Computer Networks and Inventive Communication
Semiconductor TeraHertz Technology
Issues in Electrical, Computer, and Optical Engineering: 2013 Edition
Issues in Transportation Research and Application: 2013 Edition
Web-Based Services: Concepts, Methodologies, Tools, and Applications
Stochastic Geometry Analysis of Cellular Networks
Semantic Technology
Machine Learning and Intelligent Communications
Ad Hoc Networks
The Internet of Things for Smart Urban Ecosystems
Mobile Broadband Communications for Public Safety: The Road Ahead Through LTE Technology
Noncarboxylic Acids—Advances in Research and Application: 2013 Edition
Energy Harvesting and Energy Efficiency
Information Systems Security
Application of Surrogate-based Global Optimization to Aerodynamic Design
Handbook of Research on Cloud Computing and Big Data Applications in IoT
Wireless Power Transfer Algorithms, Technologies and Applications in Ad Hoc Communication Networks
Mobile Networks and Management
Testbeds and Research Infrastructure: Development of Networks and Communities
Intelligent Data Engineering and Automated Learning – IDEAL 2019
Data Analytics for Cultural Heritage
Digital Nations – Smart Cities, Innovation, and Sustainability
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Interference Mitigation and Energy Management in 5G Heterogeneous Cellular Networks
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Automotive Ethernet
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Issues in Networks Research and Application: 2013 Edition
Infrastructure and e-Services for Developing Countries
Monovalent Cations—Advances in Research and Application: 2013 Edition
802.3.1-2013 IEEE Standard for Management Information Base (MIB) Definitions for Ethernet
Handbook of Research on Redesigning the Future of Internet Architectures
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Key advances in Semiconductor Terahertz (THz) Technology now promises important new applications enabling scientists and engineers to overcome the challenges of accessing the so-called terahertz gap. This pioneering reference explains the fundamental methods and surveys innovative techniques in the generation, detection and processing of THz waves with solid-state devices, as well as illustrating their potential applications in security and telecommunications, among other fields. With contributions from leading experts, Semiconductor Terahertz Technology: Devices and Systems at Room Temperature Operation comprehensively and systematically covers semiconductor-based room temperature operating sources such as photomixers, THz antennas, radiation concepts and THz propagation as well as room-temperature operating THz detectors. The second part of the book focuses on applications such as the latest photonic and electronic THz systems as well as emerging THz technologies including: whispering gallery resonators, liquid crystals, metamaterials and graphene-based devices. This book will provide support for practicing researchers and professionals and will be an indispensable reference to graduate students in the field of THz technology. Key features: Includes crucial theoretical background sections to photomixers, photoconductive switches and electronic THz generation & detection. Provides an extensive overview of semiconductor-based THz sources and applications. Discusses vital technologies for affordable THz applications. Supports teaching and studying increasingly popular courses on semiconductor THz technology.

Aerodynamic design, like many other engineering applications, is increasingly relying on computational power. The growing need for multi-disciplinarity and high fidelity in design optimization for industrial applications requires a huge number of repeated simulations in order to find an optimal design candidate. The main drawback is that each simulation can be computationally expensive – this becomes an even bigger issue when used within parametric studies, automated search or optimization loops, which typically may require thousands of analysis
evaluations. The core issue of a design-optimization problem is the search process involved. However, when facing complex problems, the high-dimensionality of the design space and the high-multi-modality of the target functions cannot be tackled with standard techniques. In recent years, global optimization using meta-models has been widely applied to design exploration in order to rapidly investigate the design space and find sub-optimal solutions. Indeed, surrogate and reduced-order models can provide a valuable alternative at a much lower computational cost. In this context, this volume offers advanced surrogate modeling applications and optimization techniques featuring reasonable computational resources. It also discusses basic theory concepts and their application to aerodynamic design cases. It is aimed at researchers and engineers who deal with complex aerodynamic design problems on a daily basis and employ expensive simulations to solve them.

This book is the first systematic exposition on the emerging domain of wireless power transfer in ad hoc communication networks. It selectively spans a coherent, large spectrum of fundamental aspects of wireless power transfer, such as mobility management in the network, combined wireless power and information transfer, energy flow among network devices, joint activities with wireless power transfer (routing, data gathering and solar energy harvesting), and safety provisioning through electromagnetic radiation control, as well as fundamental and novel circuits and technologies enabling the wide application of wireless powering. Comprising a total of 27 chapters, contributed by leading experts, the content is organized into six thematic sections: technologies, communication, mobility, energy flow, joint operations, and electromagnetic radiation awareness. It will be valuable for researchers, engineers, educators, and students, and it may also be used as a supplement to academic courses on algorithmic applications, wireless protocols, distributed computing, and networking.

The Afro-European Conference for Industrial Advancement (AECIA) brought together the foremost experts and excellent young researchers from Africa, Europe and the rest of the world to disseminate the latest results from various fields of engineering, information and communication technologies. This volume gathers the carefully selected
papers from the third installment of the AECIA, which was held in Marrakech, Morocco from November 21 to 23, 2016. The papers address important topics like Automation Systems, Intelligent Techniques and Algorithms, Information and Communication Technology (ICT) Applications in Engineering, Control, Optimization and Processing, as well as manufacturing-related topics. As such, it offers a valuable reference guide for researchers, students and practitioners in the fields of computer science and engineering.

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This book constitutes the refereed proceedings of the 12th International Conference on Information Systems Security, ICISS 2016, held in Jaipur, India, in December 2016. The 24 revised full papers and 8 short papers presented together with 4 invited papers were carefully reviewed and selected from 196 submissions. The papers address the following topics: attacks and mitigation; authentication; authorization and information flow control; crypto systems and protocols; network security and intrusion detection; privacy; software security; and wireless, mobile and IoT security.

This book constitutes the proceedings of the Third Joint International Semantic Technology Conference, JIST 2013, held in Seoul, South Korea,
in November 2013. The 32 papers, included four tutorials and 5 workshop papers, in this volume were carefully reviewed and selected from numerous submissions. The contributions are organized in topical sections on semantic Web services, multilingual issues, biomedical applications, ontology construction, semantic reasoning, semantic search and query, ontology mapping, and learning and discovery.

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A reliable and focused treatment of the emergent technology of fifth generation (5G) networks This book provides an understanding of the most recent developments in 5G, from both theoretical and industrial perspectives. It identifies and discusses technical challenges and recent results related to improving capacity and spectral efficiency on the radio interface side, and operations management on the core network side. It covers both existing network technologies and those currently in development in three major areas of 5G: spectrum extension, spatial spectrum utilization, and core network and network topology management. It explores new spectrum opportunities; the capability of radio access technology; and the operation of network infrastructure and heterogeneous QoE provisioning. 5G Networks: Fundamental
Requirements, Enabling Technologies, and Operations Management is split into five sections: Physical Layer for 5G Radio Interface Technologies; Radio Access Technology for 5G Networks; 5G Network Interworking and Core Network Advancements; Vertical 5G Applications; and R&D and 5G Standardization. It starts by introducing emerging technologies in 5G software, hardware, and management aspects before moving on to cover waveform design for 5G and beyond; code design for multi-user MIMO; network slicing for 5G networks; machine type communication in the 5G era; provisioning unlicensed LAA interface for smart grid applications; moving toward all-IT 5G end-to-end infrastructure; and more. This valuable resource: Provides a comprehensive reference for all layers of 5G networks Focuses on fundamental issues in an easy language that is understandable by a wide audience Includes both beginner and advanced examples at the end of each section Features sections on major open research challenges 5G Networks: Fundamental Requirements, Enabling Technologies, and Operations Management is an excellent book for graduate students, academic researchers, and industry professionals, involved in 5G technology.

This two volume set constitutes the refereed post-conference proceedings of the Second International Conference on Machine Learning and Intelligent Communications, MLICOM 2017, held in Weihai, China, in August 2017. The 143 revised full papers were carefully selected from 225 submissions. The papers are organized thematically in machine learning, intelligent positioning and navigation, intelligent multimedia processing and security, intelligent wireless mobile network and security, cognitive radio and intelligent networking, intelligent internet of things, intelligent satellite communications and networking, intelligent remote sensing, visual computing and three-dimensional modeling, green communication and intelligent networking, intelligent ad-hoc and sensor networks, intelligent resource allocation in wireless and cloud networks, intelligent signal processing in wireless and optical communications, intelligent radar signal processing, intelligent cooperative communications and networking.

Noncarboxylic Acids—Advances in Research and Application: 2013
Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Hydrogen Sulfide. The editors have built Noncarboxylic Acids—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews™. You can expect the information about Hydrogen Sulfide in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Noncarboxylic Acids—Advances in Research and Application: 2013 Edition has been produced by the world’s leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

This book constitutes the thoroughly refereed proceedings of the 6th International Conference on e-Infrastructure and e-Services for Developing Countries, AFRICOMM 2014, held in Kampala, Uganda, November 24-25, 2014. The 31 revised full papers were carefully selected from 57 submissions and cover topics such as communication infrastructure, health, IoT, cloud computing and TVWS, ICT4D applications, access to information, and ICT4D miscellaneous.

As the volume of global Internet traffic increases, the Internet is beginning to suffer from a broad spectrum of performance-degrading infrastructural limitations that threaten to jeopardize the continued growth of new, innovative services. In answer to this challenge, computer scientists seek to maintain the original design principles of the Internet while allowing for a more dynamic approach to the manner in which networks are designed and operated. The Handbook of Research on Redesigning the Future of Internet Architectures covers some of the hottest topics currently being debated by the Internet community at large, including Internet governance, privacy issues, service delivery automation, advanced networking schemes, and new approaches to Internet traffic-forwarding and path-computation mechanics. Targeting students, network-engineers, and technical strategists, this book seeks to provide a broad and
comprehensive look at the next wave of revolutionary ideas poised to reshape the very foundation of the Internet as we know it.

The main objective of this book is to provide a multidisciplinary overview of methodological approaches, architectures, platforms, and algorithms for the realization of an Internet of Things (IoT)-based Smart Urban Ecosystem (SUE). Moreover, the book details a set of real-world applications and case studies related to specific smart infrastructures and smart cities, including structural health monitoring, smart urban drainage networks, smart grids, power efficiency, healthcare, city security, and emergency management. A Smart Urban Ecosystem (SUE) is a people-centric system of systems that involves smart city environments, applications, and infrastructures. SUEs require the close integration of cyber and physical components for monitoring, understanding and controlling the urban environment. In this context, the Internet of Things (IoT) offers a valuable enabling technology, as it bridges the gap between physical things and software components, and empowers cooperation between distributed, pervasive, and heterogeneous entities.

The Internet of Things (IoT) is a system of inter-connected devices, objects, and organisms. Among these devices, drones are gaining lots of interest. Drones are expected to communicate with cellular networks in the next generation networks (5G and beyond) which opens the door for another exciting research area. This book considers very important research areas in drone and cellular networks. It addresses major issues and challenges in drone-based solutions proposed for IoT-enabled cellular/computer networks, routing/communication protocols, surveillances applications, secured data management, and positioning approaches. It focuses mainly on smart and context-aware implementations.

This is the first volume of the two-volume set (CCIS 528 and CCIS 529) that contains extended abstracts of the posters presented during the 17th International Conference on Human-Computer Interaction, HCII 2015, held in Heraklion, Crete, Greece in August 2015. The total of 1462 papers and 246 posters presented at the HCII 2015 conferences was carefully reviewed and selected from 4843 submissions. These papers address the
latest research and development efforts and highlight the human aspects of
design and use of computing systems. The papers thoroughly cover the
entire field of human-computer interaction, addressing major advances in
knowledge and effective use of computers in a variety of application
areas. The papers included in this volume are organized in the following
topical sections: design and evaluation methods, techniques and tools;
cognitive and psychological issues in HCI; virtual, augmented and mixed
reality; cross-cultural design; design for aging; children in HCI; product
design; gesture, gaze and motion detection, modelling and recognition;
reasoning, optimisation and machine learning for HCI; information
processing and extraction for HCI; image and video processing for HCI;
brain and physiological parameters monitoring; dialogue systems.

In recent years, wireless networks have become more ubiquitous and
integrated into everyday life. As such, it is increasingly imperative to
research new methods to boost cost-effectiveness for spectrum and energy
efficiency. Interference Mitigation and Energy Management in 5G
Heterogeneous Cellular Networks is a pivotal reference source for the
latest research on emerging network architectures and mitigation
technology to enhance cellular network performance and dependency.
Featuring extensive coverage across a range of relevant perspectives and
topics, such as interference alignment, resource allocation, and high-speed
mobile environments, this book is ideally designed for engineers,
professionals, practitioners, upper-level students, and academics seeking
current research on interference and energy management for 5G
heterogeneous cellular networks.

Today, cloud computing, big data, and the internet of things (IoT) are
becoming indubitable parts of modern information and communication
systems. They cover not only information and communication technology
but also all types of systems in society including within the realms of
business, finance, industry, manufacturing, and management. Therefore, it
is critical to remain up-to-date on the latest advancements and
applications, as well as current issues and challenges. The Handbook of
Research on Cloud Computing and Big Data Applications in IoT is a
pivotal reference source that provides relevant theoretical frameworks and
the latest empirical research findings on principles, challenges, and
Read Online 2013 Ieee Base Paper On Cloud Computing

applications of cloud computing, big data, and IoT. While highlighting topics such as fog computing, language interaction, and scheduling algorithms, this publication is ideally designed for software developers, computer engineers, scientists, professionals, academicians, researchers, and students.

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This book constitutes the refereed proceedings of the 10th International Conference on Ad Hoc Networks, ADHOCNETS 2018, held in Cairns, Australia, in September 2018. The 27 full papers were selected from 50 submissions and cover a variety of network paradigms including mobile ad hoc networks, sensor networks, vehicular networks, underwater networks, airborne networks, underground networks, personal area networks, device-to-device (D2D) communications in 5G cellular networks, and home networks. The papers present a wide range of applications in civilian, commercial, and military areas.

This book constitutes the refereed conference proceedings of the 16th IFIP WG 6.11 Conference on e-Business, e-Services and e-Society, I3E 2017, held in Delhi, India, in November 2017. The 45 revised full papers presented were carefully reviewed and selected from 92 submissions. They are organized in the following topical sections: Adoption of Smart
Public Protection and Disaster Relief (PPDR) agencies rely on the use of Private/Professional Mobile Radio (PMR) technologies such as TETRA, TETRAPOL, and APCO 25 which were conceived in the 1990s, in parallel with the second generation (2G) of mobile communications systems. Whilst PMR systems offer a rich set of voice-centric services, with a number of features matched to the special requirements of PPDR, the data transmission capabilities of these PMR technologies are rather limited and lag far behind the technological advances made in the commercial wireless domain. As a result, Long Term Evolution (LTE) technology for mobile broadband PPDR is increasingly backed as the technology of choice for future PPDR communications, and technical work is currently being undertaken within the 3rd Generation Partnership Project (3GPP), the organisation in charge of LTE standardisation, to add a number of improved capabilities and features to the LTE standard that will further increase its suitability for PPDR and other professional users. This book provides a timely and comprehensive overview of the introduction of LTE technology for PPDR communications. It looks at operational scenarios and emerging multimedia and data-centric applications which have the potential to improve the efficiency of disaster recovery operations. There is a discussion of the main techno-economic drivers which are believed to be pivotal for an efficient and cost-efficient delivery of mobile broadband PPDR communications. The capabilities and features of the LTE standard for improved support of mission-critical communications are also covered, as is the applicability of Mobile Virtual Network Operator (MVNO) models for the delivery of PPDR services through commercial networks. This book offers a wide and deep analysis of the incoming evolution of PPDR domain, covering user need and technologies, normative and economic topics including those in the framework of commercial and PPDR domains' convergence and interoperability. It provides a highly original reference to the driving subjects and trend of PPDR evolution worldwide.章節標題包括:- 公共保護和災難救援通信/私人移動無線電系統/移動寬頻數據需求和要求/移動寬頻
systems for PPDR communications / LTE technology for PPDR / Supplementing LTE / Spectrum use for PPDR / MNVO model for PPDR / Interconnection of PPDR networks / State of play

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This book constitutes the post-proceedings of the 7th International Conference on Mobile Networks and Management, MONAMI 2015, held in Santander, Spain, in September 2015. The 16 full papers were carefully reviewed and selected from 24 submissions. In addition there appears one short and 5 invited papers. These are organized thematically in five parts starting with Cellular Network Management and Self-Organizing Networks in Part I. Radio Resource Management in LTE and 5G Networks aspects are discussed in Part II. Part III presents novel Techniques and Algorithms for Wireless Networks, while Part IV deals with Video Streaming over Wireless Networks. Part V includes papers presenting avant-garde research on applications and services and, finally, Part VI features two papers introducing novel architectural approaches for Wireless Sensor Networks.

This book constitutes the proceedings of the Second International Conference on Space Information Network, SINC 2017, held in Yinchuan, China, in August 2017. The 27 full and three short papers
presented in this volume were carefully reviewed and selected from 145 submissions. The papers are organized in topical sections on system architecture and efficient networking mechanism; theory and method of high speed transmission; sparse representation and fusion processing.

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This two-volume set of LNCS 11871 and 11872 constitutes the thoroughly refereed conference proceedings of the 20th International Conference on Intelligent Data Engineering and Automated Learning, IDEAL 2019, held in Manchester, UK, in November 2019. The 94 full papers presented were carefully reviewed and selected from 149 submissions. These papers provided a timely sample of the latest advances in data engineering and machine learning, from methodologies, frameworks, and algorithms to applications. The core themes of IDEAL 2019 include big data challenges, machine learning, data mining, information retrieval and management, bio-/neuro-informatics, bio-inspired models (including neural networks, evolutionary computation and swarm intelligence), agents and hybrid intelligent systems, real-world applications of intelligent techniques and AI.

This book constitutes the proceedings of the 9th International Conference on Testbeds and Research Infrastructures for the Development of
Networks and Communities, TridentCom 2014, held in Guangzhou, China, in May 2014. The 49 revised full papers presented were carefully selected out of 149 submissions. The conference consisted of 6 symposia covering topics such as testbed virtualization, Internet of Things, vehicular networks, SDN, NDN, large-scale testbed federation, mobile networks, wireless networks.

This book emphasizes that learning efficiency of the learners can be increased by providing personalized course materials and guiding them to attune with suitable learning paths based on their characteristics such as learning style, knowledge level, emotion, motivation, self-efficacy and many more learning ability factors in e-learning system. Learning is a continuous process since human evolution. In fact, it is related to life and innovations. The basic objective of learning to grow, aspire and develop ease of life remains the same despite changes in the learning methodologies. Introduction of computers empowered us to attain new zenith in knowledge domain, developed pragmatic approach to solve life’s problem and helped us to decipher different hidden patterns of data to get new ideas. Of late, computers are predominantly used in education. Its process has been changed from offline to online in view of enhancing the ease of learning. With the advent of information technology, e-learning has taken centre stage in educational domain. In e-learning context, developing adaptive e-learning system is buzzword among contemporary research scholars in the area of Educational Data Mining (EDM). Enabling personalized systems is meant for improvement in learning experience for learners as per their choices made or auto-detected needs. It helps in enhancing their performance in terms of knowledge, skills, aptitudes and preferences. It also enables speeding up the learning process qualitatively and quantitatively. These objectives are met only by the Personalized Adaptive E-learning Systems in this regard. Many noble frameworks were conceptualized, designed and developed to infer learning style preferences, and accordingly, learning materials were delivered adaptively to the learners. Designing frameworks help to measure learners’ preferences minutely and provide adaptive learning materials to them in a way most appropriately.
The recent explosion of digital media, online networking, and e-commerce has generated great new opportunities for those Internet-savvy individuals who see potential in new technologies and can turn those possibilities into reality. It is vital for such forward-thinking innovators to
Web-Based Services: Concepts, Methodologies, Tools, and Applications provides readers with comprehensive coverage of some of the latest tools and technologies in the digital industry. The chapters in this multi-volume book describe a diverse range of applications and methodologies made possible in a world connected by the global network, providing researchers, computer scientists, web developers, and digital experts with the latest knowledge and developments in Internet technologies.

Learn about the latest developments in automotive Ethernet technology and implementation with this fully revised second edition. Including approximately twenty-five percent new material and greater technical detail, coverage is expanded to include: · Detailed explanations of how the 100BASE-T1 PHY and 1000 BASE-T1 PHY technologies actually work · A step-by-step description of how the 1000BASE-T1 channel was derived · A summary of the content and uses of the new TSN standards · A framework for security in Automotive Ethernet · Discussion of the interrelation between power supply and automotive Ethernet communication Industry pioneers share the technical and non-technical decisions that have led to the success of automotive Ethernet, covering everything from electromagnetic requirements and physical layer technologies, Quality of Service, the use of VLANs, IP and Service Discovery, and network architecture and testing. This is a guide for engineers, technical managers and researchers designing components for in-car electronics, and those interested in the strategy of introducing a new technology.

Achieve faster and more efficient network design and optimization with this comprehensive guide. Some of the most prominent researchers in the field explain the very latest analytic techniques and results from stochastic geometry for modelling the signal-to-interference-plus-noise ratio (SINR) distribution in heterogeneous cellular networks. This book will help readers to understand the effects of combining different system deployment parameters on key performance indicators such as coverage and capacity, enabling the efficient allocation of simulation resources. In addition to covering results for network models based on the Poisson point process, this book presents recent results for when non-Poisson base
station configurations appear Poisson, due to random propagation effects such as fading and shadowing, as well as non-Poisson models for base station configurations, with a focus on determinantal point processes and tractable approximation methods. Theoretical results are illustrated with practical Long-Term Evolution (LTE) applications and compared with real-world deployment results.

Offers concise, practical knowledge on modern communication systems to help students transition smoothly into the workplace and beyond. This book presents the most relevant concepts and technologies of today's communication systems and presents them in a concise and intuitive manner. It covers advanced topics such as Orthogonal Frequency-Division Multiplexing (OFDM) and Multiple-Input Multiple-Output (MIMO) Technology, which are enabling technologies for modern communication systems such as WiFi (including the latest enhancements) and LTE-Advanced. Following a brief introduction to the field, Digital Communication for Practicing Engineers immerses readers in the theories and technologies that engineers deal with. It starts off with Shannon Theorem and Information Theory, before moving on to basic modules of a communication system, including modulation, statistical detection, channel coding, synchronization, and equalization. The next part of the book discusses advanced topics such as OFDM and MIMO, and introduces several emerging technologies in the context of 5G cellular system radio interface. The book closes by outlining several current research areas in digital communications. In addition, this text: Breaks down the subject into self-contained lectures, which can be read individually or as a whole. Focuses on the pros and cons of widely used techniques, while providing references for detailed mathematical analysis. Follows the current technology trends, including advanced topics such as OFDM and MIMO. Touches on content this is not usually contained in textbooks such as cyclo-stationary symbol timing recovery, adaptive self-interference canceler, and Tomlinson-Harashima precoder. Includes many illustrations, homework problems, and examples. Digital Communication for Practicing Engineers is an ideal guide for graduate students and professionals in digital communication looking to understand, work with, and adapt to the current and future technology.
This book presents basic and advanced concepts for energy harvesting and energy efficiency, as well as related technologies, methods, and their applications. The book provides up-to-date knowledge and discusses the state-of-the-art equipment and methods used for energy harvesting and energy efficiency, combining theory and practical applications. Containing over 200 illustrations and problems and solutions, the book begins with overview chapters on the status quo in this field. Subsequent chapters introduce readers to advanced concepts and methods. In turn, the final part of the book is dedicated to technical strategies, efficient methods and applications in the field of energy efficiency, which also makes it of interest to technicians in industry. The book tackles problems commonly encountered using basic methods of energy harvesting and energy efficiency, and proposes advanced methods to resolve these issues. All the methods proposed have been validated through simulation and experimental results. These “hot topics” will continue to be of interest to scientists and engineers in future decades and will provide challenges to researchers around the globe as issues of climate change and changing energy policies become more pressing. Here, readers will find all the basic and advanced concepts they need. As such, it offers a valuable, comprehensive guide for all students and practicing engineers who wishing to learn about and work in these fields.
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