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Edited by a panel of experts, this book fills a gap in the existing literature by comprehensively covering system, processing, and application aspects of biometrics, based on a wide variety of biometric traits. The book provides an extensive survey of biometrics theory, methods, and applications, making it an indispensable source of information for researchers, security experts, policy makers, engineers, practitioners, and graduate students. The book's wide and in-depth coverage of biometrics enables readers to build a strong, fundamental understanding of theory and methods, and provides a foundation for solutions to many of today's most interesting and challenging biometric problems. Biometric traits covered: Face, Fingerprint, Iris, Gait, Hand Geometry, Signature, Electrocardiogram (ECG), Electroencephalogram (EEG), physiological biometrics. Theory, Methods and Applications covered: Multilinear Discriminant Analysis, Neural Networks for biometrics, classifier design, biometric fusion, Event-Related Potentials, person-specific characteristic feature selection, image and video-based face, recognition/verification, near-infrared face recognition, elastic graph matching, super-resolution of facial images, multimodal solutions, 3D approaches to biometrics, facial aging models for recognition, information theory approaches to biometrics, biologically-inspired methods, biometric encryption, decision-making support in biometric systems, privacy in biometrics.

The physical design flow of any project depends upon the size of the design, the technology, the number of designers, the clock frequency, and the time to do the design. As technology advances and design-styles change, physical design flows are constantly reinvented as traditional phases are removed and new ones are added to accommodate changes in This book presents the latest techniques for machine learning based data analytics on IoT edge devices. A comprehensive literature review on neural network compression and machine learning accelerator is presented from both algorithm level optimization and hardware architecture optimization. Coverage focuses on shallow and deep neural network with real applications on smart buildings. The authors also discuss hardware architecture design with coverage focusing on both CMOS based computing systems and the new emerging Resistive Random-Access Memory (RRAM) based systems. Detailed case studies such as indoor positioning, energy management and intrusion detection are also presented for smart buildings. The huge and growing demand for wireless communication systems has spurred a massive effort on the parts of the computer science and electrical engineering communities to formulate ever-more efficient protocols and algorithms. Written by a respected figure in the field, Handbook of Wireless Networks and Mobile Computing is the first book to cover the subject from a computer scientist's perspective. It provides detailed practical coverage of an array of key topics, including cellular networks, channel assignment, queuing, routing, power optimization, and much more.

Advanced Technologies and Solutions, Second Edition

Programming, Interfacing & Using the PC's Parallel Printer Port

Observations Made at the Royal Observatory, Greenwich in the Year ... in Astronomy, Magnetism and Meteorology

Theoretical Foundations and Applications

Recent Trends in Image Processing and Pattern Recognition

Simulation of Communication Systems

This book is a collection of research papers in optimization and approximation dedicated to Professor Minyi Yue of the Institute of Applied Mathematics, Beijing, China. The papers provide a broad spectrum of research on optimization problems, including scheduling, location, assignment, linear and nonlinear programming problems as well as problems in molecular biology. The emphasis of the book is on algorithmic aspects of research work in optimization. Special attention is paid to approximation algorithms, including heuristics for combinatorial approximation problems, approximation algorithms for global optimization problems, and applications of approximations in real problems. The work provides the state of the art for researchers in mathematical programming, operations research, theoretical computer science and applied mathematics.

This book presents a collection of high-quality research by leading experts in computer vision and its applications. Each chapter can be read independently and discusses the principles of a specific topic, reviews up-to-date techniques, discusses outcomes, and highlights the challenges and future directions. As such the book explores the latest trends in fashion design processes, facial features detection, visual odometry, transfer learning, face recognition, feature description, plankton classification, video face alignment, video searching, and object segmentation. It is intended for postgraduate students, researchers, scholars and developers who are interested in computer vision and connected research disciplines, and is also suitable for senior undergraduate students who are taking advanced courses in related topics. However, it is also a valuable reference resource for practitioners from industry who want to keep abreast of recent developments in this exciting and profitable research field.

This three-volume set (CCIS 1367-1368) constitutes the refereed proceedings of the 5th International Conference on Computer Vision and Image Processing, CVIP 2020, held in Prayagraj, India, in December 2020. Due to the COVID-19 pandemic the conference was partially held online. The 134 papers were carefully reviewed and selected from 352 submissions. The papers present recent research on such topics as biometrics, forensics, content protection, image enhancement/super-resolution/restoration, motion and tracking, image or video retrieval, image, image/video processing for autonomous video scene understanding, human-computer interaction, document image analysis, face, iris, emotion, sign language recognition, 3D image/video processing, action and event detection/recognition, medical image and video analysis, video analysis, human GAIT analysis, remote sensing, and more.

Circuits for Emerging Technologies Beyond CMOS New exciting opportunities are abounding in the field of body area networks, wireless communications, data networking, and optical imaging. In response to these developments, top-notch international experts in industry and academia present Circuits at the Nanoscale: Communications, Imaging, and Sensing. This volume is unique in both its scope and its focus, addresses the state-of-the-art in integrated circuit design in the context of emerging systems. A must for anyone serious about circuit design for future technologies, this book discusses emerging materials that take system performance beyond standard CMOS. These include Silicon on Insulator (SOI), Silicon Germanium (SiGe), Indium Phosphide (InP). Three-dimensional CMOS integration and co-integration with Microelectromechanical (MEMS) technology and radiation sensors are described as well. Topics in the book are divided into comprehensive sections on design techniques, mixed-signal CMOS circuits, circuits for communications, and circuits for imaging and sensing. Dr.

Iniewski is a director at CMOS Emerging Technologies, Inc., a consulting company in Vancouver, British Columbia. His research interests are in VLSI circuits for medical applications. He has published over 100 research papers in international journals and conferences, and he holds 18 international patents granted in the United States, Canada, France, Germany, and Japan. In this volume, he has assembled the contributions of over 60 world-renowned experts who are at the top of the world of circuit design, advancing the bank of knowledge for all who work in this exciting and burgeoning area.

Hardware/Software Co-Design

Communications, Imaging, and Sensing

Compact and Fast Machine Learning Accelerator for IoT Devices

Digital Integrated Circuits

Bell Laboratories Talks and Papers

Handbook of Wireless Networks and Mobile Computing

This two-volume set constitutes the refereed proceedings of the Third International Conference on Recent Trends in Image Processing and Pattern Recognition (RTIP2R) 2020, held in Aurangabad, India, in January 2020. The 78 revised full papers presented were carefully reviewed and selected from 329 submissions.

The papers are organized in topical sections in the two volumes. Part I: Computer vision and applications; Data science and machine learning; Document understanding and Recognition. Part II: Healthcare informatics and medical imaging; Image analysis and recognition; Signal processing and pattern recognition; Image and signal processing in Agriculture.

Remote Sensing Image Fusion: A Practical Guide gives an introduction to remote sensing image fusion providing an overview on the sensors and applications. It describes data selection, application requirements and the choice of a suitable image fusion technique. It comprises a diverse selection of successful image fusion cases that are relevant to other users and other areas of interest around the world. The book helps newcomers to obtain a quick start into the practical value and benefits of multi-sensor image fusion. Experts will find this book useful to obtain an overview on the state of the art and understand current constraints that need to be solved in future research efforts. For industry professionals the book can be a great introduction and basis to understand multisensor remote sensing image exploitation and the development of commercialized image fusion software from a practical perspective. The book concludes with a chapter on current trends and future developments in remote sensing image fusion. Along with the book, RSIF website provides additional up-to-date information in the field.

We are immersed in the so-called digital energy network, continuously introducing new technological advances for a better way of life. Numerous emerging words are in the spotlight, namely: Internet of Things (IoT), Big Data, Smart Cities, Smart Grid, Industry 4.0, etc. To achieve this formidable goal, systems should work more efficiently, and this fact inevitably leads to power quality (PQ) assurance. Apart from its economic losses, a bad PQ implies serious risks for machines, and consequently for people. Many researchers are endeavoring to develop new analysis techniques, instruments, measurement methods, and new indices and norms that match and fulfil the requirements regarding the current operation of the electrical network. This book offers a compilation of the some recent advances in this field. The chapters range from computing issues to technological implementations, going through event detection strategies and new indices and measurement methods that contribute significantly to the advancement of PQ analysis. Experiments have been developed within the frames of research units and projects, and deal with real data from industry and public buildings. Human beings have an unavoidable commitment with sustainability, which implies adapting PQ monitoring techniques to our dynamic world, defining a digital and smart concept of quality for electricity.

Concurrent design, or co-design of hardware and software is extremely important for meeting design goals, such as high performance, that are the key to commercial competitiveness. Hardware/Software Co-Design covers many aspects of the subject, including methods and examples for designing: (1) general purpose and embedded computing systems based on instruction set processors; (2) telecommunication systems using general purpose digital signal processors as well as application specific instruction set processors; (3) embedded control systems and applications to automotive electronics. The book also surveys the areas of emulation and prototyping systems with field programmable gate array technologies, hardware/software synthesis and verification, and industrial design trends. Most contributions emphasize the design methodology, the requirements and state of the art of computer aided co-design tools, together with current design examples.

18th International Conference, DISC 2004, Amsterdam, The Netherlands, October 4-8, 2004. Proceedings

5th International Conference, CVIP 2020, Prayagraj, India, December 4-6, 2020, Revised Selected Papers, Part III

Encyclopedia of Software Engineering Three-Volume Set (Print)

Smart Grids

Parallel Port Complete

Information Systems and Information Technology

Exponential improvement in functionality and performance of digital integrated circuits has revolutionized the way we live and work. The continued scaling down of MOS transistors has broadened the scope of use for circuit technology to the point that texts on the topic are generally lacking after a few years. The second edition of Digital Integrated Circuits: Analysis and Design focuses on timeless principles with a modern interdisciplinary view that will serve integrated circuits engineers from all disciplines for years to come. Providing a revised instructional reference for engineers involved with Very Large Scale Integrated Circuit design and fabrication, this book delves into the dramatic advances in the field, including new applications and changes in the physics of operation made possible by relentless miniaturization. This book was conceived in the versatile spirit of the field to bridge a void that had existed between books on transistor electronics and those covering VLSI design and

fabrication as a separate topic. Like the first edition, this volume is a crucial link for integrated circuit engineers and those studying the field, supplying the cross-disciplinary connections they require for guidance in more advanced work. For pedagogical reasons, the author uses SPICE level 1 computer simulation models but introduces BSIM models that are indispensable for VLSI design. This enables users to develop a strong and intuitive sense of device and circuit design by drawing direct connections between the hand analysis and the SPICE models. With four new chapters, more than 200 new illustrations, numerous worked examples, case studies, and support provided on a dynamic website, this text significantly expands concepts presented in the first edition.

"Addressing the ongoing quest for teaching excellence in an increasingly technological society, the information presented in this volume addresses how to effectively implement teaching technologies across disciplinary boundaries. The scholarly dimensions of belief, inquiry, argument, and reflection in information systems are presented with attention to educational theories of metacognition, technology literacy, and community informatics. Training for e-business and public agency work are discussed to better equip instructors for the distinctive information needs of these sectors."

This three volume book set constitutes the proceedings of the Third International Conference on Machine Learning for Cyber Security, ML4CS 2020, held in Xi'an, China in October 2020. The 118 full papers and 40 short papers presented were carefully reviewed and selected from 360 submissions. The papers offer a wide range of the following subjects: Machine learning, security, privacy-preserving, cyber security, Adversarial machine Learning, Malware detection and analysis, Data mining, and Artificial Intelligence. The field of computational intelligence has grown tremendously over that past five years, thanks to evolving soft computing and artificial intelligent methodologies, tools and techniques for envisaging the essence of intelligence embedded in real life observations. Consequently, scientists have been able to explain and understand real life processes and practices which previously often remain unexplored by virtue of their underlying imprecision, uncertainties and redundancies, and the unavailability of appropriate methods for describing the incompleteness and vagueness of information represented. With the advent of the field of computational intelligence, researchers are now able to explore and unearth the intelligence, otherwise insurmountable, embedded in the systems under consideration. Computational Intelligence is now not limited to only specific computational fields, it has made inroads in signal processing, smart manufacturing, predictive control, robot navigation, smart cities, and sensor design to name a few. Recent Trends in Computational Intelligence Enabled Research: Theoretical Foundations and Applications explores the use of this computational paradigm across a wide range of applied domains which handle meaningful information. Chapters investigate a broad spectrum of the applications of computational intelligence across different platforms and disciplines, expanding our knowledge base of various research initiatives in this direction. This volume aims to bring together researchers, engineers, developers and practitioners from academia and industry working in all major areas and interdisciplinary areas of computational intelligence, communication systems, computer networks, and soft computing. Provides insights into the theory, algorithms, implementation, and application of computational intelligence techniques Covers a wide range of applications of deep learning across various domains which are researching the applications of computational intelligence Investigates novel techniques and reviews the state-of-the-art in the areas of machine learning, computer vision, soft computing techniques

Coding and Signal Processing for Magnetic Recording Systems

Mixed Analog-Digital VLSI Devices and Technology

Analysis for Power Quality Monitoring

Computing Handbook, Third Edition

Proceedings of the 7th Euro-China Conference on Intelligent Data Analysis and Applications, May 29-31, 2021, Hangzhou, China

Nanoelectronic Device Applications Handbook

The latest edition features a new chapter on implementation and operation of an integrated smart grid with updates to multiple chapters throughout the text. New sections on Internet of things, and how they relate to smart grids and smart cities, have also been added to the book. It describes the impetus for change in the electric utility industry and discusses the business drivers, benefits, and market outlook of the smart grid initiative. The book identifies the technical framework of enabling technologies and smart solutions and describes the role of technology developments and coordinated standards in smart grid, including various initiatives and organizations helping to drive the smart grid effort. With chapters written by leading experts in the field, the text explains how to plan, integrate, implement, and operate a smart grid.

Improve your circuit-design potential with this expert guide to the devices and technology used in mixed analog-digital VLSI chips for such high-volume applications as hard-disk drives, wireless telephones, and consumer electronics. The book provides you with a critical understanding of device models, fabrication technology, and layout as they apply to mixed analog-digital circuits. You will learn about the many device-modeling requirements for analog work, as well as the pitfalls in models used today for computer simulators such as Spice. Also included is information on fabrication technologies developed specifically for mixed-signal VLSI chips, plus guidance on the layout of mixed analog-digital chips for a high degree of analog-device matching and minimum digital-to-analog interference. This reference book features an intuitive introduction to MOSFET operation that will enable you to view with insight any MOSFET model — besides thorough discussions on valuable large-signal and small-signal models. Filled with practical information, this first-of-its-kind book will help you grasp the nuances of mixed-signal VLSI-device models and layout that are crucial to the design of high-performance chips. Contents: Introduction: Mixed Analog-Digital Chips The MOSFET: Introduction and Qualitative View MOSFET DC Modeling MOSFET Small-Signal Modeling Technology and Available Circuit

Components Layout Appendices: Additional MOS Transistor Modeling Information A Set of Benchmark Tests for Evaluating MOSFET Models for Analog Design A Sample Spice Input File Readership: Upper-level undergraduates, graduate students, researchers and practising engineers in electrical and electronic engineering. Keywords:

Spanning the multi-disciplinary scope of information technology, the Encyclopedia of Information Systems and Technology draws together comprehensive coverage of the inter-related aspects of information systems and technology. The topics covered in this encyclopedia encompass internationally recognized bodies of knowledge, including those of The IT BOK, the Chartered Information Technology Professionals Program, the International IT Professional Practice Program (British Computer Society), the

Core Body of Knowledge for IT Professionals (Australian Computer Society), the International Computer Driving License Foundation (European Computer Driving License Foundation), and the Guide to the Software Engineering Body of Knowledge. Using the universally recognized definitions of IT and information systems from these recognized bodies of knowledge, the encyclopedia brings together the information that students, practicing professionals, researchers, and academicians need to keep their knowledge up to date. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: [?] Citation tracking and alerts [?] Active reference linking [?] Saved searches and marked lists [?] HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk Provides advice for Visual Basic programmers attempting to interface hardware through standard ports.

6th International Conference, SWQD 2014, Vienna, Austria, January 14-16, 2014, Proceedings

Theory, Methods, and Applications

Current Issues in IT Education

Future Information Technology

A Practical Guide

Multimedia Services in Intelligent Environments

In recent years, power electronics have been intensely contributing to the development and evolution of new structures for the processing of energy. They can be used in a wide range of applications ranging from power systems and electrical machines to electric vehicles and robot arm drives. In conjunction with the evolution of microprocessors and advanced control theories, power electronics are playing an increasingly essential role in our society. Thus, in order to cope with the obstacles lying ahead, this book presents a collection of original studies and modeling methods which were developed and published in the field of electrical energy conditioning and control by using circuits and electronic devices, with an emphasis on power applications and industrial control. Researchers have contributed 19 selected and peer-reviewed papers covering a wide range of topics by addressing a wide variety of themes, such as motor drives, AC-DC and DC-DC converters, multilevel converters, varistors, and electromagnetic compatibility, among others. The overall result is a book that represents a cohesive collection of inter-/multidisciplinary works regarding the industrial applications of power electronics. Rapid advances in recording materials, read/write heads, and mechanical designs over the last 15 years have led to the need for more complicated signal processing, coding, and modulation algorithms for the hard disk drive "read channel." Today, the challenges in implementing new architectures and designs for the read channel have been pushed to the

Simulation of Communication Systems Springer

Explore the multidisciplinary nature of complex networks through machine learning techniques Statistical and Machine Learning Approaches for Network Analysis provides an accessible framework for structurally analyzing graphs by bringing together known and novel approaches on graph classes and graph measures for classification. By providing different approaches based on experimental data, the book uniquely sets itself apart from the current literature by exploring the application of machine learning techniques to various types of complex networks. Comprised of chapters written by internationally renowned researchers in the field of interdisciplinary network theory, the book presents current and classical methods to analyze networks statistically. Methods from machine learning, data mining, and information theory are strongly emphasized throughout. Real data sets are used to showcase the discussed methods and topics, which include: A survey of computational approaches to reconstruct and partition biological networks An introduction to complex networks—measures, statistical properties, and models Modeling for evolving biological networks The structure of an evolving random bipartite graph Density-based enumeration in structured data Hyponym extraction employing a weighted graph kernel Statistical and Machine Learning Approaches for Network Analysis is an excellent supplemental text for graduate-level, cross-disciplinary courses in applied discrete mathematics, bioinformatics, pattern recognition, and computer science. The book is also a valuable reference for researchers and practitioners in the fields of applied discrete mathematics, machine learning, data mining, and biostatistics.

Theories and Applications

Remote Sensing Image Fusion

Encyclopedia of Information Systems and Technology - Two Volume Set

1982 Census of Retail Trade: Geographic area statistics. pt. 1. United States, Alabama

Third International Conference, ML4CS 2020, Guangzhou, China, October 8-10, 2020, Proceedings, Part II

Advances in Optimization and Approximation

This book constitutes the refereed proceedings of the 18th International Conference on Distributed Computing, DISC 2004, held in Amsterdam, The Netherlands, in October 2004. The 31 revised full papers presented together with an extended abstract of an invited lecture and an eulogy for Peter Ruzicka were carefully reviewed and selected from 142 submissions. The entire scope of current issues in distributed computing is addressed, ranging from foundational and theoretical topics to algorithms and systems issues to applications in various fields.

KES International (KES) is a worldwide organisation that provides a professional community and association for researchers, originally in the discipline of Knowledge Based and Intelligent Engineering Systems, but now extending into other related areas. Through this, KES provides its members with opportunities for publication and beneficial interaction. The focus of KES is research and technology transfer in the area of Intelligent Systems, i.e. computer-based software systems that operate in a manner analogous to the human brain, in order to perform advanced tasks. Recently KES has started to extend its area of interest to encompass the contribution that intelligent systems can make to sustainability and renewable energy, and also the knowledge transfer, innovation and enterprise agenda. Involving several thousand researchers, managers and engineers drawn from universities and companies world-wide, KES is in an excellent position to facilitate international research co-

operation and generate synergy in the area of artificial intelligence applied to real-world 'Smart' systems and the underlying related theory. The KES annual conference covers a broad spectrum of intelligent systems topics and attracts several hundred delegates from a range of countries round the world. KES also organises symposia on specific technical topics, for example, Agent and Multi Agent Systems, Intelligent Decision Technologies, Intelligent Interactive Multimedia Systems and Services, Sustainability in Energy and Buildings and Innovations through Knowledge Transfer. KES is responsible for two peer-reviewed journals, the International Journal of Knowledge based and Intelligent Engineering Systems, and Intelligent Decision Technologies: an International Journal.

Simulation may be defined as the discipline whose objective is to imitate one or more aspects of reality in a way that is as close to that reality as possible; indeed, an apt synonym that is gaining some currency is artificial reality. Under this definition, simulation is a very old discipline. Probably the first applications of simulation were to scale models of various types of dynamical structures or mechanical devices. Man has always looked for ways to "try things out" before building the real thing; this is the motivation behind any form of simulation. Thus, simulation of communication systems is concerned with imitating some aspects of the behavior of communication systems. It is implicit in our use of simulation that the medium (so to speak) for carrying it out is the digital computer. Computer-based modeling and simulation of communication systems has only developed in the last 20 years or so, since the advent of modern digital computers. A variety of modeling and simulation techniques have been developed and described in widely scattered journals, but until now there has not been a single volume devoted to the subject. We have tried to provide a unified framework that describes both the disciplines involved and the methods of modeling and simulating communication systems and subsystems. In the electronic era, the first type of computer simulation, in today's use of the term, took shape in the form of analog computers.

VLSI Design Environments investigates design alternatives such as object oriented data modelling. The difficulty of automating chip architecture designs is caused by the complexity of the problem. The explosion of design decisions make a heuristic approach necessary. PLAYOUT aims at the solution of system problems based on hierarchy, top-down planning, silicon compiler presentations, advances in encoding logic synthesis and a microarchitectre and logic optimization system. PLAYOUT supports the physical design from entering the structure of digital systems to the generation of the mask. The concept for autonomous tools with a clear interface to the network description and the simple interface to the graphics is presented. This enables the designer to have a great influence on the configuration of the placement of the schematic diagram. Substantial progress is being made in behavioural and logic synthesis, both of which depend upon specifications.

Handbook of Algorithms for Physical Design Automation

Third International Conference, RTIP2R 2020, Aurangabad, India, January 3-4, 2020, Revised Selected Papers, Part I

VLSI Design Environments

Industrial Applications of Power Electronics

Statistical and Machine Learning Approaches for Network Analysis

With breadth and depth of coverage, the Encyclopedia of Computer Science and Technology, Second Edition has a multi-disciplinary scope, drawing together comprehensive coverage of the inter-related aspects of computer science and technology. The topics covered in this encyclopedia include: General and reference Hardware Computer systems organization Networks Software and its engineering Theory of computation Mathematics of computing Information systems Security and privacy Human-centered computing Computing methodologies Applied computing Professional issues Leading figures in the history of computer science The encyclopedia is structured according to the ACM Computing Classification System (CCS), first published in 1988 but subsequently revised in 2012. This classification system is the most comprehensive and is considered the de facto ontological framework for the computing field. The encyclopedia brings together the information and historical context that students, practicing professionals, researchers, and academicians need to have a strong and solid foundation in all aspects of computer science and technology. This book is intended as a graduate/post graduate level textbook for courses on high-speed optical networks as well as computer networks. The ten chapters cover basic principles of the technology as well as latest developments and further discuss network security, survivability, and reliability of optical networks and priority schemes used in wavelength routing. This book also goes on to examine Fiber To The Home (FTTH) standards and their deployment and research issues and includes examples in all the chapters to aid the understanding of problems and solutions. Presents advanced concepts of optical network devices Includes examples and exercises in all the chapters of the book to aid the understanding of basic problems and solutions for undergraduate and postgraduate students Discusses optical ring metropolitan area networks and queuing system and its interconnection with other networks Discusses routing and wavelength assignment Examines restoration schemes in the survivability of optical networks The book is a collection of high-quality research papers presented at 7th Euro-China Conference on Intelligent Data Analysis and Applications, hosted by Communication University of Zhejiang, China and technically co-sponsored by Shandong University of Science and Technology, China; Zhejiang Lab, China; and Fujian University of Technology, China. The book covers areas like intelligent data analysis, computational intelligences, signal processing, and all associated applications of artificial intelligence.

Computing Handbook, Third Edition: Information Systems and Information Technology demonstrates

the richness and breadth of the IS and IT disciplines. The second volume of this popular handbook explores their close links to the practice of using, managing, and developing IT-based solutions to advance the goals of modern organizational environments. Established leading experts and influential young researchers present introductions to the current status and future directions of research and give in-depth perspectives on the contributions of academic research to the practice of IS and IT development, use, and management. Like the first volume, this second volume describes what occurs in research laboratories, educational institutions, and public and private organizations to advance the effective development and use of computers and computing in today's world. Research-level survey articles provide deep insights into the computing discipline, enabling readers to understand the principles and practices that drive computing education, research, and development in the twenty-first century.

Encyclopedia of Computer Science and Technology

Product-Focused Software Process Improvement

Distributed Computing

Analysis and Design, Second Edition

Advances in Intelligent Systems and Computing

Circuits at the Nanoscale

This book constitutes the refereed proceedings of the 7th International Conference on Product-Focused Software Process Improvement, PROFES 2006, held in Amsterdam, June 2006. The volume presents 26 revised full papers and 12 revised short papers together with 6 reports on workshops and tutorials. The papers constitute a balanced mix of academic and industrial aspects, organized in topical sections on decision support, embedded software and system development, measurement, process improvement, and more.

Nanoelectronic Device Applications Handbook gives a comprehensive snapshot of the state of the art in nanodevices for nanoelectronics applications. Combining breadth and depth, the book includes 68 chapters on topics that range from nano-scaled complementary metal-oxide-semiconductor (CMOS) devices through recent developments in nano capacitors and AlGaAs/GaAs devices. The contributors are world-renowned experts from academia and industry from around the globe. The handbook explores current research into potentially disruptive technologies for a post-CMOS world. These include: Nanoscale advances in current MOSFET/CMOS technology Nano capacitors for applications such as electronics packaging and humidity sensors Single electron transistors and other electron tunneling devices Quantum cellular automata and nanomagnetic logic Memristors as switching devices and for memory Graphene preparation, properties, and devices Carbon nanotubes (CNTs), both single CNT and random network Other CNT applications such as terahertz, sensors, interconnects, and capacitors Nano system architectures for reliability Nanowire device fabrication and applications Nanowire transistors Nanodevices for spintronics The book closes with a call for a new generation of simulation tools to handle nanoscale mechanisms in realistic nanodevice geometries. This timely handbook offers a wealth of insights into the application of nanoelectronics. It is an invaluable reference and source of ideas for anyone working in the rapidly expanding field of nanoelectronics.

Software engineering requires specialized knowledge of a broad spectrum of topics, including the construction of software and the platforms, applications, and environments in which the software operates as well as an understanding of the people who build and use the software. Offering an authoritative perspective, the two volumes of the Encyclopedia of Software Engineering cover the entire multidisciplinary scope of this important field. More than 200 expert contributors and reviewers from industry and academia across 21 countries provide easy-to-read entries that cover software requirements, design, construction, testing, maintenance, configuration management, quality control, and software engineering management tools and methods. Editor Phillip A. Laplante uses the most universally recognized definition of the areas of relevance to software engineering, the Software Engineering Body of Knowledge (SWEBOK®), as a template for organizing the material. Also available in an electronic format, this encyclopedia supplies software engineering students, IT professionals, researchers, managers, and scholars with unrivaled coverage of the topics that encompass this ever-changing field. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

This two-volume-set constitutes the refereed proceedings of the 6th International Conference on Future Information Technology, FutureTech 2011, held in Crete, Greece, in June 2011. The 123 revised full papers presented in both volumes were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on future information technology, IT service and cloud computing; social computing, network, and services; forensics for future generation communication environments; intelligent transportation systems and applications; multimedia and semantic technologies; information science and technology.

Recent Advances in Computer Vision

NBS Special Publication

Integrated Systems

Biometrics

Advances in Optical Networks and Components

7th International Conference, PROFES 2006, Amsterdam, The Netherlands, June 12-14, 2006,

Proceedings

This book constitutes the refereed proceedings of the 6th Software Quality Days Conference (SWQD) held in Vienna, Austria, in January 2014. This professional symposium and conference offers a range of comprehensive and valuable opportunities for advanced professional training, new ideas and networking with a series of keynote speeches, professional lectures, exhibits and tutorials. The four scientific full papers accepted for SWQD were each peer reviewed by three or more reviewers and selected out of 24 high-quality submissions. Further, one keynote and ten short papers on promising research directions were also presented and included in order to spark discussions between researchers and practitioners. The papers are organized into topical sections on software process improvement and measurement, requirements management, value-based software engineering, software and systems testing, automation-supported testing and quality assurance and collaboration.

Computer Vision and Image Processing

Machine Learning for Cyber Security

Recent Trends in Computational Intelligence Enabled Research

Software Quality. Model-Based Approaches for Advanced Software and Systems Engineering

6th International Conference on Future Information Technology, FutureTech 2011, Crete, Greece, June 28-30, 2011. Proceedings, Part II