

Le Computing Cse

Advances in Computers

The bright future of green IoT will change our tomorrow environment to become healthier and green, with very high quality of service that is socially, environmentally, and economically sustainable. This book covers the most recent advances in IoT, it discusses Smart City implementation, and offers both quantitative and qualitative research. It focuses on greening things such as green communication and networking, green design and implementations, green IoT services and applications, energy saving strategies, integrated RFIDs and sensor networks, mobility and network management, the cooperation of homogeneous and heterogeneous networks, smart objects, and green localization. This book with its wide range of related topics in IoT and Smart City, will be useful for graduate students, researchers, academicians, institutions, and professionals that are interested in exploring the areas of IoT and Smart City.

This book features a collection of high-quality, peer-reviewed papers presented at the Fourth International Conference on Intelligent Computing and Communication (ICICC 2020) organized by the Department of Computer Science and Engineering and the Department of Computer Science and Technology, Dayananda Sagar University, Bengaluru, India, on 18–20 September 2020. The book is organized in two volumes and discusses advanced and multi-disciplinary research regarding the design of smart computing and informatics. It focuses on innovation paradigms in system knowledge, intelligence and sustainability that can be applied to provide practical solutions to a number of problems in society, the environment and industry. Further, the book also addresses the deployment of emerging computational and knowledge transfer approaches, optimizing solutions in various disciplines of science, technology and health care.

This book constitutes the refereed post-conference proceedings of the 11th EAI International Conference on Research in Computer science and its Applications, CNRIA 2021, held in June 2021. Due to COVID-19 pandemic the conference was held virtually. The 11 full papers presented were selected from 24 submissions and issue different problems in underserved and unserved areas. The papers are arranged in 3 tracks: data science and artificial intelligence; telecom and artificial intelligence; IoT and ICT applications.

Theoretical Studies in Computer Science focuses on the field of theoretical computer science. This book discusses the context-free multi-languages, non-membership in certain families of context-free languages, and single tree grammars. The complexity of structural containment and equivalence, interface between language theory and database theory, and automata theory for database theoreticians are also deliberated. This text likewise covers the datalog linearization of chain queries, expressive power of query languages, and object identity and query equivalences. Other topics include the unified approach to data and meta-data modification for data/knowledge bases, polygon clipping algorithms, and convex polygon generator. This publication is intended for computer scientists and researchers interested in theoretical computer science.

This book constitutes the refereed proceedings of the International Conference on Embedded and Ubiquitous Computing, EUC 2007, held in Taipei, Taiwan, in December 2007. The 65 revised full papers presented were carefully reviewed and selected from 217 submissions. The papers are organized in topical sections. They include sections on power aware computing, reconfigurable embedded systems, wireless networks, real-time/embedded operating systems, and embedded system architectures.

Computing in Nonlinear Media and Automata Collectives presents an account of new ways to design massively parallel computing devices in advanced mathematical models, such as cellular automata and lattice swarms, from unconventional materials, including chemical solutions, bio-polymers, and excitable media.

This book describes warehouse-scale computers (WSCs), the computing platforms that power cloud computing and all the great web services we use every day. It discusses how these new systems treat the datacenter itself as one massive computer designed at warehouse scale, with hardware and software working in concert to deliver good levels of internet service performance. The book details the architecture of WSCs and covers the main factors influencing their design, operation, and cost structure, and the characteristics of their software base. Each chapter contains multiple real-world examples, including detailed case studies and previously unpublished details of the infrastructure used to power Google's online services. Targeted at the architects and programmers of today's WSCs, this book provides a great foundation for those looking to innovate in this fascinating and important area, but the material will also be broadly interesting to those who just want to understand the infrastructure powering the internet. The third edition reflects four years of advancements since the previous edition and nearly doubles the number of pictures and figures. New topics range from additional workloads like video streaming, machine learning, and public cloud to specialized silicon accelerators, storage and network building blocks, and a revised discussion of data center power and cooling, and uptime. Further discussions of emerging trends and opportunities ensure that this revised edition will remain an essential resource for educators and professionals working on the next generation of WSCs.

"This book provides research into parallel & distributed computing, high performance computing, and Grid computing"--Provided by publisher.

This book provides comprehensive details of all Swarm Intelligence based Techniques available till date in a comprehensive manner along with their mathematical proofs. It will act as a foundation for authors, researchers and industry professionals. This monograph will present the latest state of the art research being done on varied Intelligent Technologies like sensor networks, machine learning, optical fiber communications, digital signal processing, image processing and many more.

This book covers both basic and high-level concepts relating to the intelligent computing paradigm and data sciences in the context of distributed computing, big data, data sciences, high-performance computing and Internet of Things. It is becoming increasingly important to develop adaptive, intelligent computing-centric, energy-aware, secure and privacy-aware systems in high-performance computing and IoT applications. In this context, the book serves as a useful guide for industry practitioners, and also offers beginners a comprehensive introduction to basic and advanced areas of intelligent computing. Further, it provides a platform for researchers, engineers, academics and industrial professionals around the globe to showcase their recent research concerning recent trends. Presenting novel ideas and stimulating interesting discussions, the book appeals to researchers and practitioners working in the field of information technology and computer science.

This book constitutes the refereed proceedings of the 7th Annual International Conference on Computing and Combinatorics, COCOON 2001, held in Guilin, China, in August 2001. The 50 revised full papers and 16 short papers presented were carefully reviewed and selected from 97 submissions. The papers are organized in topical sections on complexity theory, computational biology, computational geometry, data structures and algorithms, games and combinatorics, graph algorithms and complexity, graph drawing, graph theory, online algorithms, randomized and average-case algorithms, Steiner trees, systems algorithms and modeling, and computability.

The cognitive approach to the IoT provides connectivity to everyone and everything since IoT connected devices are known to increase rapidly. When the IoT is integrated with cognitive technology, performance is improved, and smart intelligence is obtained. Discussed in this book are different types of datasets with structured content based on cognitive systems. The IoT gathers the information from the real time datasets through the internet, where the IoT network connects with multiple devices. This book mainly concentrates on providing the best solutions to existing real-time issues in the cognitive

domain. Healthcare-based, cloud-based and smart transportation-based applications in the cognitive domain are addressed. The data integrity and security aspects of the cognitive computing main are also thoroughly discussed along with validated results.

With the rapid growth of technology in society, communication networks have become a heavily researched topic. Implementing these advanced systems is a challenge, however, due to the abundance of optimization problems within these networks. The use of meta-heuristic algorithms and nature-inspired computing has become a prevalent technique among researchers for solving these complex problems within communication networks. Despite its popularity, this specific computing technique lacks the appropriate amount of research that is needed for professionals to grasp a definite understanding. Nature-Inspired Computing Applications in Advanced Communication Networks is a collection of innovative research on the methods and applications of natural computation techniques and algorithms within communication systems such as wireless sensor networks, vehicular adhoc networks, and internet of things. While highlighting topics including mobile sensor deployment, routing optimization, and sleep scheduling, this book is ideally designed for researchers, network professionals, computer scientists, mathematicians, developers, scholars, educators, and students seeking to enhance their understanding of nature-inspired computing and its solutions within various advanced communication networks.

This book constitutes the proceedings of the 19th International Conference on Computer Information Systems and Industrial Management Applications, CISIM 2020, held in Bialystok, Poland, in October 2020. Due to the COVID-19 pandemic the conference has been postponed to October 2020. The 40 full papers presented together with 5 abstracts of keynotes were carefully reviewed and selected from 62 submissions. The main topics covered by the chapters in this book are biometrics, security systems, multimedia, classification and clustering, industrial management. Besides these, the reader will find interesting papers on computer information systems as applied to wireless networks, computer graphics, and intelligent systems. The papers are organized in the following topical sections: biometrics and pattern recognition applications; computer information systems and security; industrial management and other applications; machine learning and high performance computing; modelling and optimization.

Computer-supported co-operative work (CSCW) is a research area that aims at integrating the works of several people involved in a common goal, inside a co-operative universe, through the sharing of resources in an efficient way. This report contains the papers presented at a conference on CSCW in design. Topics covered include: techniques, methods, and tools for CSCW in design; social organization of the CSCW process; integration of methods & tools within the work organization; co-operation in virtual enterprises and electronic businesses; CSCW in design & manufacturing; interaction between the CSCW approach and knowledge reuse as found in knowledge management; intelligent agent & multi-agent systems; Internet/World Wide Web and CSCW in design; and applications & test beds.

Les sociétés accumulent un volume considérable de connaissances techniques, environnementales, sociales, économiques et fiscales. Elles doivent rester pertinentes dans l'organisation et l'exploitation de cette masse d'information, et également apprendre à collaborer avec les outils de Knowledge Management. Cet ouvrage présente une démarche originale de mise en œuvre d'un système de management des connaissances qui comprend : - l'intégration d'infrastructures et l'utilisation des ressources externes ou internes, - les architectures fonctionnelles et techniques, - les technologies du Web 2.0, - les modes de gestion des connaissances et des métadonnées, - le modèle de traitement adapté, - la circulation des flux de connaissance. Cette évolution des usages nécessite la mise en place de nouveaux modes de management dans l'entreprise afin de préparer, conduire, expliquer les actions et définir les axes stratégiques. Le but étant ici de mettre en place un système efficace de gestion des connaissances évoluant vers des offres de services applicables à toute forme d'organisation : le Knowledge Management.

This proceedings volume gathers a selection of papers presented at the Fifth International Conference on High Performance Scientific Computing, which took place in Hanoi on March 5-9, 2012. The conference was organized by the Institute of Mathematics of the Vietnam Academy of Science and Technology (VAST), the Interdisciplinary Center for Scientific Computing (IWR) of Heidelberg University, Ho Chi Minh City University of Technology, and the Vietnam Institute for Advanced Study in Mathematics. The contributions cover the broad interdisciplinary spectrum of scientific computing and present recent advances in theory, development of methods, and practical applications. Subjects covered include mathematical modeling; numerical simulation; methods for optimization and control; parallel computing; software development; and applications of scientific computing in physics, mechanics and biomechanics, material science, hydrology, chemistry, biology, biotechnology, medicine, sports, psychology, transport, logistics, communication networks, scheduling, industry, business and finance.

The book focuses on the way that human beings and computers interact to ever increasing levels of both complexity and simplicity. Assuming very little knowledge, the book provides content on theory, cognition, design, evaluation, and user diversity. It aims to explain the underlying causes of the cognitive, social and organizational problems typically are devoted to descriptions of rehabilitation methods for specific cognitive processes. This book describes new algorithms for modeling accessible to cognitive scientists of all varieties. The book is inherently interdisciplinary, publishing original research in the fields of computing, engineering, artificial intelligence, psychology, linguistics, and social and system organization, as applied to the design, implementation, application, analysis, and evaluation of interactive systems. Machine learning research has been being carried out for a decade at international level in various applications. The new learning approach is mostly used in machine learning based cognitive applications. This will give direction for future research to scientists and researchers working in neuroscience, neuro-imaging, machine learning based brain mapping and modeling etc.

This book is suitable for use in a university-level first course in computing (CS1), as well as the increasingly popular course known as CS0. It is difficult for many students to master basic concepts in computer science and programming. A large portion of the confusion can be blamed on the complexity of the tools and materials that are traditionally used to teach CS1 and CS2. This textbook was written with a single overarching goal: to present the core concepts of computer science as simply as possible without being simplistic.

All over the world, vast research is in progress on the domain of Industry 4.0 and related techniques. Industry 4.0 is expected to have a very high impact on labor markets, global value chains, education, health, environment, and many social economic aspects. Industry 4.0 Interoperability, Analytics, Security, and Case Studies provides a deeper understanding of the drivers and enablers of Industry 4.0. It includes real case studies of various applications related to different fields, such as cyber physical systems (CPS), Internet of Things (IoT), cloud computing, machine learning, virtualization, decentralization, blockchain, fog computing, and many other related areas. Also discussed are interoperability, design, and implementation challenges.

Researchers, academicians, and those working in industry around the globe will find this book of interest. FEATURES Provides an understanding of the drivers and enablers of Industry 4.0

Includes real case studies of various applications for different fields Discusses technologies such as cyber physical systems (CPS), Internet of Things (IoT), cloud computing, machine learning, virtualization, decentralization, blockchain, fog computing, and many other related areas Covers design, implementation challenges, and interoperability Offers detailed knowledge on Industry 4.0 and its underlying technologies, research challenges, solutions, and case studies

The 6-volume set, comprising the LNCS books 12535 until 12540, constitutes the refereed proceedings of 28 out of the 45 workshops held at the 16th European Conference on Computer Vision, ECCV 2020. The conference was planned to take place in Glasgow, UK, during August 23-28, 2020, but changed to a virtual format due to the COVID-19 pandemic. The 249 full papers, 18 short papers, and 21 further contributions included in the workshop proceedings were carefully reviewed and selected from a total of 467 submissions. The papers deal with diverse computer vision topics. Part VI focusses on reassessing the evaluation of object detection; computer vision problems in plant phenotyping; fair face recognition and analysis; and perception through structured generative models.

The combination of faster, more advanced computers and more quantitatively oriented biomedical researchers has recently yielded new and more precise methods for the analysis of biomedical data. These better analyses have enhanced the conclusions that can be drawn from biomedical data, and they have changed the way that experiments are designed and performed. This volume, along with the 2 previous Computer Methods volumes for the Methods in Enzymology series, aims to inform biomedical researchers about recent applications of modern data analysis and simulation methods as applied to biomedical research. Presents step-by-step computer methods and discusses the techniques in detail to enable their implementation in solving a wide range of problems Informs biomedical researchers of the modern data analysis methods that have developed alongside computer hardware Presents methods at the "nuts and bolts" level to identify and resolve a problem and analyze what the results mean

It is currently quite easy for students or designers/engineers to find very general books on the various aspects of safety, reliability and dependability of computer system architectures, and partial treatments of the elements that comprise an effective system architecture. It is not so easy to find a single source reference for all these aspects of system design. However, the purpose of this book is to present, in a single volume, a full description of all the constraints (including legal contexts around performance, reliability norms, etc.) and examples of architectures from various fields of application, including: railways, aeronautics, space, automobile and industrial automation. The content of the book is drawn from the experience of numerous people who are deeply immersed in the design and delivery (from conception to test and validation), safety (analysis of safety: FMEA, HA, etc.) and evaluation of critical systems. The involvement of real world industrial applications is handled in such a way as to avoid problems of confidentiality, and thus allows for the inclusion of new, useful information (photos, architecture plans/schematics, real examples).

This book constitutes the revised selected papers of the scientific satellite events that were held in conjunction with the 14th International Conference on Service-Oriented Computing, ICSOC 2016, held in Banff, AB, Canada, in October 2016. The ICSOC 2016 workshop track consisted of three workshops on a wide range of topics that fall into the general area of service computing: ASOCA 2016: The 1st Workshop on Adaptive Service-oriented and Cloud Applications ISyCC 2016: The 1st Workshop on IoT Systems Provisioning & Management in Cloud Computing BSCI 2016: The Second International Workshop on Big Data Services and Computational Intelligence

This book constitutes the thoroughly refereed post-conference proceedings of the 31st International Workshop on Languages and Compilers for Parallel Computing, LCPC 2018, held in Salt Lake City, UT, USA, in October 2018. The 14 revised full papers were carefully reviewed and selected from 26 submissions. Specific topics are compiling for parallelism and parallel compilers, static, dynamic, and adaptive optimization of parallel programs, parallel programming models and languages, formal analysis and verification of parallel programs, parallel runtime systems and libraries, performance analysis and debugging tools for concurrency and parallelism, parallel algorithms and concurrent data structures, parallel applications, synchronization and concurrency control, software engineering for parallel programs, fault tolerance for parallel systems, and parallel programming and compiling for heterogeneous systems.

Information retrieval (IR) aims at defining systems able to provide a fast and effective content-based access to a large amount of stored information. The aim of an IR system is to estimate the relevance of documents to users' information needs, expressed by means of a query. This is a very difficult and complex task, since it is pervaded with imprecision and uncertainty. Most of the existing IR systems offer a very simple model of IR, which privileges efficiency at the expense of effectiveness. A promising direction to increase the effectiveness of IR is to model the concept of "partially intrinsic" in the IR process and to make the systems adaptive, i.e. able to "learn" the user's concept of relevance. To this aim, the application of soft computing techniques can be of help to obtain greater flexibility in IR systems.

Offers more than 360,000 words and 550,000 translations and explores idiomatic variations in meaning.

This book focuses on big data in business intelligence, data management, machine learning, cloud computing, and smart cities. It also provides an interdisciplinary platform to present and discuss recent innovations, trends, and concerns in the fields of big data and analytics. Big Data Analysis for Green Computing: Concepts and Applications presents the latest technologies and covers the major challenges, issues, and advances of big data and data analytics in green computing. It explores basic as well as high-level concepts. It also includes the use of machine learning using big data and discusses advanced system implementation for smart cities. The book is intended for business and management educators, management researchers, doctoral scholars, university professors, policymakers, and higher academic research organizations.

This book comprises high-quality refereed research papers presented at the Fourth International Conference on Computer Science, Engineering and Education Applications (ICSEEA2021), held in Kyiv, Ukraine, on January 23-24, 2021, organized jointly by the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute", National Aviation University, and the International Research Association of Modern Education and Computer Science. The topics discussed in the book include state-of-the-art papers in computer science, artificial intelligence, engineering techniques, genetic coding systems, deep learning with its medical applications, and knowledge representation with

its applications in education. It is an excellent source of references for researchers, graduate students, engineers, management practitioners, and undergraduate students interested in computer science and their applications in engineering and education.

Schedule of Classes Modeling, Simulation and Optimization of Complex Processes - HPSC 2012 Proceedings of the Fifth International Conference on High Performance Scientific Computing, March 5-9, 2012, Hanoi, Vietnam Springer

In modern electoral processes, Information and Communication Technologies play a crucial role, whether used in voter registration, ballot casting, or processing of results. Securing these systems is a necessary step in ensuring the fairness of the democratic process. Design, Development, and Use of Secure Electronic Voting Systems analyzes current research on the integration of modern technologies with traditional democratic systems, providing a framework for designing and deploying electronic voting systems in any context or society. Stakeholders, researchers, architects, designers, and scholars interested in the use of electronic systems in government processes will use this book to gain a broader understanding of some of the latest advances in this emerging field.

This in-depth technical guide is an essential resource for anyone involved in the development of “smart mobile wireless technology, including devices, infrastructure, and applications. Written by researchers active in both academic and industry settings, it offers both a big-picture introduction to the topic and detailed insights into the technical details underlying all of the key trends. Smart Phone and Next-Generation Mobile Computing shows you how the field has evolved, its real and potential current capabilities, and the issues affecting its future direction. It lays a solid foundation for the decisions you face in your work, whether you’re a manager, engineer, designer, or entrepreneur. Covers the convergence of phone and PDA functionality on the terminal side, and the integration of different network types on the infrastructure side Compares existing and anticipated wireless technologies, focusing on 3G cellular networks and wireless LANs Evaluates terminal-side operating systems/programming environments, including Microsoft Windows Mobile, Palm OS, Symbian, J2ME, and Linux Considers the limitations of existing terminal designs and several pressing application design issues Explores challenges and possible solutions relating to the next phase of smart phone development, as it relates to services, devices, and networks Surveys a collection of promising applications, in areas ranging from gaming to law enforcement to financial processing

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