials for biomedical applications. The conference, as well as the realization of this book, was supported by the

Romanian Society for Medical Engineering and Biological Technology.

Big-Data-Analytics in Astronomy, Science, and Engineering - Shelly Sachdeva 2022

This book constitutes the proceedings of the 9th International Conference on Big Data Analytics, BDA 2021, which took place virtually during December 7-9 2021. The 15 full papers and 1 short paper included in this volume were carefully reviewed and selected from 60 submissions. They were organized in topical sections as follows: Data science: systems; data science: architectures; big data analytics in healthcare support systems, information interchange of web data resources; and business analytics.

Machine Learning and Autonomous Systems - Joy Iong-Zong Chen 2022

This book involves a collection of selected papers presented at International Conference on Machine Learning and Autonomous Systems (ICMLAS 2021), held in Tamil Nadu, India, during 24-25 September 2021. 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 emerging modern mobile robotic systems and intelligent information systems and autonomous systems in agriculture, health care, education, military and industries.