

Communication Technologies For Vehicles 6th International

Emerging Communication Technologies Based on Wireless Sensor Networks: Current Research and Future Applications fills a gap in the existing literature by combining a plethora of WSN-based emerging technologies into a single source so that researchers can form opinions regarding these technologies. It presents different types of emerging communication technologies based on WSNs and describes how wireless sensor networks can be integrated with other communication technologies. It covers many of the new techniques and demonstrates the application of WSNs. The book's 14 chapters are divided into four parts. The first part covers the basics of wireless sensor networks and their principal working methods. The authors then move on to discuss different types of WSNs, characteristics of different types of emerging technologies based on WSNs, renewable energy sources, battery replenishment strategies, and application-specific energy challenges of WSNs. The second part is dedicated to issues related to wireless body area networks (WBANs). It discusses wearable WSNs and their applications, standards, and research trends. The authors also discuss routing schemes devised for WBANs and thermal-aware routing protocols for WBANs. The third part focuses on different emerging communication technologies based on WSNs, including electromagnetic wireless nanosensor networks, WSNs in the IoT, management of WSNs through satellite networks, WSNs in smart homes, and cognitive radio technology in conjunction with WSNs. The last part of the book covers topics generally related to typical WSNs, including energy-efficient data collection in WSNs, key distribution mechanisms in WSNs, distributed data gathering algorithms for mobile WSNs, and finally, a novel mobility scheme for WSNs that supports IPv6.

This Proceedings volume contains articles presented at the CIRP-Sponsored International Conference on Digital Enterprise Technology (DET2009) that takes place December 14–16, 2009 in Hong Kong. This is the 6th DET conference in the series and the first to be held in Asia. Professor Paul Maropoulos initiated, hosted and chaired the 1st International DET Conference held in 2002 at the University of Dham. Since this inaugural first DET conference, DET conference series has been successfully held in 2004 at Seattle, Washington USA, in 2006 at Setubal Portugal, in 2007 at Bath England, and in 2008 at Nantes France. The DET2009 conference continues to bring together International expertise from the academic and industrial fields, pushing forward the boundaries of research knowledge and best practice in digital enterprise technology for design and manufacturing, and logistics and supply chain management. Over 120 papers from over 10 countries have been accepted for presentation at DET2009 and inclusion in this Proceedings volume after stringent refereeing process. On behalf of the organizing and program committees, the Editors are grateful to the many people who have made DET2009 possible: to the authors and presenters, especially the keynote speakers, to those who have diligently reviewed submissions, to members of International Scientific Committee, Organizing Committee and Advisory Committee, and to colleagues for their hard work in sorting out all the arrangements. We would also like to extend our gratitude to DET2009 sponsors, co-organizers, and supporting organizations.

This book constitutes the proceedings of the 13th International Workshop on Communication Technologies for Vehicles, Nets4Cars/Nets4Trains/Nets4Aircraft 2018, held in Madrid, Spain, in May 2018. The 17 full papers presented together with 2 demo papers in this volume were carefully reviewed and selected from numerous submissions. The volume features contributions in the theory or practice of intelligent transportation systems (ITS) and communication technologies for: - Vehicles on road: e.g. cars, trucks and buses; - Air: e.g. aircraft and unmanned aerial vehicles; and - Rail: e.g. trains, metros and trams.

This book constitutes the refereed proceedings of the 28th International Conference on Data Analytics and Management in Data Intensive Domains, DAMDID/RCDL 2016, held in Ershovo, Moscow, Russia, in October 2016. The 16 revised full papers presented together with one invited talk and two keynote papers were carefully reviewed and selected from 57 submissions. The papers are organized in topical sections on semantic modeling in data intensive domains; knowledge and learning management; text mining; data infrastructures in astrophysics; data analysis; research infrastructures; position paper.

This book constitutes the refereed proceedings of the 5th International Conference on Convergence and Hybrid Information Technology, ICHIT 2011, held in Daejeon, Korea, in September 2011. The 94 revised full papers were carefully selected from 323 initial submissions. The papers are organized in topical sections on communications and networking, intelligent systems and applications, sensor network and cloud systems, information retrieval and scheduling, hardware and software engineering, security systems, robotics and RFID Systems, pattern recognition, image processing and clustering, data mining, as well as human computer interaction.

Communication Technologies for Vehicles 6th International Workshop, Nets4Cars/Nets4Trains/Nets4Aircraft 2014, Offenburg, Germany, May 6-7, 2014, Proceedings Springer

Receive comprehensive instruction on the fundamentals of wireless security from three leading international voices in the field Security in Wireless Communication Networks delivers a thorough grounding in wireless communication security.

The distinguished authors pay particular attention to wireless specific issues, like authentication protocols for various wireless communication networks, encryption algorithms and integrity schemes on radio channels, lessons learned from designing secure wireless systems and standardization for security in wireless systems. The book addresses how engineers, administrators, and others involved in the design and maintenance of wireless networks can achieve security while retaining the broadcast nature of the system, with all of its inherent harshness and interference. Readers will learn: A comprehensive introduction to the background of wireless communication network security, including a broad overview of wireless communication networks, security services, the mathematics crucial to the subject, and cryptographic techniques An exploration of wireless local area network security, including Bluetooth security, Wi-Fi security, and body area network security An examination of wide area wireless network security, including treatments of 2G, 3G, and 4G

Discussions of future development in wireless security, including 5G, and vehicular ad-hoc network security Perfect for undergraduate and graduate students in programs related to wireless communication, Security in Wireless Communication Networks will also earn a place in the libraries of professors, researchers, scientists, engineers, industry managers, consultants, and members of government security agencies who seek to improve their understanding of wireless security protocols and practices.

The book is about all aspects of computing, communication, general sciences and educational research covered at the Second International Conference on Computer & Communication Technologies held during 24-26 July 2015 at Hyderabad. It hosted by CMR Technical Campus in association with Division – V (Education & Research) CSI, India. After a rigorous review only quality papers are selected and included in this book. The entire book is divided into three volumes. Three volumes cover a variety of topics which include medical imaging, networks, data mining, intelligent computing, software design, image processing, mobile computing, digital signals and speech processing, video surveillance and processing, web mining, wireless sensor networks, circuit analysis, fuzzy systems, antenna and communication systems, biomedical signal processing and applications, cloud computing, embedded systems applications and cyber security and digital forensic. The readers of these volumes will be highly benefited from the technical contents of the topics.

Recent developments in the fields of intelligent computing and communication have paved the way for the handling of current and upcoming problems and brought about significant technological advancements. This book presents the proceedings of IConIC 2021, the 4th International Conference on Intelligent Computing, held on 26 and 27 March 2021 in Chennai, India. The principle objective of the annual IConIC conference is to provide an international scientific forum where participants can exchange innovative ideas in relevant fields and interact in depth through discussion with their peer group. The theme of the 2021 conference and this book is 'Smart Intelligent Computing and Communication Technology', and the 109 papers included here focus on the technological innovations and trendsetting initiatives in medicine, industry, education and security that are improving and optimizing business and technical processes and enabling inclusive growth. The papers are grouped under 2 headings: Evolution of Computing Intelligence; and Computing and Communication, and cover a broad range of intelligent-computing research and applications. The book provides an overview of the cutting-edge developments and emerging areas of study in the technological fields of intelligent computing, and will be of interest to researchers and practitioners from both academia and industry.

This book constitutes the proceedings of the 8th International Workshop on Communication Technologies for Vehicles, Nets4Cars/Nets4Trains/Nets4Aircraft 2015, held in Sousse, Tunisia, in May 2015. The 20 papers presented in this volume were carefully reviewed and selected from 27 submissions. The contributions are organized in topical sections named: road; rail; and air.

Interactive mobile technologies have now become the core of many—if not all—fields of society. Not only do the younger generation of students expect a mobile working and learning environment, but also the new ideas, technologies and solutions introduced on a nearly daily basis also boost this trend. Discussing and assessing key trends in the mobile field were the primary aims of the 11th International Conference on Interactive Mobile Communication, Technologies and Learning (IMCL2017), which was held in Thessaloniki from 30 November to 01 December 2017. Since being founded in 2006, the conference has been devoted to new approaches in interactive mobile technologies, with a focus on learning. The IMCL conferences have in the meanwhile become a central forum of the exchange of new research results and relevant trends, as well as best practices. This book contains papers in the fields of: Future Trends and Emerging Mobile Technologies Design and Development of Mobile Learning Apps and Content Mobile Games—Gamification and Mobile Learning Adaptive Mobile Environments Augmented Reality and Immersive Applications Tangible, Embedded and Embodied Interaction Interactive Collaborative and Blended Learning Digital Technology in Sports Mobile Health Care and Training Multimedia Learning in Music Education 5G Network Infrastructure Case Studies Real-World Experiences The content will appeal to a broad readership, including policymakers, academics, educators, researchers in pedagogy and learning theory, school teachers, the learning industry, further education lecturers, etc.

Spectrum Sharing in Wireless Networks: Fairness, Efficiency, and Security provides a broad overview of wireless network spectrum sharing in seven distinct sections: The first section examines the big picture and basic principles, explaining the concepts of spectrum sharing, hardware/software function requirements for efficient sharing, and future trends of sharing strategies. The second section contains more than 10 chapters that discuss differing approaches to efficient spectrum sharing. The authors introduce a new coexistence and sharing scheme for multi-hop networks, describe the space-time sharing concept, introduce LTE-U, and examine sharing in broadcast and unicast environments. They then talk about different cooperation strategies to achieve mutual benefits for primary users (PU) and secondary users (SU), discuss protocols in a spectrum sharing context, and provide different game theory models between PUs and SUs. The third section explains how to model the interactions of PUs and SUs, using an efficient calculation method to determine spectrum availability. Additionally, this section explains how to use scheduling models to achieve efficient SU traffic delivery. The subject of the fourth section is MIMO-oriented design. It focuses on how directional antennas and MIMO antennas greatly enhance wireless network performance. The authors include a few chapters on capacity/rate calculations as well as beamforming issues under MIMO antennas. Power control is covered in the fifth section which also describes the interference-aware power allocation schemes among cognitive radio users and the power control schemes in cognitive radios. The sixth section provides a comprehensive look at security issues, including different types of spectrum sharing attacks and threats as well as corresponding countermeasure schemes. The seventh and final section covers issues pertaining to military applications and examines how the military task protects its data flows when sharing the spectrum with civilian applications.

The book proposes new technologies and discusses future solutions for ICT design infrastructures, and includes high-quality submissions presented at the Third International Conference on ICT for Sustainable Development (ICT4SD 2018), held in Goa, India on 30–31 August 2018. The conference stimulated cutting-edge research discussions among pioneering researchers, scientists, industrial engineers, and students from all around the world. Bringing together experts from different countries, the book focuses on innovative issues at an international level.

This book constitutes the joint refereed proceedings of the 4th International Workshop on Communication Technologies for Vehicles/Trains, Nets4Cars 2012 and Nets4Trains 2012, held in Vilnius, Lithuania, in April 2012. The 4 full papers of the rail track and 11 full papers of the road track presented were carefully reviewed and selected from numerous submissions. They provide an overview over latest technologies and research in the field of intra- and inter-vehicle communications (protocols and standards), mobility and traffic models (models, methodologies, and techniques), testing, and applications.

In spite of their importance and potential societal impact, there is currently no comprehensive source of information about vehicular ad hoc networks (VANETs). Cohesively integrating the state of the art in this emerging field, *Vehicular Networks: From Theory to Practice* elucidates many issues involved in vehicular networking, including traffic engineering, human factors studies, and novel computer science research. Divided into six broad sections, the book begins with an overview of traffic engineering issues, such as traffic monitoring and traffic flow modeling. It then introduces governmental and industrial efforts in the United States and Europe to set standards and perform field tests on the feasibility of vehicular networks. After highlighting innovative applications enabled by vehicular networks, the book discusses several networking-related issues, including routing and localization. The following section focuses on simulation, which is currently the primary method for evaluating vehicular networking systems. The final part explores the extent and impact of driver distraction with in-vehicle displays. Encompassing both introductory and advanced concepts, this guide covers the various areas that impact the design of applications for vehicular networks. It details key research challenges, offers guidance on developing future standards, and supplies valuable information on existing experimental studies.

This two volume set (CCIS 1257 and 1258) constitutes the refereed proceedings of the 6th International Conference of Pioneering Computer Scientists, Engineers and Educators, ICPCSEE 2020 held in Taiyuan, China, in September 2020. The 98 papers presented in these two volumes were carefully reviewed and selected from 392 submissions. The papers are organized in topical sections: database, machine learning, network, graphic images, system, natural language processing, security, algorithm, application, and education. The chapter "Highly Parallel SPARQL Engine for RDF" is available open access under a Creative Commons Attribution 4.0 International License via link.springer.com.

This book includes selected papers presented at the 4th International Conference on Data Engineering and Communication Technology (ICDECT 2020), held at Kakatiya Institute of Technology & Science, Warangal, India, during 25-6 September 2020. It features advanced, multidisciplinary research towards the design of smart computing, information systems and electronic systems. It also focuses on various innovation paradigms in system knowledge, intelligence and sustainability which can be applied to provide viable solutions to diverse problems related to society, the environment and industry.

This book (CCIS 899) constitutes the refereed proceedings of the First International Conference on Applications of Computing and Communication Technologies, ICACCT 2018, held in Delhi, India, in March 2018. The 30 full papers were carefully reviewed and selected from 109 submissions. The papers are organized in topical sections on communication and system technologies, computing and network technologies, application and services.

This book constitutes the revised, selected and extended papers of the 6th International Conference on Communication Technologies for Ageing Well and e-Health, ICT4AWE 2020, held in Prague, Czech Republic, in May 2020. Due to the COVID-19 pandemic the conference was held online. The 7 full papers presented were carefully reviewed and selected from 50 submissions. The papers present most recent research on best practices, innovation and technical improvements in the fields of age and health care, education, psychology, social coordination and ambient assisted living.

This book constitutes the refereed proceedings of the International Conference on Applications and Techniques in Information Security, ATIS 2016, held in Cairns, Australia, October 2016. The 10 revised full papers and three short papers presented together with two invited talks were carefully reviewed and selected from 38 submissions. The papers are organized in topical sections on invited speeches; attacks on data security systems; detection of attacks on data security systems; data security; data privacy.

"This book attempts to close the gap between science and technology in the field of roadside backbones for VCNs"--Provided by publisher.

This book constitutes the thoroughly refereed post-conference proceedings of the 12th International Conference on Wired/Wireless Internet Communication, WWIC 2014, held in Paris, France, during May 27-28, 2014. The 22 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on wireless and wired networks; resource management and next generation services; next generation services, network architecture and applications.

This book constitutes the refereed proceedings of the Second International Multi-topic Conference, IMTIC 2012, held in Jamshoro, Pakistan, in March 2012. The 51 revised full papers presented were carefully reviewed and selected from 205 submissions. The papers address topics from information communication technologies.

This book includes extended and revised selected papers from the 9th International Conference on Smart Cities and Green ICT Systems, SMARTGREENS 2020, and the 6th International Conference on Vehicle Technology and Intelligent Transport Systems, VEHITS 2020, held in Prague, Czech Republic, in May 2020. The 30 full papers presented during SMARTGREENS and VEHITS 2020 were carefully reviewed and selected from the 117 submissions. The papers present research on advances and applications in the fields of smart cities, electric vehicles, sustainable computing and communications, energy aware systems and technologies, intelligent vehicle technologies, intelligent transport systems and infrastructure, connected vehicles.

This book constitutes the proceedings of the 6th International Workshop on Communication Technologies for Vehicles, Nets4Cars/Nets4Trains/Nets4Aircraft 2014, held in Offenburg, Germany in May 2014. The 10 papers presented in this volume were carefully reviewed and selected from 15 submissions. The book also contains 4 invited papers. The contributions are organized in topical sections named: automotive issues, car-to-car, aviation issues, in-car, and infrastructures.

This volume contains 69 papers presented at ICICT 2015: International Congress on Information and Communication Technology. The conference was held during 9th and 10th October, 2015, Udaipur, India and organized by CSI Udaipur Chapter, Division IV, SIG-WNS, SIG-e-Agriculture in association with ACM Udaipur Professional Chapter, The Institution of Engineers (India), Udaipur Local Centre and Mining Engineers Association of India, Rajasthan Udaipur Chapter. This volume contains papers mainly focused on ICT for Managerial Applications, E-governance, IOT and E-Mining.

This book presents new communication and networking technologies, an area that has gained significant research attention from both academia and industry in recent years. It also discusses the development of more intelligent and efficient communication technologies, which are an essential part of current day-to-day life, and reports on recent innovations in technologies, architectures, and standards relating to these technologies. The book includes research that spans a wide range of communication and networking technologies, including wireless sensor networks, big data, Internet of Things, optical and telecommunication networks, artificial intelligence, cryptography, next-generation networks, cloud computing, and natural language processing. Moreover, it focuses on novel solutions in the context of communication and networking challenges, such as optimization algorithms, network interoperability, scalable network clustering, multicasting and fault-tolerant

techniques, network authentication mechanisms, and predictive analytics.

This book gathers selected high-quality research papers presented at the Sixth International Congress on Information and Communication Technology, held at Brunel University, London, on February 25-26, 2021. It discusses emerging topics pertaining to information and communication technology (ICT) for managerial applications, e-governance, e-agriculture, e-education and computing technologies, the Internet of things (IoT) and e-mining. Written by respected experts and researchers working on ICT, the book offers a valuable asset for young researchers involved in advanced studies. The book is presented in four volumes.

"This book contains case studies, theories, and empirical research aimed to assist individuals and organizations in understanding the critical concepts of data networking and communications"--Provided by publisher.

This book constitutes the proceedings of the 6th International Conference on the Internet of Vehicles, IOV 2019, which took place in Kaohsiung, Taiwan, in November 2019. The 23 papers presented in this volume were carefully reviewed and selected from 101 submissions. The papers focus on providing new efficient solutions with digital intervehicular data transfer and overall communications. Yet, IOV is different from Telematics, Vehicle Ad hoc Networks, and Intelligent Transportation, in which vehicles like phones can run within the whole network, and obtain various services by swarm intelligent computing with people, vehicles, and environments.

The two-volume set IFIP AICT 392 and 393 constitutes the refereed post-conference proceedings of the 6th IFIP TC 5, SIG 5.1 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2012, held in Zhangjiajie, China, in October 2012. The 108 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including Internet of things and cloud computing; simulation models and decision-support systems for agricultural production; smart sensor, monitoring, and control technology; traceability and e-commerce technology; computer vision, computer graphics, and virtual reality; the application of information and communication technology in agriculture; and universal information service technology and service systems development in rural areas. The 53 papers included in the first volume focus on decision support systems, intelligent systems, and artificial intelligence applications.

This book discusses data communication and computer networking, communication technologies and the applications of IoT (Internet of Things), big data, cloud computing and healthcare informatics. It explores, examines and critiques intelligent data communications and presents inventive methodologies in communication technologies and IoT. Aimed at researchers and academicians who need to understand the importance of data communication and advanced technologies in IoT, it offers different perspectives to help readers increase their knowledge and motivates them to conduct research in the area, highlighting various innovative ideas for future research.

This book includes original, peer-reviewed research from the 3rd International Conference on Emerging Trends in Electrical, Communication and Information Technologies (ICECIT 2018), held at Srinivasa Ramanujan Institute of Technology, Ananthapuramu, Andhra Pradesh, India in December 2018. It covers the latest research trends and developments in the areas of Electrical Engineering, Electronic and Communication Engineering, and Computer Science and Information.

This book constitutes the thoroughly refereed post-conference proceedings of the 12th International Conference on Security for Information Technology and Communications, SecITC 2019, held in Bucharest, Romania, in November 2019. The 14 revised full papers presented together with 4 invited talks were carefully reviewed and selected from 34 submissions. The papers present a wide range from cryptographic algorithms, to digital forensic and cyber security.

The book covers a wide range of wireless communication and network technologies, and will help readers understand the role of wireless technologies in applications touching on various spheres of human life, e.g. healthcare, agriculture, building smart cities, forecasting and the manufacturing industry. The book begins by discussing advances in wireless communication, including emerging trends and research directions for network technologies. It also highlights the importance of and need to actively develop these technologies. In turn, the book addresses different algorithms and methodologies which could be beneficial in implementing 5G Mobile Communication, Vehicular Ad-hoc Networks (VANET), Reliable Cooperative Networks, Delay Tolerant Networks (DTN) and many more contexts related to advanced communications. It then addresses the prominence of wireless communication in connection with the Internet of Things (IoT), Mobile Opportunistic Networks and Cognitive Radio Networks (CRN). Lastly, it presents the new horizons in architecture and building protocols for Li-Fi (Light-Fidelity) and Wearable Sensor Technology.

The revised and updated sixth edition of *Satellite Communications Systems* contains information on the most recent advances related to satellite communications systems, technologies, network architectures and new requirements of services and applications. The authors – noted experts on the topic – cover the state-of-the-art satellite communication systems and technologies and examine the relevant topics concerning communication and network technologies, concepts, techniques and algorithms. New to this edition is information on internetworking with the broadband satellite systems, more intensive coverage of Ka band technologies, GEO high throughput satellite (HTS), LEO constellations and the potential to support the current new broadband Internet services as well as future developments for global information infrastructure. The authors offer details on digital communication systems and broadband networks in order to provide high-level researchers and professional engineers an authoritative reference. The companion website provides slides for instructors to teach and for students to learn. In addition, the book is designed in a user-friendly format.

"This book examines critical issues involved with telematics such as vehicular network infrastructure, vehicular network communication protocols, and vehicular services and applications"--Provided by publisher.

This book presents the Proceedings of The 6th Brazilian Technology Symposium (BTSym'20). The book discusses the current technological issues on Systems Engineering, Mathematics and Physical Sciences, such as the Transmission Line, Protein-Modified Mortars, Electromagnetic Properties, Clock Domains, Chebyshev Polynomials, Satellite Control Systems, Hough Transform, Watershed Transform, Blood Smear Images, Toxoplasma Gondii, Operation System Developments, MIMO Systems, Geothermal-Photovoltaic Energy Systems, Mineral Flotation Application, CMOS Techniques, Frameworks Developments, Physiological Parameters Applications, Brain-Computer Interface, Artificial Neural Networks, Computational Vision, Security Applications, FPGA Applications, IoT, Residential Automation, Data Acquisition, Industry 4.0, Cyber-Physical Systems, Digital Image Processing, Patters Recognition, Machine Learning, Photocatalytic Process, Physical-Chemical Analysis, Smoothing Filters, Frequency Synthesizers, Voltage-Controlled Ring Oscillator, Difference Amplifier, Photocatalysis, Photodegradation, current technological issues on Human, Smart and Sustainable Future of Cities, such as the Digital Transformation, Data Science, Hydrothermal Dispatch, Project Knowledge Transfer, Immunization Programs, Efficiency and Predictive Methods, PMBOK Applications, Logistics Process, IoT, Data Acquisition, Industry 4.0, Cyber-Physical Systems, Fingerspelling Recognition, Cognitive Ergonomics, Ecosystem Services, Environmental, Ecosystem Services Valuation, Solid Waste and University Extension. Advances the understanding of management methods, information technology, and their joint application in business processes.

This volume presents the contributions of the 6th International Conference on Advancements of Medicine and Health Care through Technology – MediTech 2018, held between 17 – 20 October 2018 in Cluj-Napoca, Romania. The papers of this Proceedings volume present new developments in : - Health Care Technology - Medical Devices, Measurement and Instrumentation - Medical Imaging, Image and Signal Processing - Modeling and Simulation - Molecular Bioengineering - Biomechanics

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