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2000-
Handbook of Research on New Solutions and Technologies in Electrical Distribution Networks
Design, Analysis, and Implementation
Smart Grid Applications, Communications, and Security
Co-modelling and Co-simulation
Convergence, DSP, QoS, and Security
Logarithmic Voltage-to-Time Converter for Analog-to-Digital Signal Conversion
Industrial Internet of Things
IEEE Recommended Practice for Electric Power Distribution for Industrial Plants
Knowledge Management in Organizations
Broadband Fixed Wireless Access
Official (ISC)2® Guide to the CISSP®-ISSEP® CBK®
Electromagnetic Fields and Radiation
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Enterprise Information Systems
Comprehensive Everglades Restoration Plan C-111 Spreader Canal Western Project: Communication from the Assistant Secretary of the Army, Civil Works, the Department of Defense, Transmitting a Report on the Authorization of the C-111 Spreader Canal Western Project
Second International Workshop, FTSCS 2013, Queenstown, New Zealand, October 29--30, 2013. Revised Selected Papers
Trends and Standards
Fixed Broadband Wireless System Design
17th International Conference, ICEIS 2015, Barcelona, Spain, April 27-30, 2015, Revised Selected Papers

LEVY PONCE

Human Bioeffects and Safety CRC Press
Think about someone taking control of your car while you're driving. Or, someone hacking into a drone and taking control. Both of these things have been done, and both are attacks against cyber-physical systems (CPS). Securing Cyber-Physical Systems explores the cybersecurity needed for CPS, with a focus on results of research and real-world deployment experiences. It addresses CPS across multiple sectors of industry. CPS emerged from traditional engineered systems in the areas of power and energy, automotive, healthcare, and aerospace. By introducing pervasive communication support in those systems, CPS made the systems more flexible, high-performing, and responsive. In general, these systems are mission-critical—their availability and correct operation is essential. This book focuses on the security of such mission-critical systems. Securing Cyber-Physical Systems brings together engineering and IT experts who have been dealing separately with these issues. The contributed chapters in this book cover a broad range of CPS security topics, including: Securing modern electrical power systems Using moving target defense (MTD) techniques to secure CPS Securing wireless sensor networks (WSNs) used for critical infrastructures Mechanisms to improve cybersecurity and privacy in transportation CPS Anticipated cyberattacks and defense approaches for next-generation autonomous vehicles Security issues, vulnerabilities, and challenges in the Internet of Things Machine-to-machine (M2M) communication security Security of industrial control systems Designing "trojan-resilient" integrated circuits While CPS security techniques are constantly evolving, this book captures the latest advancements from many different fields. It should be a valuable resource for both professionals and students working in network, web, computer, or embedded system security.
Code of Federal Regulations CRC Press
Special edition of the Federal Register, containing a codification of documents of general applicability and future effect ... with ancillaries.
Electrical Power Equipment Maintenance and Testing Springer Science & Business
This book discusses relevant microgrid technologies in the context of integrating renewable energy and also addresses challenging issues. The authors summarize long term academic and research outcomes and contributions. In addition, this book is influenced by the authors’ practical experiences on microgrids (MGs), electric network monitoring, and control and power electronic systems. A thorough discussion of the basic principles of the MG modeling and operating issues is provided. The MG structure, types, operating modes, modelling, dynamics, and control levels are covered. Recent advances in DC microgrids, virtual synchronousgenerators, MG planning and energy management are examined. The physical constraints and engineering aspects of the MGs are covered, and developed robust and intelligent control strategies are discussed using real time simulations and experimental studies.
Central and Southern Florida Project, C-111 Spreader Canal Western Project Springer
This book develops the core system science needed to enable the development of a complex industrial internet of things/manufacturing cyber-physical systems (IIoT/M-CPS). Gathering contributions from leading experts in the field with years of experience in advancing manufacturing, it fosters a research community committed to advancing research and education in IIoT/M-CPS and to translating applicable science and technology into engineering practice. Presenting the current state of IIoT and the concept of cybermanufacturing, this book is at the nexus of research advances from the engineering and computer and information science domains. Readers will acquire the core system science needed to transform to cybermanufacturing that spans the full spectrum from ideation to physical realization.

Optimization Methods Applied to Power Systems Ⅱ CRC Press
The second edition of a bestseller, this definitive text covers all aspects of testing and maintenance of the equipment found in electrical power systems serving industrial, commercial, utility substations, and generating plants. It addresses practical aspects of routing testing and maintenance and presents both the methodologies and engineering basics needed to carry out these tasks. It is an essential reference for engineers and technicians responsible for the operation, maintenance, and testing of power system equipment. Comprehensive coverage includes dielectric theory, dissolved gas analysis, cable fault locating, ground resistance measurements, and power factor, dissipation factor, DC, breaker, and relay testing methods.
Ontology-Based Applications for Enterprise Systems and Knowledge Management IGI Global
Future wireless communication systems should be operating mainly, if not completely, on burst data services carrying multimedia traffic.The need to support high-speed burst traffic has already posed a great challenge to all currently available air-link technologies based either on TDMA or CDMA.The first generation CDMA technology has been used in both 2G and 3G mobile cellular standards and it has been suggested that it is not suitable for high-speed burst-type traffic. There are many problems with the first generation CDMA technology, such as its low spreading efficiency, interference-limited capacity and the need for precision power control, etc... 'The Next Generation Technologies' will offer first-hand information on how to make use of various innovative technologies to implement the next generation CDMA technology. As an all-in-one reference for telecommunications engineers, advanced R & D personnels, undergraduate and postgraduate students, this book is must-read material. Addresses various important issues about the next generation CDMA technologies as the major air-link technology for beyond 3G wireless applications. Covers topics from next generation CDMA system modelling to analytical methodology, starting with the basics and progressing to advanced research topics. Contains many new and previously unpublished research results. Introduces many innovative CDMA technologies such as DS/CC-CDMA, OS/CC-CDMA, space-time complementary coding CDMA, M-ary CDMA, optical complementary coded CDMA, etc.
Springer Science & Business Media
Rapid progress in software, hardware, mobile networks, and the potential of interactive media poses many questions for researchers, manufacturers, and operators of wireless multimedia communication systems. Wireless Multimedia Communication Systems: Design, Analysis, and Implementation strives to answer those questions by not only covering the underlying concepts involved in the design, analysis, and implementation of wireless multimedia communication systems, but also by tackling advanced topics such as mobility management, security components, and smart grids. Offering an accessible treatment of the latest research, this book: Presents specific wireless multimedia communication schemes that have proven to be useful Discusses important standardization processing activities regarding wireless networking Includes wireless mesh and multimedia sensor network architectures, protocols, and design optimizations Highlights the challenges associated with meeting complex connectivity requirements Contains numerous figures, tables, examples, references, and a glossary of acronyms Providing coverage of significant technological advances in their initial steps along with a survey of the fundamental principles and practices, Wireless Multimedia Communication Systems: Design, Analysis, and Implementation aids senior-level and graduate-level engineering students and practicing professionals in understanding the processes and furthering the development of today’s wireless multimedia communication systems.
Securing Cyber-Physical Systems CRC Press
This book contains the refereed proceedings of the 9th International Conference on Knowledge Management in Organizations (KMO) held in Santiago, Chile, during September 2014. The theme of the conference is "Knowledge Management to Improve Innovation and Competitiveness through Big

Data." The KMO conference brings together researchers and developers from industry and academia to discuss and research how knowledge management using big data can improve innovation and competitiveness. The 39 contributions accepted for KMO 2014 were selected from 89 submissions and are organized in sections on: big data and knowledge management, knowledge management practice and case studies, information technology and knowledge management, knowledge management and social networks, knowledge management in organizations, and knowledge transfer, sharing and creation.

IEEE Std 43-2013 (Revision of IEEE Std 43-2000) Springer Science & Business Media

This book constitutes the refereed proceedings of the 5th Annual International Conference on Wireless Algorithms, Systems, and Applications, WASA 2010, held in Beijing, China, in August 2010. The 19 revised full papers and 10 revised short papers presented together with 18 papers from 4 workshops were carefully reviewed and selected from numerous submissions. The papers are organized in topica sections on topology control and coverage, theoretical foundations, energy-aware algorithms and protocol design, wireless sensor networks and applications, applications and experimentation, scheduling and channel assignment, coding, information theory and security, security of wireless and ad-hoc networks, data management and network control in wireless networks, radar and sonar sensor networks, as well as compressive sensing for communications and networking.

Collaborative Design for Embedded Systems CRC Press

The second edition of a bestseller, this definitive text covers all aspects of testing and maintenance of the equipment found in electrical power systems serving industrial, commercial, utility substations, and generating plants. It addresses practical aspects of routing testing and maintenance and presents both the methodologies and engineering basics needed to carry out these tasks. It is an essential reference for engineers and technicians responsible for the operation, maintenance, and testing of power system equipment. Comprehensive coverage includes dielectric theory, dissolved gas analysis, cable fault locating, ground resistance measurements, and power factor, dissipation factor, DC, breaker, and relay testing methods.

Cybermanufacturing Systems Wiley

The two volumes of this new edition of the Handbook cover the basic biological, medical, physical, and electrical engineering principles. They also include experimental results concerning how electric and magnetic fields affect biological systems—both as potential hazards to health and potential tools for medical treatment and scientific research. They also include material on the relationship between the science and the regulatory processes concerning human exposure to the fields. Like its predecessors, this edition is intended to be useful as a reference book but also for introducing the reader to bioelectromagnetics or some of its aspects. FEATURES • New topics include coverage of electromagnetic effects in the terahertz region, effects on plants, and explicitly applying feedback concepts to the analysis of biological electromagnetic effects • Expanded coverage of electromagnetic brain stimulation, characterization and modeling of epithelial wounds, and recent lab experiments on at all frequencies • Section on background for setting standards and precautionary principle • Discussion of recent epidemiological, laboratory, and theoretical results; including: WHO IARC syntheses of epidemiological results on both high and low frequency fields, IITRI lab study of cancer in mice exposed to cell phone-like radiation, and other RF studies • All chapters updated by internationally acknowledged experts in the field

IEEE Recommended Practice for Testing Insulation Resistance of Electric Machinery Springer

This reference explores the sources, characteristics, bioeffects, and health hazards of extremely low-frequency (ELF) fields and radio frequency radiation (RFR), analyzing current research as well as the latest epidemiological studies to assess potential risks associated with exposure and to develop effective safety guidelines. Compiles reports and investigations from four decades of study on the effect of nonionizing electromagnetic fields and radiation on human health Summarizing modern engineering approaches to control exposure, Electromagnetic Fields and Radiation discusses: EM interaction mechanisms in biological systems Explorations into the impact of EM fields on free radicals, cells, tissues, organs, whole organisms, and the population Regulatory standards in the United States, Canada, Europe, and Asia Pacific Evaluation of incident fields from various EM sources Measurement surveys for various sites including power lines, substations, mobile systems, cellular base stations, broadcast antennas, traffic radar devices, heating equipment, and other sources Dosimetry techniques for the determination of internal EM fields Conclusions reached by the Food and Drug Administration, World Health Organization, and other institutions

Modelling and Simulation for Autonomous Systems IGI Global

Fixed broadband networks can provide far higher data rates and capacity than the currently envisioned 3G and 4G mobile cellular systems. Achieving higher data rates is due to the unique technical properties of fixed systems, in particular, the use of high gain and adaptive antennas, wide frequency bands, dynamic data rate and channel resource allocation, and advanced multiple access techniques. Fixed Broadband Wireless System Design is a comprehensive presentation of the engineering principles, advanced engineering techniques, and practical design methods for planning and deploying fixed wireless systems, including: Point-to-point LOS and NLOS network design Point-to-point microwave link design including active and passive repeaters Consecutive point and mesh network planning Advanced empirical and physical propagation modeling including ray-tracing Detailed microwave fading models for multipath and rain NLOS (indoor and outdoor) propagation and fading models Propagation environment models including terrain, morphology, buildings, and atmospheric effects Novel mixed application packet traffic modeling for dimensioning network capacity Narrow beam, wide beam, and adaptive (smart) antennas MIMO systems and space-time coding Channel planning including fixed and dynamic channel assignment and dynamic packet assignment IEEE 802.11b and 802.11a (WLAN) system design Free space optic (FSO) link design At present, there are no titles available that provide such a concise presentation of the wide variety of systems, frequency bands, multiple access techniques, and other factors that distinguish fixed wireless systems from mobile wireless systems. Fixed Broadband Wireless System Design is essential reading for design, system and RF engineers involved in the design and deployment of fixed broadband wireless systems, fixed wireless equipment vendors, and academics and postgraduate students in the field.

IEEE Trial-use Guide to the Measurement of Partial Discharges in Rotating Machinery CRC Press

For many, smart grids are the biggest technological revolutionsince the Internet. They have the potential to reduce carbondioxide emissions, increase the reliability of electricity supply,and increase the efficiency of our energy infrastructure. Smart Grid Applications, Communications, and Securityexplains how diverse technologies play hand-in-hand in building andmaintaining smart grids around the globe. The book delves into thecommunication aspects of smart grids, provides incredible insightinto power electronics, sensing, monitoring, and controltechnologies, and points out the potential for new technologies andmarkets. Extensively cross-referenced, the book contains comprehensivecoverage in four major parts: Part I: Applications provides a detailedintroduction to smart grid applications—spanning thetransmission, distribution, and consumer side of the electricitygrid Part II: Communications discusses wireless,wireline, and optical communication solutions—from thephysical layers up to sensing, automation, and control protocolsrunning on the application layers Part III: Security deals with cybersecurity—sharpening the awareness of security threats,reviewing the ongoing standardization, and outlining the future ofauthentication and encryption key management Part IV: Case Studies and Field Trials presentsself-contained chapters of studies where the smart grid of tomorrowhas already been put into practice With contributions from majorindustry stakeholders such as Siemens, Cisco, ABB, and Motorola,this is the ideal book for both engineering professionals andstudents.

Microgrid Dynamics and Control Springer

This book is a printed edition of the Special Issue "Power Transformer Diagnostics, Monitoring and Design Features" that was published in Energies

Wireless Multimedia Communications IGI Global

The Official (ISC)2® Guide to the CISSP®-ISSEP® CBK® provides an inclusive analysis of all of the topics covered on the newly created CISSP-ISSEP Common Body of Knowledge. The first fully comprehensive guide to the CISSP-ISSEP CBK, this book promotes understanding of the four ISSEP domains: Information Systems Security Engineering (ISSE); Certification and Accreditation; Technical Management; and an Introduction to United States Government Information Assurance Regulations. This volume explains ISSE by comparing it to a traditional Systems Engineering model, enabling you to see the correlation of how security fits into the design and development process for information systems. It also details key points of more than 50 U.S. government policies and procedures that need to be understood in order to understand the CBK and protect U.S. government information. About the Author Susan Hansche, CISSP-ISSEP is the training director for information assurance at Nortel PEC Solutions in Fairfax, Virginia. She has more than 15 years of experience in the field and since 1998 has served as the contractor program manager of the information assurance training program for the U.S. Department of State.

Transformer Ageing Springer Science & Business Media

This introductory volume provides a systematic overview of WiMAX technology, demystifing the technology and providing technical advice on various system trade-offs. Much of the material is based on the practical experiences of the authors in building new systems. Coverage includes the IEEE 802.16 standard, a tutorial on implementation and tips on controlling cost of WiMAX network ownership. This is a must read book for professionals involved in broadband fixed wireless access.

The Journal of the Acoustical Society of America CRC Press

Next Generation Wireless Systems and Networks offers an expert view of cutting edge Beyond 3rd Generation (B3G) wireless applications. This self-contained reference combines the basics of wireless communications, such as 3G wireless standards, spread spectrum and CDMA systems, with a more advanced level research-oriented approach to B3G communications, eliminating the need to refer to other material. This book will provide readers with the most up-to-date technological developments in wireless communication systems/networks and introduces the major 3G standards, such as W-CDMA, CDMA2000 and TD-SCDMA. It also includes a focus on cognitive radio technology and 3GPP E-UTRA technology; areas which have not been well covered elsewhere. Covers many hot topics in the area of next generation wireless from the authors' own research, including: Bluetooth, all-IP wireless networking, power-efficient and bandwidth-efficient air-link technologies, and multi-user signal processing in B3G wireless Clear, step-by-step progression throughout the book will provide the reader with a thorough grounding in the basic topics before moving on to more advanced material Addresses various important topics on wireless communication systems and networks that have emerged only very recently, such as Super-3G technology, 4G wireless, UWB, OFDMA and MIMO Includes a wealth of explanatory tables and illustrations This essential reference will prove invaluable to senior undergraduate and postgraduate students, academics and researchers. It will also be of interest to telecommunications engineers wishing to further their knowledge in this field.

Formal Techniques for Safety-Critical Systems Springer

This book addresses the issues of the rapidly changing field of wireless wearable and implantable sensors. It also discusses the latest technological developments and clinical applications of body-sensor networks (BSN). BSN is a new area of research and the last decade has seen a rapid surge of interest. The book also provides a review of current wireless sensor development platforms and a guide to developing your own BSN applications.

9th International Conference, KMO 2014, Santiago, Chile, September 2-5, 2014, Proceedings John Wiley & Sons

This book presents a novel logarithmic conversion architecture based on cross-coupled inverter. An overview of the current state of the art of logarithmic converters is given where most conventional logarithmic analog-to-digital converter architectures are derived or adapted from linear analog-to-digital converter architectures, implying the use of analog building blocks such as amplifiers. The conversion architecture proposed in this book differs from the conventional logarithmic architectures. Future possible studies on integrating calibration in the voltage to time conversion element and work on an improved conversion architecture derived from the architecture are also presented in this book.