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ACS/IEEE International Conference on Computer Systems and Applications, 25-29 June 2001, Beirut, Lebanons McGraw-Hill Companies

This book gathers selected papers presented at the 2020 World Conference on Information Systems and Technologies (WorldCIST ' 20), held in Budva, Montenegro, from April 7 to 10, 2020. WorldCIST provides a global forum for researchers and practitioners to present and discuss recent results and innovations, current trends, professional experiences with and challenges regarding various aspects of modern information systems and technologies. The main topics covered are A) Information and Knowledge Management; B) Organizational Models and Information Systems; C) Software and Systems Modeling; D) Software Systems, Architectures, Applications and Tools; E) Multimedia Systems and Applications; F) Computer Networks, Mobility and Pervasive Systems; G) Intelligent and Decision Support Systems; H) Big Data Analytics and Applications; I) Human – Computer Interaction; J) Ethics, Computers & Security; K) Health Informatics; L) Information Technologies in Education; M) Information Technologies in Radiocommunications; and N) Technologies for Biomedical Applications.

Cloud Computing for Machine Learning and Cognitive Applications SPIE-International Society for Optical Engineering

The first textbook to teach students how to build data analytic solutions on large data sets using cloud-based technologies. This is

the first textbook to teach students how to build data analytic solutions on large data sets (specifically in Internet of Things applications) using cloud-based technologies for data storage, transmission and mashup, and AI techniques to analyze this data. This textbook is designed to train college students to master modern cloud computing systems in operating principles, architecture design, machine learning algorithms, programming models and software tools for big data mining, analytics, and cognitive applications. The book will be suitable for use in one-semester computer science or electrical engineering courses on cloud computing, machine learning, cloud programming, cognitive computing, or big data science. The book will also be very useful as a reference for professionals who want to work in cloud computing and data science. Cloud and Cognitive Computing begins with two introductory chapters on fundamentals of cloud computing, data science, and adaptive computing that lay the foundation for the rest of the book. Subsequent chapters cover topics including cloud architecture, mashup services, virtual machines, Docker containers, mobile clouds, IoT and AI, inter-cloud mashups, and cloud performance and benchmarks, with a focus on Google's Brain Project, DeepMind, and X-Lab programs, IBKai HwangM SyNapse, Bluemix programs, cognitive initiatives, and neurocomputers. The book then covers machine learning algorithms and cloud programming software tools and application development, applying the tools in machine learning, social media, deep learning, and cognitive applications. All cloud systems are illustrated with big data and cognitive application examples.

Advanced Computer Architecture IEEE

This concise text is designed to present the recent advances in parallel and distributed architectures and algorithms within an integrated framework. Beginning with an introduction to the basic concepts, the book goes on discussing the basic methods of parallelism exploitation in computation through vector processing, super scalar and VLIW processing, array processing, associative processing, systolic algorithms, and dataflow computation. After introducing interconnection networks, it discusses parallel algorithms for sorting, Fourier transform, matrix algebra, and graph theory. The second part focuses on basics and selected theoretical issues of distributed processing. Architectures and algorithms have been dealt in an integrated way throughout the book. The last chapter focuses on the different paradigms and issues of high performance computing making the reading more interesting. This book is meant for the senior level undergraduate and postgraduate students of computer science and engineering, and information technology. The book is also useful for the

postgraduate students of computer science and computer application.

Scalable Parallel Computing Computational Mechanics

Mastering Cloud Computing is designed for undergraduate students learning to develop cloud computing applications. Tomorrow's applications won't live on a single computer but will be deployed from and reside on a virtual server, accessible anywhere, any time. Tomorrow's application developers need to understand the requirements of building apps for these virtual systems, including concurrent programming, high-performance computing, and data-intensive systems. The book introduces the principles of distributed and parallel computing underlying cloud architectures and specifically focuses on virtualization, thread programming, task programming, and map-reduce programming. There are examples demonstrating all of these and more, with exercises and labs throughout. Explains how to make design choices and tradeoffs to consider when building applications to run in a virtual cloud environment Real-world case studies include scientific, business, and energy-efficiency considerations

Accuracy and Stability of Numerical Algorithms PHI Learning Pvt. Ltd.

This text on high-performance computing includes coverage of the topics: applications; I/O and compilers; scientific computing; data and file management; interconnection networks; compilers; image and signal processing; distributed systems; algorithms; architecture; and parallel programming.

Advanced Computer Architecture, 3e Springer Nature

Accuracy and Stability of Numerical Algorithms gives a thorough, up-to-date treatment of the behavior of numerical algorithms in finite precision arithmetic. It combines algorithmic derivations, perturbation theory, and rounding error analysis, all enlivened by historical perspective and informative quotations. This second edition expands and updates the coverage of the first edition (1996) and includes numerous improvements to the original material. Two new chapters treat symmetric indefinite systems and skew-symmetric systems, and nonlinear systems and Newton's method. Twelve new sections include coverage of additional error bounds for Gaussian elimination, rank revealing LU factorizations, weighted and constrained least squares problems, and the fused multiply-add operation found on some modern computer architectures.

PARALLEL AND DISTRIBUTED COMPUTING : ARCHITECTURES AND ALGORITHMS Tata McGraw-Hill Education

This comprehensive new text from author Kai Hwang covers four important aspects of parallel and distributed computing -- principles, technology, architecture, and programming -- and can be used for several upper-level courses.

The Internet of Things and Big Data Analytics Cengage Learning

This volume gives an overview of the state-of-the-art with respect to the development of all types of parallel computers and their application to a wide range of problem areas. The international conference on parallel computing ParCo97 (Parallel Computing 97) was held in Bonn, Germany from 19 to 22 September 1997. The first conference in this biannual series was held in 1983 in Berlin. Further conferences were held in Leiden (The Netherlands), London (UK), Grenoble (France) and Gent (Belgium). From the outset the aim with the ParCo (Parallel Computing) conferences was to promote the application of parallel computers to solve real life problems. In the case of ParCo97 a new milestone was reached in that more than half of the papers and posters presented were concerned with application aspects. This fact reflects the coming of age of parallel computing. Some 200 papers were submitted to the Program Committee by authors from all over the world. The final programme consisted of four invited papers, 71 contributed scientific/industrial papers and 45 posters. In addition a panel discussion on Parallel Computing and the Evolution of Cyberspace was held. During and after the conference all final contributions were refereed. Only those papers and posters accepted during this final screening process are included in this volume. The practical emphasis of the conference was accentuated by an

industrial exhibition where companies demonstrated the newest developments in parallel processing equipment and software. Speakers from participating companies presented papers in industrial sessions in which new developments in parallel computing were reported.

Advanced Computer Architecture and Parallel Processing Morgan Kaufmann

The first textbook to teach students how to build data analytic solutions on large data sets using cloud-based technologies. This is the first textbook to teach students how to build data analytic solutions on large data sets (specifically in Internet of Things applications) using cloud-based technologies for data storage, transmission and mashup, and AI techniques to analyze this data. This textbook is designed to train college students to master modern cloud computing systems in operating principles, architecture design, machine learning algorithms, programming models and software tools for big data mining, analytics, and cognitive applications. The book will be suitable for use in one-semester computer science or electrical engineering courses on cloud computing, machine learning, cloud programming, cognitive computing, or big data science. The book will also be very useful as a reference for professionals who want to work in cloud computing and data science. Cloud and Cognitive Computing begins with two introductory chapters on fundamentals of cloud computing, data science, and adaptive computing that lay the foundation for the rest of the book. Subsequent chapters cover topics including cloud architecture, mashup services, virtual machines, Docker containers, mobile clouds, IoT and AI, inter-cloud mashups, and cloud performance and benchmarks, with a focus on Google's Brain Project, DeepMind, and X-Lab programs, IBKai HwangM SyNapse, Bluemix programs, cognitive initiatives, and neurocomputers. The book then covers machine learning algorithms and cloud programming software tools and application development, applying the tools in machine learning, social media, deep learning, and cognitive applications. All cloud systems are illustrated with big data and cognitive application examples.

Annual ACM Symposium on Parallel Algorithms and Architectures Elsevier

This book constitutes the refereed post-conference proceedings of the Second BenchCouncil International Federated Intelligent Computing and Block Chain Conferences, FICC 2020, held in Qingdao, China, in October/ November 2020. The 32 full papers and 6 short papers presented were carefully reviewed and selected from 103 submissions. The papers of this volume are organized in topical sections on AI and medical technology; AI and big data; AI and block chain; AI and education technology; and AI and financial technology.

Cybersecurity and Privacy in Cyber Physical Systems CRC Press

This book comprehensively conveys the theoretical and practical aspects of IoT and big data analytics with the solid contributions from practitioners as well as academicians. This book examines and expounds the unique capabilities of the big data analytics platforms in capturing, cleansing and crunching IoT device/sensor data in order to extricate actionable insights. A number of experimental case studies and real-world scenarios are incorporated in this book in order to instigate our book readers. This book Analyzes current research and development in the domains of IoT and big data analytics Gives an overview of latest trends and transitions happening in the IoT data

analytics space Illustrates the various platforms, processes, patterns, and practices for simplifying and streamlining IoT data analytics The Internet of Things and Big Data Analytics: Integrated Platforms and Industry Use Cases examines and accentuates how the multiple challenges at the cusp of IoT and big data can be fully met. The device ecosystem is growing steadily. It is forecast that there will be billions of connected devices in the years to come. When these IoT devices, resource-constrained as well as resource-intensive, interact with one another locally and remotely, the amount of multi-structured data generated, collected, and stored is bound to grow exponentially. Another prominent trend is the integration of IoT devices with cloud-based applications, services, infrastructures, middleware solutions, and databases. This book examines the pioneering technologies and tools emerging and evolving in order to collect, pre-process, store, process and analyze data heaps in order to disentangle actionable insights.

Big-Data Analytics for Cloud, IoT and Cognitive Computing CRC Press

Annotation The proceedings from this June 2001 conference in Beirut include 94 papers on artificial intelligence, databases and data engineering, distributed computing, software engineering, and web engineering. Specific attention is given to issues like: genetic programming, machine learning, problem solving, pattern recognition, and neural nets; multimedia databases, database structures, and database processing; analysis, techniques, and synthesis of distributed systems; software metrics, testing, management, programming languages, and reliability; and management and design of web applications. Author index only. c. Book News Inc.

Analysis and Design of Scalable Parallel Algorithms for Scientific Computing MIT Press

"The Encyclopedia of Microcomputers serves as the ideal companion reference to the popular Encyclopedia of Computer Science and Technology. Now in its 10th year of publication, this timely reference work details the broad spectrum of microcomputer technology, including microcomputer history; explains and illustrates the use of microcomputers throughout academe, business, government, and society in general; and assesses the future impact of this rapidly changing technology."

IPPS/SPDP 1999 : Proceedings : April 12-16, 1999, San Juan, Puerto Rico Tata McGraw-Hill Education

The salient features of the book are as follows: • Hybrid Elements including topics like Memory organization, Binary representation of data, Computer arithmetic Software for parallel programming, tagged across some chapters through Quick Response (QR) Codes • Learning objectives tagged across chapters: • Emphasis on parallelism, scalability and programmability aspects of computer architecture. It presents the analysis of scalability • Issues related to instruction level parallelism, processor clock speed, and power consumption defined according to the recent developments in processor design • Inclusion of important topics like processor design, control unit, input and output, parallelis • erial Bus, Real systems– IBM, Hitachi, Cray, Intel, UltraSparc, Blue Gene (from IBM), Cray XT series, XT5 and XMT, Fujitsu, DEC, MasPar, Tera, Stardent Topical inclusions include: • Pipelining hazards, data hazards and control hazards • PCI Bus and PCI Express • Interconnection networks and cluster computers • MPI, openMP, PVM, Pthreads • Multicore processors • Impact of technology • Stream processing • Programming language Chapel • Updated coverage of recent processors and systems: Intel Pentium IV, Sun UltraSparc, Blue Gene (from IBM), Cray XT Series, XT5 and XMT Useful pedagogical features include the following: • Plenty of background material on OLC • Diagrams illustrating the basic concepts: 320 • A good number of case studies and: 6 • Solved problems: 114 • Exercise and review problems at the end of chapters: 251 • Tables: 40 • Solved Examples: 114 • Exercise Problems: 251

Cloud Computing for Machine Learning and Cognitive Applications

John Wiley & Sons

Provide today's learners with a solid understanding of how to audit accounting information systems with the innovative INFORMATION TECHNOLOGY AUDITING, 4E. New and expanded coverage of enterprise systems and fraud and fraud detection topics, such as continuous online auditing, help learners focus on the key topics they need for future success. Readers gain a strong background in traditional auditing, as well as a complete understanding of auditing today's accounting information systems in the contemporary business world. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Water Wave Mechanics For Engineers And Scientists Advanced Computer Architecture, 3e

Computer architecture deals with the physical configuration, logical structure, formats, protocols, and operational sequences for processing data, controlling the configuration, and controlling the operations over a computer. It also encompasses word lengths, instruction codes, and the interrelationships among the main parts of a computer or group of computers. This two-volume set offers a comprehensive coverage of the field of computer organization and architecture.

Distributed and Cloud Computing MIT Press

Advanced Computer Architecture, 3eMcGraw-Hill Education

14-15 October, 1997, Pittsburgh, Pennsylvania McGraw-Hill Science, Engineering & Mathematics

This book outlines a set of issues that are critical to all of parallel architecture--communication latency, communication bandwidth, and coordination of cooperative work (across modern designs). It describes the set of techniques available in hardware and in software to address each issues and explore how the various techniques interact.

From Parallel Processing to the Internet of Things SIAM

Cybersecurity and Privacy in Cyber-Physical Systems collects and reports on recent high-quality research that addresses different problems related to cybersecurity and privacy in cyber-physical systems (CPSs). It Presents high-quality contributions addressing related theoretical and practical aspects Improves the reader’s awareness of cybersecurity and privacy in CPSs Analyzes and presents the state of the art of CPSs, cybersecurity, and related technologies and methodologies Highlights and discusses recent developments and emerging trends in cybersecurity and privacy in CPSs Proposes new models, practical solutions, and technological advances related to cybersecurity and privacy in CPSs Discusses new cybersecurity and privacy models, prototypes, and protocols for CPSs This comprehensive book promotes high-quality research by bringing together researchers and experts in CPS security and privacy from around the world to share their knowledge of the different aspects of CPS security. Cybersecurity and Privacy in Cyber-Physical Systems is ideally suited for policymakers, industrial engineers, researchers, academics, and professionals seeking a thorough understanding of the principles of cybersecurity and privacy in CPSs. They will learn about promising solutions to these research problems and identify unresolved and challenging problems for their own research. Readers will also have an overview of CPS cybersecurity and privacy design.

McGraw-Hill Education

The definitive guide to successfully integrating social, mobile, Big-Data analytics, cloud and IoT principles and technologies The main goal of this

book is to spur the development of effective big-data computing operations on smart clouds that are fully supported by IoT sensing, machine learning and analytics systems. To that end, the authors draw upon their original research and proven track record in the field to describe a practical approach integrating big-data theories, cloud design principles, Internet of Things (IoT) sensing, machine learning, data analytics and Hadoop and Spark programming. Part 1 focuses on data science, the roles of clouds and IoT devices and frameworks for big-data computing. Big data analytics and cognitive machine learning, as well as cloud architecture, IoT and cognitive systems are explored, and mobile cloud-IoT-interaction frameworks are illustrated with concrete system design examples. Part 2 is devoted to the principles of and algorithms for machine learning, data analytics and deep learning in big data applications. Part 3 concentrates on cloud programming software libraries from MapReduce to Hadoop, Spark and TensorFlow and describes business, educational, healthcare and social media applications for those tools. The first book describing a practical approach to integrating social, mobile, analytics, cloud and IoT (SMACT) principles and technologies Covers theory and computing techniques and technologies, making it suitable for use in both computer science and electrical engineering programs Offers an extremely well-informed vision of future intelligent and cognitive computing environments integrating SMACT technologies Fully illustrated throughout with examples, figures and approximately 150 problems to support and reinforce learning Features a companion website with an instructor manual and PowerPoint slides www.wiley.com/go/hwangIOT Big-Data Analytics for Cloud, IoT and Cognitive Computing satisfies the demand among university faculty and students for cutting-edge information on emerging intelligent and cognitive computing systems and technologies. Professionals working in data science, cloud computing and IoT applications will also find this book to be an extremely useful working resource.