

International Journal Of Computer Applications Technology And Research

This book contains a selection of refereed and revised papers of Intelligent Techniques and Applications track, and the Special Track on Intelligent Image Processing and Artificial Vision track originally presented at the International Symposium on Intelligent Systems Technologies and Applications (ISTA), August 10-13, 2015, Kochi, India.

This edited volume presents the best chapters presented during the international conference on computer and applications ICCA'17 which was held in Dubai, United Arab Emirates in September 2017. Selected chapters present new advances in digital information, communications and multimedia. Authors from different countries show and discuss their findings, propose new approaches, compare them with the existing ones and include recommendations. They address all applications of computing including (but not limited to) connected health, information security, assistive technology, edutainment and serious games, education, grid computing, transportation, social computing, natural language processing, knowledge extraction and reasoning, Arabic apps, image and pattern processing, virtual reality, cloud computing, haptics, information security, robotics, networks algorithms, web engineering, big data analytics, ontology, constraints satisfaction, cryptography and steganography, Fuzzy logic, soft computing, neural networks, artificial intelligence, biometry and bio-informatics, embedded systems, computer graphics, algorithms and optimization, Internet of things and smart cities. The book can be used by researchers and practitioners to discover the recent trends in computer applications. It opens a new horizon for research discovery works locally and internationally.

Mechanical Engineering is defined nowadays as a discipline "which involves the application of principles of physics, design, manufacturing and maintenance of mechanical systems". Recently, mechanical engineering has also focused on some cutting-edge subjects such as nanomechanics and nanotechnology, mechatronics and robotics, computational mechanics, biomechanics, alternative energies, as well as aspects related to sustainable mechanical engineering. This book covers mechanical engineering higher education with a particular emphasis on quality assurance and the improvement of academic institutions, mechatronics education and the transfer of knowledge between university and industry.

"Neutrosophic Sets and Systems" has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.

A critical part of ensuring that systems are advancing alongside technology

without complications is problem solving. Practical applications of problem-solving theories can model conflict and cooperation and aid in creating solutions to real-world problems. *Soft-Computing-Based Nonlinear Control Systems Design* is a critical scholarly publication that examines the practical applications of control theory and its applications in problem solving to fields including economics, environmental management, and financial modelling. Featuring a wide range of topics, such as fuzzy logic, nature-inspired algorithms, and cloud computing, this book is geared toward academicians, researchers, and students seeking relevant research on control theory and its practical applications.

The book 'Data Intensive Computing Applications for Big Data' discusses the technical concepts of big data, data intensive computing through machine learning, soft computing and parallel computing paradigms. It brings together researchers to report their latest results or progress in the development of the above mentioned areas. Since there are few books on this specific subject, the editors aim to provide a common platform for researchers working in this area to exhibit their novel findings. The book is intended as a reference work for advanced undergraduates and graduate students, as well as multidisciplinary, interdisciplinary and transdisciplinary research workers and scientists on the subjects of big data and cloud/parallel and distributed computing, and explains didactically many of the core concepts of these approaches for practical applications. It is organized into 24 chapters providing a comprehensive overview of big data analysis using parallel computing and addresses the complete data science workflow in the cloud, as well as dealing with privacy issues and the challenges faced in a data-intensive cloud computing environment. The book explores both fundamental and high-level concepts, and will serve as a manual for those in the industry, while also helping beginners to understand the basic and advanced aspects of big data and cloud computing.

This volume constitutes the refereed proceedings of the International Conferences, EL, DTA and UNESST 2012, held as part of the Future Generation Information Technology Conference, FGIT 2012, Kangwondo, Korea, in December 2012. The papers presented were carefully reviewed and selected from numerous submissions and focus on the various aspects of education and learning, database theory and application and u- and e-service, science and technology.

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

While Computer Security is a broader term which incorporates technologies, protocols, standards and policies to ensure the security of the computing systems including the computer hardware, software and the information stored in it, Cyber Security is a specific, growing field to protect computer networks (offline and online) from unauthorized access, botnets, phishing scams, etc. Machine learning is a branch of Computer Science which enables computing machines to adopt new behaviors on the basis of observable and verifiable data and information. It can be applied to ensure the security of the computers and the information by detecting anomalies using data mining and other such techniques. This book will be an invaluable resource to understand the importance of machine learning and data mining in establishing computer and cyber security. It emphasizes important security aspects associated with computer and cyber security along with the analysis of machine learning and data mining based solutions. The book also highlights the future research domains in which these solutions can be applied. Furthermore, it caters to the needs of IT professionals, researchers, faculty members, scientists, graduate students, research scholars and software developers who seek to carry out research and develop combating solutions in the area of cyber security using machine learning based approaches. It is an extensive source of information for the readers belonging to the field of Computer Science and Engineering, and Cyber Security professionals. Key Features: This book contains examples and illustrations to demonstrate the principles, algorithms, challenges and applications of machine learning and data mining for computer and cyber security. It showcases important security aspects and current trends in the field. It provides an insight of the future research directions in the field. Contents of this book help to prepare the students for exercising better defense in terms of understanding the motivation of the attackers and how to deal with and mitigate the situation using machine learning based approaches in better manner.

Adaptive Health Management Information Systems, Fourth Edition is a thorough resource for a broad range of healthcare professionals-from informaticians, physicians and nurses, to pharmacists, public health and allied health professionals-who need to keep pace the digital transformation of health care. Wholly revised, updated, and expanded in scope, the fourth edition covers the latest developments in the field of health management information systems (HMIS) including big data analytics and machine learning in health care; precision medicine; digital health commercialization; supply chain management; informatics for pharmacy and public health; digital health leadership; cybersecurity; and social media analytics.

This book uses tutorials and new material to describe the basic concepts of soft-computing which potentially can be used in real-life sensor network applications. It is organized in a manner that exemplifies the use of an assortment of soft-computing applications for solving different problems in sensor networking. Written by worldwide experts, the chapters provide a balanced mixture of

different problems concerning channel access, routing, coverage, localization, lifetime maximization and target tracking using emerging soft-computing applications.

This holistic book is an invaluable reference for addressing various practical challenges in architecting and engineering Intelligent IoT and eHealth solutions for industry practitioners, academic and researchers, as well as for engineers involved in product development. The first part provides a comprehensive guide to fundamentals, applications, challenges, technical and economic benefits, and promises of the Internet of Things using examples of real-world applications. It also addresses all important aspects of designing and engineering cutting-edge IoT solutions using a cross-layer approach from device to fog, and cloud covering standards, protocols, design principles, reference architectures, as well as all the underlying technologies, pillars, and components such as embedded systems, network, cloud computing, data storage, data processing, big data analytics, machine learning, distributed ledger technologies, and security. In addition, it discusses the effects of Intelligent IoT, which are reflected in new business models and digital transformation. The second part provides an insightful guide to the design and deployment of IoT solutions for smart healthcare as one of the most important applications of IoT. Therefore, the second part targets smart healthcare-wearable sensors, body area sensors, advanced pervasive healthcare systems, and big data analytics that are aimed at providing connected health interventions to individuals for healthier lifestyles.

HCTL Open International Journal of Technology Innovations and Research (IJTIR) [ISSN (Online): 2321-1814] is an International, Open-Access, Peer-Reviewed, Online journal devoted to various disciplines of Science and Technology. HCTL Open IJTIR is a bi-monthly journal published by HCTL Open Publications Solutions, India and Hybrid Computing Technology Labs, India. - Get more information at: <http://ijtir.hctl.org/>

ICMCCA 2012 is the first International Conference on Multimedia Processing, Communication and Computing Applications and the theme of the Conference is chosen as 'Multimedia Processing and its Applications'. Multimedia processing has been an active research area contributing in many frontiers of today's science and technology. This book presents peer-reviewed quality papers on multimedia processing, which covers a very broad area of science and technology. The prime objective of the book is to familiarize readers with the latest scientific developments that are taking place in various fields of multimedia processing and is widely used in many disciplines such as Medical Diagnosis, Digital Forensic, Object Recognition, Image and Video Analysis, Robotics, Military, Automotive Industries, Surveillance and Security, Quality Inspection, etc. The book will assist the research community to get the insight of the overlapping works which are being carried out across the globe at many medical hospitals and institutions, defense labs, forensic labs, academic institutions, IT companies and security & surveillance domains. It also discusses latest state-of-the-art research problems and techniques and helps to encourage, motivate and introduce the budding researchers to a larger domain of multimedia.

This book is a collection of accepted papers that were presented at the International Conference on Communication and Computing Systems (ICCCS-2016), Dronacharya College of Engineering, Gurgaon, September 9–11, 2016. The purpose of the conference was to provide a platform for interaction between scientists from industry, academia and other areas

of society to discuss the current advancements in the field of communication and computing systems. The papers submitted to the proceedings were peer-reviewed by 2-3 expert referees. This volume contains 5 main subject areas: 1. Signal and Image Processing, 2. Communication & Computer Networks, 3. Soft Computing, Intelligent System, Machine Vision and Artificial Neural Network, 4. VLSI & Embedded System, 5. Software Engineering and Emerging Technologies.

This book presents the proceedings of International Conference on Emerging Research in Computing, Information, Communication and Applications, ERCICA 2016. ERCICA 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.

"This book focuses on network management and traffic engineering for Internet and distributed computing technologies, as well as present emerging technology trends and advanced platforms"--Provided by publisher.

"This book presents, discusses, shares ideas, results and experiences on the recent important advances and future challenges on enabling technologies for achieving higher performance"--Provided by publisher.

Peer review is the process by which submissions to journals and presses are evaluated with regard to suitability for publication. Armed with the results of numerous empirical studies, critics have leveled a variety of harsh charges against peer review such as: reviewers and editors are biased toward authors from prestigious institutions, peer review is biased toward established ideas, and it does a poor job of detecting errors and fraud. While an immense literature has sprouted on peer review in the sciences and social sciences, Peer Review is the first book-length, wide-ranging study of peer review that utilizes methods and resources of contemporary philosophy. Its six chapters cover the following topics: the tension between peer review and the liberal notion that truth emerges when ideas proliferate in the marketplace of ideas; arguments for and against blind review of submissions; the alleged conservatism of peer review; the anomalous nature of book reviewing; the status of non-peer-reviewed publications, such as invited articles or Internet publications, in tenure and promotion cases; and the future of peer review in the age of the Internet. The author has also included several key readings about peer review.

These volumes constitute the Proceedings of the 6th International Workshop on Soft Computing Applications, or SOFA 2014, held on 24-26 July 2014 in Timisoara, Romania. This edition was organized by the University of Belgrade, Serbia in conjunction with Romanian Society of Control Engineering and Technical Informatics (SRAIT) - Arad Section, The General Association of Engineers in Romania - Arad Section, Institute of Computer Science, Iasi Branch of the Romanian Academy and IEEE Romanian Section. The Soft Computing concept was introduced by Lotfi Zadeh in 1991 and serves to highlight the emergence of computing methodologies in which the accent is on exploiting the tolerance for imprecision and uncertainty to achieve tractability, robustness and

low solution cost. Soft computing facilitates the use of fuzzy logic, neurocomputing, evolutionary computing and probabilistic computing in combination, leading to the concept of hybrid intelligent systems. The combination of such intelligent systems tools and a large number of applications introduce a need for a synergy of scientific and technological disciplines in order to show the great potential of Soft Computing in all domains. The conference papers included in these proceedings, published post conference, were grouped into the following area of research: - Image, Text and Signal Processing
Intelligent Transportation Modeling and Applications Biomedical Applications Neural Network and Applications Knowledge-Based Technologies for Web Applications, Cloud Computing, Security, Algorithms and Computer Networks Knowledge-Based Technologies Soft Computing Techniques for Time Series Analysis Soft Computing and Fuzzy Logic in Biometrics Fuzzy Applications Theory and Fuzzy Control Bussiness Process Management Methods and Applications in Electrical Engineering The volumes provide useful information to professors, researchers and graduated students in area of soft computing techniques and applications, as they report new research work on challenging issues.

In the era of the Internet of Things and with the explosive worldwide growth of electronic data volume, and associated need of processing, analysis, and storage of such a humongous amount of data, it has now become mandatory to exploit the power of massively parallel architecture for fast computation. Cloud computing provides a cheap source of such a computing framework for a large volume of data for real-time applications. It is, therefore, not surprising to see that cloud computing has become a buzzword in the computing fraternity over the last decade. Applications of Cloud Computing: Approaches and Practices lays a good foundation for the core concepts and principles of cloud computing applications, walking the reader through the fundamental ideas with expert ease. The book progresses on the topics in a step-by-step manner. It reinforces theory with a full-fledged pedagogy designed to enhance students' understanding and offer them a practical insight into the applications of it. It is a valuable source of knowledge for researchers, engineers, practitioners, and graduate and doctoral students working in the field of cloud computing. It will also be useful for faculty members of graduate schools and universities.

The paper presents a novel strategy for solving bi-level linear programming problem based on goal programming in neutrosophic numbers environment. Bi-level linear programming problem comprises of two levels namely upper or first level and lower or second level with one objective at each level. The objective function of each level decision maker and the system constraints are considered as linear functions with neutrosophic numbers of the form $[p + q I]$, where p, q are real numbers and I represents indeterminacy.

This book provides insights into contemporary issues and challenges in soft computing applications and techniques in healthcare. It will be a useful guide to

identify, categorise and assess the role of different soft computing techniques for disease, diagnosis and prediction due to technological advancements. The book explores applications in soft computing and covers empirical properties of artificial neural network (ANN), evolutionary computing, fuzzy logic and statistical techniques. It presents basic and advanced concepts to help beginners and industry professionals get up to speed on the latest developments in soft computing and healthcare systems. It incorporates the latest methodologies and challenges facing soft computing, examines descriptive, predictive and social network techniques and discusses analytics tools and their role in providing effective solutions for science and technology. The primary users for the book include researchers, academicians, postgraduate students, specialists and practitioners. Dr. Ashish Mishra is a professor in the Department of Computer Science and Engineering, Gyan Ganga Institute of Technology and Sciences, Jabalpur, Madhya Pradesh, India. He has contributed in organising the INSPIRE Science Internship Camp. He is a member of the Institute of Electrical and Electronics Engineers and is a life member of the Computer Society of India. His research interests include the Internet of Things, data mining, cloud computing, image processing and knowledge-based systems. He holds nine patents in Intellectual Property, India. He has authored four books in the areas of data mining, image processing and LaTeX. Dr. G. Suseendran is an assistant professor, Department of Information Technology, School of Computing Sciences, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Chennai, Tamil Nadu, India. His research interests include ad-hoc networks, the Internet of Things, data mining, cloud computing, image processing, knowledge-based systems, and Web information exploration. He has published more than 75 research papers in various international journals such as Science Citation Index, Springer Book Chapter, Scopus, IEEE Access and UGC-referred journals. Prof. Trung-Nghia Phung is an associate professor and Head of Academic Affairs, Thai Nguyen University of Information and Communication Technology (ICTU). He has published more than 60 research papers. His main research interest lies in the field of speech, audio, and biomedical signal processing. He serves as a technical committee program member, track chair, session chair, and reviewer of many international conferences and journals. He was a co-Chair of the International Conference on Advances in Information and Communication Technology 2016 (ICTA 2016) and a Session Chair of the 4th International Conference on Information System Design and Intelligent Applications (INDIA 2017).

Computational Intelligence for Multimedia Big Data on the Cloud with Engineering Applications covers timely topics, including the neural network (NN), particle swarm optimization (PSO), evolutionary algorithm (GA), fuzzy sets (FS) and rough sets (RS), etc. Furthermore, the book highlights recent research on representative techniques to elaborate how a data-centric system formed a powerful platform for the processing of cloud hosted multimedia big data and how

it could be analyzed, processed and characterized by CI. The book also provides a view on how techniques in CI can offer solutions in modeling, relationship pattern recognition, clustering and other problems in bioengineering. It is written for domain experts and developers who want to understand and explore the application of computational intelligence aspects (opportunities and challenges) for design and development of a data-centric system in the context of multimedia cloud, big data era and its related applications, such as smarter healthcare, homeland security, traffic control trading analysis and telecom, etc. Researchers and PhD students exploring the significance of data centric systems in the next paradigm of computing will find this book extremely useful. Presents a brief overview of computational intelligence paradigms and its significant role in application domains Illustrates the state-of-the-art and recent developments in the new theories and applications of CI approaches Familiarizes the reader with computational intelligence concepts and technologies that are successfully used in the implementation of cloud-centric multimedia services in massive data processing Provides new advances in the fields of CI for bio-engineering application

There are a lot of e-business security concerns. Knowing about e-business security issues will likely help overcome them. Keep in mind, companies that have control over their e-business are likely to prosper most. In other words, setting up and maintaining a secure e-business is essential and important to business growth. This book covers state-of-the art practices in e-business security, including privacy, trust, security of transactions, big data, cloud computing, social network, and distributed systems.

Exchange of information and innovative ideas are necessary to accelerate the development of technology. With advent of technology, intelligent and soft computing techniques came into existence with a wide scope of implementation in engineering sciences. Keeping this ideology in preference, this book includes the insights that reflect the 'Advances in Computer and Computational Sciences' from upcoming researchers and leading academicians across the globe. It contains high-quality peer-reviewed papers of 'International Conference on Computer, Communication and Computational Sciences (ICCCCS 2016), held during 12-13 August, 2016 in Ajmer, India'. These papers are arranged in the form of chapters. The content of the book is divided into two volumes that cover variety of topics such as intelligent hardware and software design, advanced communications, power and energy optimization, intelligent techniques used in internet of things, intelligent image processing, advanced software engineering, evolutionary and soft computing, security and many more. This book helps the perspective readers' from computer industry and academia to derive the advances of next generation computer and communication technology and shape them into real life applications.

The volume on Data Management, Analytics and Innovations presents the latest high-quality technical contributions and research results in the areas of data

management and smart computing, big data management, artificial intelligence and data analytics along with advances in network technologies. It deals with the state-of-the-art topics and provides challenges and solutions for future development. Original, unpublished research work highlighting specific research domains from all viewpoints are contributed from scientists throughout the globe. This volume is mainly designed for professional audience, composed of researchers and practitioners in academia and industry.

In today's modernized world, the field of healthcare has seen significant practical innovations with the implementation of computational intelligence approaches and soft computing methods. These two concepts present various solutions to complex scientific problems and imperfect data issues. This has made both very popular in the medical profession. There are still various areas to be studied and improved by these two schemes as healthcare practices continue to develop.

Computational Intelligence and Soft Computing Applications in Healthcare Management Science is an essential reference source that discusses the implementation of soft computing techniques and computational methods in the various components of healthcare, telemedicine, and public health. Featuring research on topics such as analytical modeling, neural networks, and fuzzy logic, this book is ideally designed for software engineers, information scientists, medical professionals, researchers, developers, educators, academicians, and students.

International Journal of Neutrosophic Science (IJNS) is a peer-review journal publishing high quality experimental and theoretical research in all areas of Neutrosophic and its Applications. Papers concern with neutrosophic logic and mathematical structures in the neutrosophic setting. Besides providing emphasis on topics like artificial intelligence, pattern recognition, image processing, robotics, decision making, data analysis, data mining, applications of neutrosophic mathematical theories contributions to economics, finance, management, industries, electronics, and communications are promoted. This volume constitutes the refereed proceedings of the International Conferences, BSBT, MulGraB and IUrC 2012, held as part of the Future Generation Information Technology Conference, FGIT 2012, Gangneung, Korea, in December 2012. The papers presented were carefully reviewed and selected from numerous submissions and focus on the various aspects of multimedia, computer graphics and broadcasting, bio-science and bio-technology, and intelligent urban computing.

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