Intelligent Power Supply Design Solutions | c00d72cc556c26f792a9eb69155d5270

Intelligent Environments 2016

Intelligent Sensor Design Using the Microchip dsPIC This book gathers the most recent developments in fuzzy & intelligence systems and real complex systems presented at INFUS 2020, held in Istanbul on July 21–23, 2020. The INFUS conferences are a well-established international research forum to advance the foundations and applications of intelligent and fuzzy systems, computational intelligence, and soft computing, highlighting studies on fuzzy & intelligence systems and real complex systems at universities and international research institutions. Covering a range of topics, including the theory and applications of fuzzy set extensions such as intuitionistic fuzzy sets, hesitant fuzzy sets, spherical fuzzy sets, and fuzzy decision-making; machine learning; risk assessment; heuristics; and clustering, the book is a valuable resource for academics, M.Sc. and Ph.D. students, as well as managers and engineers in industry and the service sectors.

Intelligent and Fuzzy Techniques: Smart and Innovative Solutions Electrical energy usage is increasing every year due to population growth and new forms of consumption. As such, it is increasingly imperative to research methods of energy control and safe use. Security Solutions and Applied Cryptography in Smart Grid Communications is a pivotal reference source for the latest research on the development of smart grid technology and best practices of utilization. Featuring extensive coverage across a range of relevant perspectives and topics, such as threat detection,

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Intelligent Knowledge-Based Systems

Computer Techniques, Intelligent Systems Technologies, Optimization Methods, Computer Aided Design/Computer Aided Manufacturing (CAD/CAM), Manufacturing Processes

Trends in Applied Knowledge-Based Systems and Data Science


Intelligent and Biosensors

Intelligent Data Security Solutions for e-Health Applications

Proceedings of the 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems

Optimal Design of Switching Power Supply

Advances in Intelligent Decision Technologies

Filter Design Solutions for RF systems

On-Chip Power Delivery and Management

Innovative and Intelligent Technology-Based Services For Smart Environments - Smart Sensing and Artificial Intelligence

Neonatal Monitoring Technologies: Design for Integrated Solutions

Small Business Management Fundamentals

Innovative and Intelligent Systems

Architectural Transformations in Network Services and Distributed Systems

Practical Applications of Intelligent Systems

Design Methodology for Intelligent Technical Systems

Smart Energy Grid Design for Island Countries

Smart Sensors and MEMS

Soft Computing in Computer and Information Science

Global Energy Interconnection

Intelligent Circuits and Systems

Switching Power Converters

Computational Intelligence in Digital and Network Designs and Applications

New Frontiers in Applied Artificial Intelligence

Security Solutions and Applied Cryptography in Smart Grid Communications

Integrated Intelligent Computing, Communication and Security

Smart Clothing

Power Electronics

Practical Switching Power Supply Design

Communication and Networking in Smart Grids

Advanced Energy Technology

Intelligent Components and Instruments for Control Applications 2003 (SICICA 2003)

Intelligent Environments 2016 With this revised edition we aim to present a text on Power Electronics for the UG level which will provide a comprehensive coverage of converters, choppers, inverters and motor drives. All this, with a rich pedagogy to support the conceptual understanding and integral use of PSPICE.
authentication, and intrusion detection, this book is ideally designed for academicians, researchers, engineers and students seeking current
research on ways in which to implement smart grid platforms all over the globe.

Intelligent Knowledge-Based Systems This book presents a carefully selected and reviewed collection of papers presented during the 19th Advanced
Computer Systems conference ACS-2014. The Advanced Computer Systems conference concentrated from its beginning on methods and algorithms
of artificial intelligence. Further future brought new areas of interest concerning technical informatics related to soft computing and some more
technological aspects of computer science such as multimedia and computer graphics, software engineering, web systems, information security and
safety or project management. These topics are represented in the present book under the categories Artificial Intelligence, Design of Information

Computer Techniques, Intelligent Systems Technologies, Optimization Methods, Computer Aided Design/Computer Aided Manufacturing
(CAD/CAM), Manufacturing Processes This book explains the application of recent advances in computational intelligence – algorithms, design
methodologies, and synthesis techniques – to the design of integrated circuits and systems. It highlights new biasing and sizing approaches and
optimization techniques and their application to the design of high-performance digital, VLSI, radio-frequency, and mixed-signal circuits and
systems. This second of two related volumes addresses digital and network designs and applications, with 12 chapters grouped into parts on digital
circuit design, network optimization, and applications. It will be of interest to practitioners and researchers in computer science and electronics
engineering engaged with the design of electronic circuits.

Trends in Applied Knowledge-Based Systems and Data Science The term Intelligent Environments (IEs) refers to physical spaces in which IT and
other pervasive computing technologies are combined and used to achieve specific goals for the user, the environment, or both. The ultimate
objective of IEs is to enrich user experience, improve management of the environment in question and increase user awareness. This book presents
the proceedings of the following workshops, which formed part of the 12th International Conference on Intelligent Environments (IE16), held in
London, UK, in September 2016: the 5th International Workshop on Smart Offices and Other Workplaces (SOOW’16); the 5th International
Workshop on the Reliability of Intelligent Environments (WoRIE’16); the 1st International Workshop on Legal Issues in Intelligent Environments
(LIIE’2016); the 2nd International Symposium on Future Intelligent Educational Environments and Learning (SOFIEE’16); the 2nd International
Workshop on Future Internet and Smart Networks (FI&SN’2016); the International Workshop on Intelligent Environments Supporting Healthcare
and Well-being (WISHWell’2016); the International Workshop on Computation Sustainability, Technologies and Applications (CoSTA’2016); the
Creative Science 2016 (CS’16) and Cloud-of-Things 2016 (CoT’16); the Workshop on Wireless Body Area Networks for Personal Monitoring in
Intelligent Environments (WBAN-PMIE); and the Physical Computing Workshop. The workshops focused on the development of advanced intelligent
environments, as well as newly emerging and rapidly evolving topics, emphasizing the multi-disciplinary and transversal aspects of IEs, as well as
cutting-edge topics. The book will be of interest to all those whose work involves them in the use of intelligent environments.

Data Processing Techniques and Applications for Cyber-Physical Systems (DPTA 2019) ICICS-2020 is the third conference initiated by the School of
Electronics and Electrical Engineering at Lovely Professional University that explored recent innovations of researchers working for the
development of smart and green technologies in the fields of Energy, Electronics, Communications, Computers, and Control. ICICS provides
innovators to identify new opportunities for the social and economic benefits of society. This conference bridges the gap between academics and
R&D institutions, social visionaries, and experts from all strata of society to present their ongoing research activities and foster research relations.
between them. It provides opportunities for the exchange of new ideas, applications, and experiences in the field of smart technologies and finding global partners for future collaboration. The ICICS-2020 was conducted in two broad categories, Intelligent Circuits & Intelligent Systems and Emerging Technologies in Electrical Engineering.

**Intelligent and Biosensors** This is an invaluable five-volume reference on the very broad and highly significant subject of computer aided and integrated manufacturing systems. It is a set of distinctly titled and well-harmonized volumes by leading experts on the international scene. The techniques and technologies used in computer aided and integrated manufacturing systems have produced, and will no doubt continue to produce, major annual improvements in productivity, which is defined as the goods and services produced from each hour of work. This publication deals particularly with more effective utilization of labor and capital, especially information technology systems. Together the five volumes treat comprehensively the major techniques and technologies that are involved.

**Intelligent Data Security Solutions for e-Health Applications** This book contains a collection of high-quality papers describing the results of relevant investigations and cutting-edge technologies, aimed at improving key aspects of real life, including major challenges such as the development of smart cities, smart buildings, smart grids, and the reduction of the impact of human activities on the environment. Sustainability requires the use of green technologies and techniques and good practices. Artificial intelligence seems to be an appropriate approach to optimize the use of resources. The main focus of this book is the dissemination of novel and innovative technologies, techniques and applications of artificial intelligence, computing and information and communications technologies, and new digital services such as digital marketing, smart tourism, smart agriculture, green and renewable energy sources. Besides, this book focuses on nurturing energy trends including renewable energies, smart grids, human activity impact, communication, behaviour, and social development, and quality of life improvement fields based on the innovative use of sensors, big data and the Internet of things (IoT), telecommunications and machine learning.

**Proceedings of the 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems** "This book presents a unique integration of knowledge from multidisciplinary fields of engineering, industrial design, and medical science for the healthcare of a specific user group"--Provided by publisher.

**Optimal Design of Switching Power Supply** This book constitutes the refereed conference proceedings of the 29th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems, IEA/AIE 2016, held in Morioka, Japan, in August 2-4, 2016. The 80 revised full papers presented were carefully reviewed and selected from 168 submissions. They are organized in topical sections: data science; knowledge base systems; natural language processing and sentiment analysis; semantic Web and social networks; computer vision; medical diagnosis system and bio-informatics; applied neural networks; innovations in intelligent systems and applications; decision support systems; adaptive control; soft computing and multi-agent systems; evolutionary algorithms and heuristic search; system integration for real-life applications.

**Advances in Intelligent Decision Technologies** This five-volume set clearly manifests the great significance of these key technologies for the new economies of the new millennium. The discussions provide a wealth of practical ideas intended to foster innovation in thought and, consequently, in the further development of technology. Together, they comprise a significant and uniquely comprehensive reference source for research workers, practitioners, computer scientists, academics, students, and others on the international scene for years to come.
Filter Design Solutions for RF systems This Special Issue focuses on the state-of-the-art results from the definition and design of filters for low- and high-frequency applications and systems. Different technologies and solutions are commonly adopted for filter definition, from electrical to electromechanical and mechanical solutions, from passive to active devices, and from hybrid to integrated designs. Aspects related to both theoretical and experimental research in filter design, CAD modeling and novel technologies and applications, as well as filter fabrication, characterization and testing, are covered. The proposed research articles deal with different topics as follows: Modeling, design and simulation of filters; Processes and fabrication technologies for filters; Automated characterization and test of filters; Voltage and current mode filters; Integrated and discrete filters; Passive and active filters; Variable filters, characterization and tunability.

On-Chip Power Delivery and Management Appropriate for researchers, practitioners, and students alike, Communication and Networking in Smart Grids presents state-of-the-art approaches and novel technologies for communication networks in smart grids. It explains how contemporary grid networks are developed and deployed and presents a collection of cutting-edge advances to help improve current practice. Prominent researchers working on smart grids and in related fields around the world explain the fundamental aspects and applications of smart grids. Describing the role that communication and networking will play in future smart grids, they examine power delivery and the complete range of features and services available through smart grids. The book is divided into two parts: Smart Grids in General and Communications and Networks in Smart Grids. Its comprehensive coverage includes: Management of locally generated powers in micro grids Multi-perspective service management in virtual power plants Distributed algorithms for demand management and grid stability in smart grids Electric distribution grid optimizations for plug-in electric vehicles Communication technologies, networks, and strategies for practical smart grid deployments—from substations to meters Ontology-based resource description and discovery framework for low Carbon grid networks QoS in networking for smart grids Outlining an optimum method for the design of distributed electric power supply and communication networks, the book reports on key ICT system engineering trends for regional energy marketplaces supporting electric mobility. It considers the spectrum of related topics in communication, IT, and security to provide you with the understanding needed to participate in the development, design, and implementation of future smart grid communications and networks.

Innovative and Intelligent Technology-Based Services For Smart Environments - Smart Sensing and Artificial Intelligence The use of intelligent sensors have revolutionized the way in which we gather data from the world around us, how we extract useful information from that data, and the manner in which we use the newly obtained information for various operations and decision making. This book is an attempt to highlight the current research in the field of Intelligent and Biosensors, thereby describing state-of-the-art techniques in the field and emerging new technologies, also showcasing some examples and applications.

Neonatal Monitoring Technologies: Design for Integrated Solutions This book discusses how smart cities strive to deploy and interconnect infrastructures and services to guarantee that authorities and citizens have access to reliable and global customized services. The book addresses the wide range of topics present in the design, development and running of smart cities, ranging from big data management, Internet of Things, and sustainable urban planning. The authors cover - from concept to practice - both the technical aspects of smart cities enabled primarily by the Internet of Things and the socio-economic motivations and impacts of smart city development. The reader will find smart city deployment motivations, technological enablers and solutions, as well as state of the art cases of smart city implementations and services. · Provides a single compendium of the technological, political, and social aspects of smart cities; · Discusses how the successful deployment of smart Cities requires a unified infrastructure to support the diverse set of applications that can be used towards urban development; · Addresses design, development and running of smart cities, including big data management and Internet of Things applications.
Small Business Management Fundamentals The 21st International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems (IEA-AIE 2008) held in Wroclaw, Poland was an international scientific forum for researchers in the field of applied artificial intelligence. The presentations of the invited speakers and the authors focused on developing and employing methods and systems to solve real-life problems in all applied intelligence areas. The IEA-AIE conference series, chaired by Moonis Ali, has a very long tradition, and it is the first time it was hosted in Poland. We received 302 papers from 52 countries. Each paper was sent to at least three Program Committee members for review. Although the general quality of the submissions was very high, only 90 best papers were selected for oral presentation and publication in the LNAI proceedings. The papers in the proceedings cover the following topics: computer vision, fuzzy system applications, robot, manufacturing, data mining and knowledge discovery, neural network, machine learning, natural language processing, Internet application, e-learning, heuristic search, application systems, agent-based system, evolutionary and genetic algorithms, knowledge management, and other applications. These papers highlight new trends and frontiers of applied artificial intelligence and show how new research could lead to new and innovative applications. We hope you will find these works useful and inspiring for your own research. We would like to express our sincere thanks to the Program Committee members and all the reviewers for their hard work, which helped us to select the highest quality papers for the conference.

Intelligent Decision-making Support Systems An examination of all of the multidisciplinary aspects of medium- and high-power converter systems, including basic power electronics, digital control and hardware, sensors, analog preprocessing of signals, protection devices and fault management, and pulse-width-modulation (PWM) algorithms, Switching Power Converters: Medium and High Power, Second Edition discusses the actual use of industrial technology and its related subassemblies and components, covering facets of implementation otherwise overlooked by theoretical textbooks. The updated Second Edition contains many new figures, as well as new and/or improved chapters on: Thermal management and reliability Intelligent power modules AC/DC and DC/AC current source converters Multilevel converters Use of IPM within a "network of switches" concept Power semiconductors Matrix converters Practical aspects in building power converters Providing the latest research and development information, along with numerous examples of successful home appliance, aviation, naval, automotive electronics, industrial motor drive, and grid interface for renewable energy products, this edition highlights advancements in packaging technologies, tackles the advent of hybrid circuits able to incorporate control and power stages within the same package, and examines design for reliability from the system level perspective.

Sustainable Development and Innovations in Marine Technologies This book identifies the challenges, solutions, and opportunities offered by smart energy grids (SEGs) with regard to the storage and regulation of diversified energy sources such as photovoltaic, wind, and ocean energy. It provides a detailed analysis of the stability and availability of renewable sources, and assesses relevant socioeconomic structures. The book also presents case studies to maximize readers' understanding of energy grid management and optimization. Moreover, it offers guidelines on the design, implementation, and maintenance of the (SEG) for island countries.

Designing, Developing, and Facilitating Smart Cities A contemporary evaluation of switching power design methods with real world applications • Written by a leading author renowned in his field • Focuses on switching power supply design, manufacture and debugging • Switching power supplies have relevance for contemporary applications including mobile phone chargers, laptops and PCs • Based on the authors' successful "Switching Power Optimized Design 2nd Edition" (in Chinese) • Highly illustrated with design examples of real world applications

Advanced Technologies in Robotics and Intelligent Systems Global energy network is an important platform to guarantee effective exploitation of global clean energy and ensure reliable energy supply for everybody. Global Energy Interconnection analyzes the current situation and challenges
of global energy development, provides the strategic thinking, overall objective, basic pattern, construction method and development mode for the development of global energy network. Based on the prediction of global energy and electricity supply and demand in the future, with the development of UHV AC/DC and smart grid technologies, this book offers new solutions to drive the safe, clean, highly efficient and sustainable development of global energy. The concept and development ideas concerning global energy interconnection in this book are based on the author’s thinking of strategic issues about China’s and the world’s energy and electricity development for many years, especially combined with successful practices of China’s UHV development. This book is particularly suitable for researchers and graduated students engaged in energy sector, as well as energy economics researchers, economists, consultants, and government energy policy makers in relevant fields. Based on the author's many years' experience in developing Smart Grid solutions within national and international projects. Combines both solid background information and cutting-edge technology progress, coupled with a useful and impressive list of references. The key energy problems which are challenging us nowadays are well stated and explained in this book, which facilitates a better understanding of the development of global energy interconnection with UHV AC/DC and smart grid technologies.

Architectural Transformations in Network Services and Distributed Systems "Practical Applications of Intelligent Systems" presents selected papers from the 2013 International Conference on Intelligent Systems and Knowledge Engineering (ISKE2013). The aim of this conference is to bring together experts from different expertise areas to discuss the state-of-the-art in Intelligent Systems and Knowledge Engineering, and to present new research results and perspectives on future development. The topics in this volume include, but are not limited to: Intelligent Game, Intelligent Multimedia, Business Intelligence, Intelligent Bioinformatics Systems, Intelligent Healthcare Systems, User Interfaces and Human Computer Interaction, Knowledge-based Software Engineering, Social Issues of Knowledge Engineering, etc. The proceedings are benefit for both researchers and practitioners who want to learn more about the current practice, experience and promising new ideas in the broad area of intelligent systems and knowledge engineering. Dr. Zhenkun Wen is a Professor at the College of Computer and Software Engineering, Shenzhen University, China. Dr. Tianrui Li is a Professor at the School of Information Science and Technology, Southwest Jiaotong University, Xi’an, China.

Practical Applications of Intelligent Systems Intelligent Decision Technologies (IDT) seeks an interchange of research on intelligent systems and intelligent technologies which enhance or improve decision making in industry, government and academia. The focus is interdisciplinary in nature, and includes research on all aspects of intelligent decision technologies, from fundamental development to the applied system. This volume represents leading research from the Second KES International Symposium on Intelligent Decision Technologies (KES IDT’10), hosted and organized by the Sellinger School of Business and Management, Loyola University Maryland, USA, in conjunction with KES International. The symposium was concerned with theory, design development, implementation, testing and evaluation of intelligent decision systems. Topics include decision making theory, intelligent agents, fuzzy logic, multi-agent systems, Bayesian networks, optimization, artificial neural networks, genetic algorithms, expert systems, decision support systems, geographic information systems, case-based reasoning, time series, knowledge management systems, Kansei communication, rough sets, spatial decision analysis, and multi-criteria decision analysis. These technologies have the potential to revolutionize decision making in many areas of management, healthcare, international business, finance, accounting, marketing, military applications, ecommerce, network management, crisis response, building design, information retrieval, and disaster recovery.

Design Methodology for Intelligent Technical Systems This book will be bought by researchers and graduates students in Artificial Intelligence and management as well as practising managers and consultants interested in the application of IT and information systems in real business environment.
Smart Energy Grid Design for Island Countries

Intelligent sensors are revolutionizing the world of system design in everything from sports cars to assembly lines. These new sensors have abilities that leave their predecessors in the dust! They not only measure parameters efficiently and precisely, but they also have the ability to enhance and interrupt those measurements, thereby transforming raw data into truly useful information. Unlike many embedded systems books that confine themselves strictly to firmware and software, this book also delves into the supporting electronic hardware, providing the reader with a complete understanding of the issues involved when interfacing to specific types of sensor and offering insight into the real-world problems designers will face. The examples provide a complete, easily extensible code framework for sensor-based applications as well as basic support routines that are often ignored or treated superficially. The goal throughout is to make readers truly productive as quickly as possible while providing the thorough understanding necessary to design robust systems. Readers will gain in-depth, real-world design information that will help them be more productive and get up to speed on sensor design skills more quickly. The book provides designers and students a leg up in a relatively new design area, imparting knowledge about a new microcontroller that offers some of the functionality of a DSP chip. Quickly teaches the reader to design the new wave in sensor technology, “intelligent” sensors In-depth design techniques, real-world examples, detailed figures and usable code Application chapters thoroughly exploring temperature, pressure and load, and flow sensors.

Smart Sensors and MEMS

This book covers cutting-edge and advanced research on data processing techniques and applications for Cyber-Physical Systems. Gathering the proceedings of the International Conference on Data Processing Techniques and Applications for Cyber-Physical Systems (DPTA 2019), held in Shanghai, China on November 15–16, 2019, it examines a wide range of topics, including: distributed processing for sensor data in CPS networks; approximate reasoning and pattern recognition for CPS networks; data platforms for efficient integration with CPS networks; and data security and privacy in CPS networks. Outlining promising future research directions, the book offers a valuable resource for students, researchers and professionals alike, while also providing a useful reference guide for newcomers to the field.

Soft Computing in Computer and Information Science

Take the “black magic” out of switching power supplies with Practical Switching Power Supply Design! This is a comprehensive "hands-on" guide to the theory behind, and design of, PWM and resonant switching supplies. You'll find information on switching supply operation and selecting an appropriate topology for your application. There's extensive coverage of buck, boost, flyback, push-pull, half bridge, and full bridge regulator circuits. Special attention is given to semiconductors used in switching supplies. RFI/EMI reduction, grounding, testing, and safety standards are also detailed. Numerous design examples and equations are given and discussed. Even if your primary expertise is in logic or microprocessor engineering, you'll be able to design a power supply that's right for your application with this essential guide and reference! Gives special attention to resonant switching power supplies, a state-of-the-art trend in switching power supply design Approaches switching power supplies in an organized way beginning with the advantages of switching supplies and thier basic operating principles Explores various configurations of pulse width modulated (PWM) switching supplies and gives readers ideas for the direction of their designs Especially useful for practicing design engineers whose primary specialty is not in analog or power engineering fields.

Global Energy Interconnection

Global Energy Interconnection Smart Sensors and MEMS: Intelligent Devices and Microsystems for Industrial Applications, Second Edition highlights new, important developments in the field, including the latest on magnetic sensors, temperature sensors and microreaction chambers. The book outlines the industrial applications for smart sensors, covering direct interface circuits for sensors, capacitive sensors for displacement measurement in the sub-nanometer range, integrated inductive displacement sensors for harsh industrial environments, advanced silicon radiation detectors in the vacuum ultraviolet (VUV) and extreme ultraviolet (EUV) spectral range, among other topics. New sections include discussions on magnetic and temperature sensors and the industrial applications of smart micro-electro-mechanical systems (MEMS). The book is an invaluable
reference for academics, materials scientists and electrical engineers working in the microelectronics, sensors and micromechanics industry. In addition, engineers looking for industrial sensing, monitoring and automation solutions will find this a comprehensive source of information. Contains new chapters that address key applications, such as magnetic sensors, microreaction chambers and temperature sensors Provides an in-depth information on a wide array of industrial applications for smart sensors and smart MEMS Presents the only book to discuss both smart sensors and MEMS for industrial applications

Intelligent Circuits and Systems GPS-embedded clothing for finding children or skiers when they are lost, bio-monitoring smart shirts, and vests that monitor a patient’s vital signs are no longer science fiction but science fact. It is quite likely that within 20 or 30 years, computers, telephones, and televisions will be a part of our intimate clothing. Covering the whole design cycle of smart clothes, Smart Clothing: Technology and Applications examines applications for the general public and highlights the important human factors aspects that make products not only usable but marketable. The book discusses the state of the art in smart clothing technology and applications. The chapters address usability and human aspects relevant to the manufacture and sale of such products and detail the evolving and increasingly wide-ranging applications in fields such as information technology, healthcare, and entertainment. They also cover technology topics including interface, communication, energy supply, data management, processors, and actuators. Discussions of packaging and interconnection, shape memory alloy, and design and modeling of electronic textile applications round out the coverage. With technology news blaring headlines such as Smart Clothing Coming Soon to Your Galaxy and Futuristic Fashions Will Fight Our Health Scares, can clothing that communicates with your washer and dryer be far behind? It is not enough to understand the technology, you must also grasp the human factor aspects. Identifying the challenges and potential benefits of smart clothing from both perspectives, this book provides integrated coverage that establishes the need for methods significantly different from traditional ones. Its up-to-date coverage allows you to visualize trends and provides a glimpse into the future.


Computational Intelligence in Digital and Network Designs and Applications This volume gathers the latest advances, innovations, and applications in the field of intelligent systems such as robots, cyber-physical and embedded systems, as presented by leading international researchers and engineers at the International Conference on Intelligent Technologies in Robotics (ITR), held in Moscow, Russia on October 21-23, 2019. It covers highly diverse topics, including robotics, design and machining, control and dynamics, bio-inspired systems, Internet of Thing, Big Data, RFID technology, blockchain, trusted software, cyber-physical systems (CFS) security, development of CFS in manufacturing, protection of information in CFS, cybersecurity of CFS. The contributions, which were selected by means of a rigorous international peer-review process, highlight numerous exciting ideas that will spur novel research directions and foster multidisciplinary collaboration among different specialists, demonstrating that intelligent systems will drive the technological and societal change in the coming decades.
New Frontiers in Applied Artificial Intelligence With the given work we decided to help not only the readers but ourselves, as the professionals who actively involved in the networking branch, with understanding the trends that have developed in recent two decades in distributed systems and networks. Important architecture transformations of distributed systems have been examined. The examples of new architectural solutions are discussed.

Security Solutions and Applied Cryptography in Smart Grid Communications This straightforward guide to establishing, managing, and owning a small business has been thoroughly updated, revised and redesigned while preserving the readability and practical flavour that distinguished past editions. Based on field-tested, proven techniques successfully used by real-world entrepreneurs, all essential small business management concepts are covered in a highly readable, practically-oriented presentation, and discussed in terms of how they can add to the small business operator’s chances for success.

Integrated Intelligent Computing, Communication and Security This book contains a collection of the papers accepted in the 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES 2014), which was held in Singapore from 10-12th November 2014. The papers contained in this book demonstrate notable intelligent systems with good analytical and/or empirical results.

Smart Clothing A Proceedings volume from the IFAC Symposium on Intelligent Components and Instruments for Control Applications, Portugal, 2003. Provides an overview of the theory and applications and presents an exchange of experiences on recent advances in this field.

Power Electronics Intelligent technical systems, which combine mechanical, electrical and software engineering with control engineering and advanced mathematics, go far beyond the state of the art in mechatronics and open up fascinating perspectives. Among these systems are so-called self-optimizing systems, which are able to adapt their behavior autonomously and flexibly to changing operating conditions. Self-optimizing systems create high value for example in terms of energy and resource efficiency as well as reliability. The Collaborative Research Center 614 "Self-optimizing Concepts and Structures in Mechanical Engineering" pursued the long-term aim to open up the active paradigm of self-optimization for mechanical engineering and to enable others to develop self-optimizing systems. This book is directed to researchers and practitioners alike. It provides a design methodology for the development of self-optimizing systems consisting of a reference process, methods, and tools. The reference process is divided into two phases the domain-spanning conceptual design and the domain-specific design and development. For the conceptual design a holistic approach is provided. Domain-specific methods and tools developed especially for the design and development of self-optimizing systems are described and illustrated by application examples. This book will enable the reader to identify the potential for self-optimization and to develop self-optimizing systems independently.

Practical Switching Power Supply Design Sustainable Development and Innovations in Marine Technologies includes the papers presented at the 18th International Congress of the Maritime Association of the Mediterranean (IMAM 2019, Varna, Bulgaria, 9-11 September 2019). Sustainable Development and Innovations in Marine Technologies includes a wide range of topics: Aquaculture & Fishing; Construction; Defence & Security; Design; Dynamic response of structures; Degradation/ Defects in structures; Electrical equipment of ships; Human factors; Hydrodynamics; Legal/Social aspects; Logistics; Machinery & Control; Marine environmental protection; Materials; Navigation; Noise; Non-linear motions – manoeuvrability; Off-shore and coastal development; Off-shore renewable energy; Port operations; Prime movers; Propulsion; Safety at sea; Safety of Marine Systems; Sea waves; Seakeeping; Shaft & propellers; Ship resistance; Shipyards; Small & pleasure crafts; Stability; Static response of
structures; Structures, and Wind loads. The IMAM series of Conferences started in 1978 when the first Congress was organised in Istanbul, Turkey. IMAM 2019 is the eighteenth edition, and in its nearly forty years of history, this biannual event has been organised throughout Europe. Sustainable Development and Innovations in Marine Technologies is essential reading for academics, engineers and all professionals involved in the area of sustainable and innovative marine technologies.

Communication and Networking in Smart Grids This book highlights the emerging field of intelligent computing and developing smart systems. It includes chapters discussing the outcome of challenging research related to distributed computing, smart machines and their security related research, and also covers next-generation communication techniques and the networking technologies that have the potential to build the future communication infrastructure. Bringing together computing, communications and other aspects of intelligent and smart computing, it contributes to developing a roadmap for future research on intelligent systems.

Advanced Energy Technology This book describes methods for distributing power in high speed, high complexity integrated circuits with power levels exceeding many tens of watts and power supplies below a volt. It provides a broad and cohesive treatment of power delivery and management systems and related design problems, including both circuit network models and design techniques for on-chip decoupling capacitors, providing insight and intuition into the behavior and design of on-chip power distribution systems. Organized into subareas to provide a more intuitive flow to the reader, this fourth edition adds more than a hundred pages of new content, including inductance models for interdigitated structures, design strategies for multi-layer power grids, advanced methods for efficient power grid design and analysis, and methodologies for simultaneously placing on-chip multiple power supplies and decoupling capacitors. The emphasis of this additional material is on managing the complexity of on-chip power distribution networks.

Intelligent Components and Instruments for Control Applications 2003 (SICICA 2003) E-health applications such as tele-medicine, tele-radiology, tele-ophthalmology, and tele-diagnosis are very promising and have immense potential to improve global healthcare. They can improve access, equity, and quality through the connection of healthcare facilities and healthcare professionals, diminishing geographical and physical barriers. One critical issue, however, is related to the security of data transmission and access to the technologies of medical information. Currently, medical-related identity theft costs billions of dollars each year and altered medical information can put a person’s health at risk through misdiagnosis, delayed treatment or incorrect prescriptions. Yet, the use of hand-held devices for storing, accessing, and transmitting medical information is outpacing the privacy and security protections on those devices. Researchers are starting to develop some imperceptible marks to ensure the tamper-proofing, cost effective, and guaranteed originality of the medical records. However, the robustness, security and efficient image archiving and retrieval of medical data information against these cyberattacks is a challenging area for researchers in the field of e-health applications. Intelligent Data Security Solutions for e-Health Applications focuses on cutting-edge academic and industry-related research in this field, with particular emphasis on interdisciplinary approaches and novel techniques to provide security solutions for smart applications. The book provides an overview of cutting-edge security techniques and ideas to help graduate students, researchers, as well as IT professionals who want to understand the opportunities and challenges of using emerging techniques and algorithms for designing and developing more secure systems and methods for e-health applications. Investigates new security and privacy requirements related to eHealth technologies and large sets of applications Reviews how the abundance of digital information on system behavior is now being captured, processed, and used to improve and strengthen security and privacy Provides an overview of innovative security techniques which are being developed to ensure the guaranteed authenticity of transmitted, shared or stored data/information