
Bookmark File PDF Pdf Collaborative Internet Of Things C lot Book By John Wiley Sons

This is likewise one of the factors by obtaining the soft documents of this **Pdf Collaborative Internet Of Things C lot Book By John Wiley Sons** by online. You might not require more become old to spend to go to the books instigation as without difficulty as search for them. In some cases, you likewise accomplish not discover the message Pdf Collaborative Internet Of Things C lot Book By John Wiley Sons that you are looking for. It will categorically squander the time.

However below, in imitation of you visit this web page, it will be therefore certainly simple to get as with ease as download lead Pdf Collaborative Internet Of Things C lot Book By John Wiley Sons

It will not assume many become old as we notify before. You can reach it while sham something else at house and even in your workplace. as a result easy! So, are you question? Just exercise just what we provide under as with ease as evaluation **Pdf Collaborative Internet Of Things C lot Book By John Wiley Sons** what you considering to read!

HHK0QO - BRYANT SANTOS

Argues that the Internet of Things, which is making goods and services essentially free due to a nearly zero marginal cost, is causing corporate profits to dry up, property rights to weaken, and the mindset of scarcity to give away to the possibility of abundance. SECURITY AND PRIVACY IN THE INTERNET OF THINGS Provides the authoritative and up-to-date information required for securing IoT architecture and applications The vast amount of data generated by the Internet of Things (IoT) has made information and cyber security vital for not only personal privacy, but also for the sustainability of the IoT itself. Security and Privacy in the Internet

of Things brings together high-quality research on IoT security models, architectures, techniques, and application domains. This concise yet comprehensive volume explores state-of-the-art mitigations in IoT security while addressing important security and privacy challenges across different IoT layers. The book provides timely coverage of IoT architecture, security technologies and mechanisms, and applications. The authors outline emerging trends in IoT security and privacy with a focus on areas such as smart environments and e-health. Topics include authentication and access control, attack detection and prevention, securing IoT through traffic modeling, human aspects in IoT security, and IoT

hardware security. Presenting the current body of knowledge in a single volume, *Security and Privacy in the Internet of Things: Discusses a broad range of IoT attacks and defense mechanisms Examines IoT security and privacy protocols and approaches Covers both the logical and physical security of IoT devices Addresses IoT security through network traffic modeling Describes privacy preserving techniques in smart cities Explores current threat and vulnerability analyses Security and Privacy in the Internet of Things: Architectures, Techniques, and Applications* is essential reading for researchers, industry practitioners, and students involved in IoT security development and IoT systems deployment. The two-volume set LNCS 10295 and 10296 constitute the refereed proceedings of the 4th International Conference on Learning and Collaboration Technologies, LCT 2017, held as part of the 19th International Conference on Human-Computer Interaction, HCI 2017, in Vancouver, BC, Canada, in July 2017, in conjunction with 15 thematically similar conferences. The 1228 papers presented at the HCI 2017 conferences were carefully reviewed and selected from 4340 submissions. The papers 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: multimodal and natural interaction for learning; learning and teaching ecosystems; e-learning, social media and MOOCs; beyond the classroom; and games and gamification for learning.

Many of the initial developments towards the Internet of Things have focused on the combination of Auto-ID and networked infrastructures in business-to-business logistics and product lifecycle

applications. However, the Internet of Things is more than a business tool for managing business processes more efficiently and more effectively – it will also enable a more convenient way of life. Since the term Internet of Things first came to attention when the Auto-ID Center launched their initial vision for the EPC network for automatically identifying and tracing the flow of goods within supply-chains, increasing numbers of researchers and practitioners have further developed this vision. The authors in this book provide a research perspective on current and future developments in the Internet of Things. The different chapters cover a broad range of topics from system design aspects and core architectural approaches to end-user participation, business perspectives and applications.

Necessity is the mother of invention; challenging times can provide new opportunities that must be detected and exploited at the right moments. The COVID-19 pandemic has demonstrated that it is not only an issue of healthcare but also a challenge for the global economy, business, and society. Organizations have rapidly deployed technology solutions that enable them to work and service remotely and continue most of their normal operations. The *Handbook of Research on Technologies and Systems for E-Collaboration During Global Crises* focuses on emerging technologies and systems, strategies, and solutions for e-collaboration. This book assesses the importance of technologies and systems for e-collaboration in dealing with emerging crises such as pandemics. Covering topics such as deep learning processes, machine vision, and profit-sharing models, it is an essential resource for computer scientists, public officials, engineers, students and

professors of higher education, healthcare administration, programmers, researchers, and academicians.

This book provides an overview of the current Internet of Things (IoT) landscape, ranging from the research, innovation and development priorities to enabling technologies in a global context. A successful deployment of IoT technologies requires integration on all layers, be it cognitive and semantic aspects, middleware components, services, edge devices/machines and infrastructures. It is intended to be a standalone book in a series that covers the Internet of Things activities of the IERC - Internet of Things European Research Cluster from research to technological innovation, validation and deployment. The book builds on the ideas put forward by the European Research Cluster and the IoT European Platform Initiative (IoT-EPI) and presents global views and state of the art results on the challenges facing the research, innovation, development and deployment of IoT in the next years. The IoT is bridging the physical world with virtual world and requires sound information processing capabilities for the "digital shadows" of these real things. The research and innovation in nanoelectronics, semiconductor, sensors/actuators, communication, analytics technologies, cyber-physical systems, software, swarm intelligent and deep learning systems are essential for the successful deployment of IoT applications. The emergence of IoT platforms with multiple functionalities enables rapid development and lower costs by offering standardised components that can be shared across multiple solutions in many industry verticals. The IoT applications will gradually move from vertical, single purpose solutions to multi-purpose and collaborative applications interacting across industry verticals, organisations and people, being one of the es-

sential paradigms of the digital economy. Many of those applications still have to be identified and involvement of end-users including the creative sector in this innovation is crucial. The IoT applications and deployments as integrated building blocks of the new digital economy are part of the accompanying IoT policy framework to address issues of horizontal nature and common interest (i.e. privacy, end-to-end security, user acceptance, societal, ethical aspects and legal issues) for providing trusted IoT solutions in a coordinated and consolidated manner across the IoT activities and pilots. In this, context IoT ecosystems offer solutions beyond a platform and solve important technical challenges in the different verticals and across verticals. These IoT technology ecosystems are instrumental for the deployment of large pilots and can easily be connected to or build upon the core IoT solutions for different applications in order to expand the system of use and allow new and even unanticipated IoT end uses. Technical topics discussed in the book include: • Introduction • Digitising industry and IoT as key enabler in the new era of Digital Economy • IoT Strategic Research and Innovation Agenda • IoT in the digital industrial context: Digital Single Market • Integration of heterogeneous systems and bridging the virtual, digital and physical worlds • Federated IoT platforms and interoperability • Evolution from intelligent devices to connected systems of systems by adding new layers of cognitive behaviour, artificial intelligence and user interfaces. • Innovation through IoT ecosystems • Trust-based IoT end-to-end security, privacy framework • User acceptance, societal, ethical aspects and legal issues • Internet of Things Applications

This book tackles the latest research trends in technology accep-

tance models and theories. It presents high-quality empirical and review studies focusing on the main theoretical models and their applications across various technologies and contexts. It also provides insights into the theoretical and practical aspects of different technological innovations that assist decision-makers in formulating the required policies and procedures for adopting a specific technology.

Wearable technologies – such as smart glasses, smart watches, smart objects, or smart garments – are potential game-changers, breaking ground and offering new opportunities for learning. These devices are body-worn, equipped with sensors, and integrate ergonomically into everyday activities. With wearable technologies forging new human-computer relations, it is essential to look beyond the current perspective of how technologies may be used to enhance learning. This edited volume, “Perspectives on Wearable Enhanced Learning,” aims to take a multidisciplinary view on wearable enhanced learning and provide a comprehensive overview of current trends, research, and practice in diverse learning contexts including school and work-based learning, higher education, professional development, vocational training, health and healthy aging programs, smart and open learning, and work. This volume features current state of the art wearable enhanced learning and explores how these technologies have begun to mark the transition from the desktop through the mobile to the age of wearable, ubiquitous technology-enhanced learning.

This book constitutes the refereed proceedings of the 18th IFIP WG 5.5 Working Conference on Virtual Enterprises, PRO-VE 2017, held in Vicenza, Italy, in September 2017. The 68 revised full pa-

pers were carefully reviewed and selected from 159 submissions. They provide a comprehensive overview of identified challenges and recent advances in various collaborative network (CN) domains and their applications, with a strong focus on the following areas: collaborative models, platforms and systems for data-rich worlds; manufacturing ecosystem and collaboration in Industry 4.0; big data analytics and intelligence; risk, performance, and uncertainty in collaborative data-rich systems; semantic data/service discovery, retrieval, and composition in a collaborative data-rich world; trust and sustainability analysis in collaborative networks; value creation and social impact of collaboration in data-rich worlds; technology development platforms supporting collaborative systems; collective intelligence and collaboration in advanced/emerging applications: collaborative manufacturing and factories of the future, e-health and care, food and agribusiness, and crisis/disaster management.

Digital Innovations in Healthcare Education and Training discusses and debates the contemporary knowledge on the evolution of digital education, learning and the web and its integration and role within modern healthcare education and training. The book encompasses topics such as healthcare and medical education theories and methodologies, social learning as a formal and informal digital innovation, and the role of semantics in digital education. In addition, it examines how simulation, serious games, and virtual patients change learnings in healthcare, and how learning analytics and big data in healthcare education leads to personalized learning. Online pedagogy principles and applications, participatory educational design and educational technology as health intervention are bridged together to complement this collabora-

tive effort. This book is a valuable resource for a broad audience, both technical and non-technical, including healthcare and medical tutors, health professionals, clinicians, web scientists, engineers, computer scientists and any other relevant professional interested in using and creating digital innovations for healthcare education and training. Provides contemporary knowledge on the evolution of learning technologies and the web and its integration and role within modern healthcare education and training Discusses the latest digital innovation in healthcare education and training, thus enabling all type of readers to apply best practices Encompasses a cross-theme, scholarly explanation based on successful cases which provides a deep knowledge experience into digital innovation in healthcare education and training

This book offers the latest advances and results in the fields of Machine Learning and Deep Learning for Wireless Communication and provides positive and critical discussions on the challenges and prospects. It provides a broad spectrum in understanding the improvements in Machine Learning and Deep Learning that are motivating by the specific constraints posed by wireless networking systems. The book offers an extensive overview on intelligent Wireless Communication systems and its underlying technologies, research challenges, solutions, and case studies. It provides information on intelligent wireless communication systems and its models, algorithms and applications. The book is written as a reference that offers the latest technologies and research results to various industry problems.

This book constitutes the refereed proceedings of the 20th IFIP WG 5.5 Working Conference on Virtual Enterprises, PRO-VE 2019, held in Turin, Italy, in September 2019. The 56 revised full papers

were carefully reviewed and selected from 141 submissions. They provide a comprehensive overview of major challenges and recent advances in various domains related to the digital transformation and collaborative networks and their applications with a strong focus on the following areas related to the main theme of the conference: collaborative models, platforms and systems for digital revolution; manufacturing ecosystem and collaboration in Industry 4.0; big data analytics and intelligence; risk, performance, and uncertainty in collaborative networked systems; semantic data/service discovery, retrieval, and composition in a collaborative networked world; trust and sustainability analysis in collaborative networks; value creation and social impact of collaborative networks on the digital revolution; technology development platforms supporting collaborative systems; collective intelligence and collaboration in advanced/emerging applications; and collaborative manufacturing and factories of the future, e-health and care, food and agribusiness, and crisis/disaster management.

The amount of data shared and stored on the web and other document repositories is steadily on the rise. Unfortunately, this growth increases inefficiencies and difficulties when trying to find the most relevant and up-to-date information due to unstructured data. Advanced Metaheuristic Methods in Big Data Retrieval and Analytics examines metaheuristic techniques as an important alternative model for solving complex problems that are not treatable by deterministic methods. Recent studies suggest that IR and biomimicry can be used together for several application problems in big data and internet of things, especially when conventional methods would be too expensive or difficult to imple-

ment. Featuring coverage on a broad range of topics such as ontology, plagiarism detection, and machine learning, this book is ideally designed for engineers, graduate students, IT professionals, and academicians seeking an overview of new trends in information retrieval in big data.

Internet of Things: Technologies and Applications for a New Age of Intelligence outlines the background and overall vision for the Internet of Things (IoT) and Cyber-Physical Systems (CPS), as well as associated emerging technologies. Key technologies are described including device communication and interactions, connectivity of devices to cloud-based infrastructures, distributed and edge computing, data collection, and methods to derive information and knowledge from connected devices and systems using artificial intelligence and machine learning. Also included are system architectures and ways to integrate these with enterprise architectures, and considerations on potential business impacts and regulatory requirements. Presents a comprehensive overview of the end-to-end system requirements for successful IoT solutions Provides a robust framework for analyzing the technology and market requirements for a broad variety of IoT solutions Covers in-depth security solutions for IoT systems Includes a detailed set of use cases that give examples of real-world implementation How the enabling technologies in 5G as an integral or as a part can seamlessly fuel the IoT revolution is still very challenging. This book presents the state-of-the-art solutions to the theoretical and practical challenges stemming from the integration of 5G enabling technologies into IoTs in support of a smart 5G-enabled IoT paradigm, in terms of network design, operation, management, optimization, privacy and security, and applications. In particular,

the technical focus covers a comprehensive understanding of 5G-enabled IoT architectures, converged access networks, privacy and security, and emerging applications of 5G-enabled IoT.

This book discusses emerging technologies in the field of the Internet of Things and big data, an area that will be scaled in next two decades. Written by a team of leading experts, it is the only book focusing on the broad areas of both the Internet of things and big data. The thirteen chapters present real-time experimental methods and theoretical explanations, as well as the implementation of these technologies through various applications. Offering a blend of theory and hands-on practices, the book enables graduate, postgraduate and research students who are involved in real-time project scaling techniques to understand projects and their execution. It is also useful for senior computer students, researchers and industry workers who are involved in experimenting with the Internet of Things and big data technologies, helping them to solve the real-time problem. Moreover, the chapters covering cutting-edge technologies help multidisciplinary researchers who are bridging the gap of two different outset real-time problems.

As Industry 4.0 brings on a new bout of transformation and fundamental changes in various industries, the traditional manufacturing and production methods are falling to the wayside. Industrial processes must embrace modern technology and the most recent trends to keep up with the times. With “smart factories”; the automation of information and data; and the inclusion of IoT, AI technologies, robotics, and cloud computing comes new challenges to tackle. These changes are creating new threats in security, relia-

bility, the regulations around legislation and standardization of technologies, malfunctioning devices or operational disruptions, and more. These effects span a variety of industries and need to be discussed. Research Anthology on Cross-Industry Challenges of Industry 4.0 explores the challenges that have risen as multidisciplinary industries adapt to the Fourth Industrial Revolution. With a shifting change in technology, operations, management, and business models, the impacts of Industry 4.0 and digital transformation will be long-lasting and will forever change the face of manufacturing and production. This book highlights a cross-industry view of these challenges, the impacts they have, potential solutions, and the technological advances that have brought about these new issues. It is ideal for mechanical engineers, electrical engineers, manufacturers, supply chain managers, logistics specialists, investors, managers, policymakers, production scientists, researchers, academicians, and students looking for cross-industry research on the challenges associated with Industry 4.0.

A compelling argument that the Internet of things threatens human rights and security "Sobering and important."--Financial Times, "Best Books of 2020: Technology" The Internet has leapt from human-facing display screens into the material objects all around us. In this so-called Internet of things--connecting everything from cars to cardiac monitors to home appliances--there is no longer a meaningful distinction between physical and virtual worlds. Everything is connected. The social and economic benefits are tremendous, but there is a downside: an outage in cyberspace can result not only in loss of communication but also potentially in loss of life. Control of this infrastructure has become a proxy for political power, since countries can easily reach across

borders to disrupt real-world systems. Laura DeNardis argues that the diffusion of the Internet into the physical world radically escalates governance concerns around privacy, discrimination, human safety, democracy, and national security, and she offers new cyber-policy solutions. In her discussion, she makes visible the sinews of power already embedded in our technology and explores how hidden technical governance arrangements will become the constitution of our future.

The ubiquity of modern technologies has allowed for increased connectivity between people and devices across the globe. This connected infrastructure of networks creates numerous opportunities for applications and uses. As the applications of the internet of things continue to progress so do the security concerns for this technology. The study of threat prevention in the internet of things is necessary as security breaches in this field can ruin industries and lives. Securing the Internet of Things: Concepts, Methodologies, Tools, and Applications is a vital reference source that examines recent developments and emerging trends in security and privacy for the internet of things through new models, practical solutions, and technological advancements related to security. Highlighting a range of topics such as cloud security, threat detection, and open source software, this multi-volume book is ideally designed for engineers, IT consultants, ICT procurement managers, network system integrators, infrastructure service providers, researchers, academics, and professionals interested in current research on security practices pertaining to the internet of things.

Digital technology has changed the way we work, socialize, shop, play and learn. This book offers a stimulating exploration of how

digitization has begun transforming the prevailing global logistics system into a self-service and sharing economy, and ultimately provides a vision of the monumental changes likely to overflow into the business landscape.

Provides the foundations and principles needed for addressing the various challenges of developing smart cities Smart cities are emerging as a priority for research and development across the world. They open up significant opportunities in several areas, such as economic growth, health, wellness, energy efficiency, and transportation, to promote the sustainable development of cities. This book provides the basics of smart cities, and it examines the possible future trends of this technology. Smart Cities: Foundations, Principles, and Applications provides a systems science perspective in presenting the foundations and principles that span multiple disciplines for the development of smart cities. Divided into three parts—foundations, principles, and applications—Smart Cities addresses the various challenges and opportunities of creating smart cities and all that they have to offer. It also covers smart city theory modeling and simulation, and examines case studies of existing smart cities from all around the world. In addition, the book: Addresses how to develop a smart city and how to present the state of the art and practice of them all over the world Focuses on the foundations and principles needed for advancing the science, engineering, and technology of smart cities—including system design, system verification, real-time control and adaptation, Internet of Things, and test beds Covers applications of smart cities as they relate to smart transportation/connected vehicle (CV) and Intelligent Transportation Systems (ITS)

for improved mobility, safety, and environmental protection Smart Cities: Foundations, Principles, and Applications is a welcome reference for the many researchers and professionals working on the development of smart cities and smart city-related industries.

This book provides an overview of the next generation Internet of Things (IoT), ranging from research, innovation, development priorities, to enabling technologies in a global context. It is intended as a standalone in a series covering the activities of the Internet of Things European Research Cluster (IERC), including research, technological innovation, validation, and deployment. The following chapters build on the ideas put forward by the European Research Cluster, the IoT European Platform Initiative (IoT-EPI), the IoT European Large-Scale Pilots Programme and the IoT European Security and Privacy Projects, presenting global views and state-of-the-art results regarding the next generation of IoT research, innovation, development, and deployment. The IoT and Industrial Internet of Things (IIoT) are evolving towards the next generation of Tactile IoT/IIoT, bringing together hyperconnectivity (5G and beyond), edge computing, Distributed Ledger Technologies (DLTs), virtual/ augmented reality (VR/AR), and artificial intelligence (AI) transformation. Following the wider adoption of consumer IoT, the next generation of IoT/IIoT innovation for business is driven by industries, addressing interoperability issues and providing new end-to-end security solutions to face continuous threats. The advances of AI technology in vision, speech recognition, natural language processing and dialog are enabling the development of end-to-end intelligent systems encapsulating multiple technologies, delivering services in real-time using limited resources. Th-

ese developments are focusing on designing and delivering embedded and hierarchical AI solutions in IoT/IIoT, edge computing, using distributed architectures, DLTs platforms and distributed end-to-end security, which provide real-time decisions using less data and computational resources, while accessing each type of resource in a way that enhances the accuracy and performance of models in the various IoT/IIoT applications. The convergence and combination of IoT, AI and other related technologies to derive insights, decisions and revenue from sensor data provide new business models and sources of monetization. Meanwhile, scalable, IoT-enabled applications have become part of larger business objectives, enabling digital transformation with a focus on new services and applications. Serving the next generation of Tactile IoT/IIoT real-time use cases over 5G and Network Slicing technology is essential for consumer and industrial applications and support reducing operational costs, increasing efficiency and leveraging additional capabilities for real-time autonomous systems. New IoT distributed architectures, combined with system-level architectures for edge/fog computing, are evolving IoT platforms, including AI and DLTs, with embedded intelligence into the hyperconnectivity infrastructure. The next generation of IoT/IIoT technologies are highly transformational, enabling innovation at scale, and autonomous decision-making in various application domains such as healthcare, smart homes, smart buildings, smart cities, energy, agriculture, transportation and autonomous vehicles, the military, logistics and supply chain, retail and wholesale, manufacturing, mining and oil and gas.

This document provides the comprehensive list of Chinese National Standards - Category: GB, GB/T Series of year 2019.

The two volume set, LNCS 12308 + 12309, constitutes the proceedings of the 25th European Symposium on Research in Computer Security, ESORICS 2020, which was held in September 2020. The conference was planned to take place in Guildford, UK. Due to the COVID-19 pandemic, the conference changed to an online format. The total of 72 full papers included in these proceedings was carefully reviewed and selected from 366 submissions. The papers were organized in topical sections named: database and Web security; system security; network security; software security; machine learning security; privacy; formal modelling; applied cryptography; analyzing attacks; post-quantum cryptography; security analysis; and blockchain.

This book constitutes the refereed proceedings of the 17th IFIP WG 5.5 Working Conference on Virtual Enterprises, PRO-VE 2016, held in Porto, Portugal, in October 2016. The 57 revised papers were carefully reviewed and selected from 148 submissions. They provide a comprehensive overview of identified challenges and recent advances in various collaborative network (CN) domains and their applications, with a strong focus on the following areas: hyperconnected systems, managing data and knowledge, networked business processes, collective intelligence and decision making, creating supply and production networks, operating and management of networks, collaborative engineering, product services, intelligent product ecosystems, product personalization, service orientation, cloud technology aspects for VOs, design science research, business models in hyperconnected context, agribusiness value chain, and collaborative networks in circular economy.

This book examines the Internet of Things (IoT) and Data Analytics from a technical, application, and business point of view. Internet of Things and Data Analytics Handbook describes essential technical knowledge, building blocks, processes, design principles, implementation, and marketing for IoT projects. It provides readers with knowledge in planning, designing, and implementing IoT projects. The book is written by experts on the subject matter, including international experts from nine countries in the consumer and enterprise fields of IoT. The text starts with an overview and anatomy of IoT, ecosystem of IoT, communication protocols, networking, and available hardware, both present and future applications and transformations, and business models. The text also addresses big data analytics, machine learning, cloud computing, and consideration of sustainability that are essential to be both socially responsible and successful. Design and implementation processes are illustrated with best practices and case studies in action. In addition, the book: Examines cloud computing, data analytics, and sustainability and how they relate to IoT over the scope of consumer, government, and enterprise applications. Includes best practices, business model, and real-world case studies. Hwaiyu Geng, P.E., is a consultant with Amica Research (www.AmicaResearch.org, Palo Alto, California), promoting green planning, design, and construction projects. He has had over 40 years of manufacturing and management experience, working with Westinghouse, Applied Materials, Hewlett Packard, and Intel on multi-million high-tech projects. He has written and presented numerous technical papers at international conferences. Mr. Geng, a patent holder, is also the editor/author of Data Center Handbook (Wiley, 2015).

This book includes high-quality research papers presented at the Fifth International Conference on Innovative Computing and Communication (ICICC 2022), which is held at the Shaheed Sukhdev College of Business Studies, University of Delhi, Delhi, India, on February 19–20, 2022. Introducing the innovative works of scientists, professors, research scholars, students and industrial experts in the field of computing and communication, the book promotes the transformation of fundamental research into institutional and industrialized research and the conversion of applied exploration into real-time applications.

Ever since 1989, the Faculty of Organizational Sciences, University of Belgrade, has been the host of SymOrg, an event that promotes scientific disciplines of organizing and managing a business. Traditionally, the Symposium has been an opportunity for its participants to share and exchange both academic and practical knowledge and experience in a pleasant and creative atmosphere. This time, however, due the challenging situation regarding the COVID-19 pandemic, we have decided that all the essential activities planned for the International Symposium SymOrg 2020 should be carried out online between the 7th and the 9th of September 2020. We are very pleased that the topic of SymOrg 2020, “Business and Artificial Intelligence”, attracted researchers from different institutions, both in Serbia and abroad. Why is artificial intelligence a disruptive technology? Simply because “it significantly alters the way consumers, industries, or businesses operate.” According to the European Commission document titled Artificial Intelligence for Europe 2018, AI is a key disruptive technology that has just begun to reshape the world. The Government of the Republic of Serbia has also recognized the importance of AI

for the further development of its economy and society and has prepared an AI Development Strategy for the period between 2020 and 2025. The first step has already been made: the Science Fund of the Republic of Serbia, after a public call, has selected and financed twelve AI projects. This year, more than 200 scholars and practitioners authored and co-authored the 94 scientific and research papers that had been accepted for publication in the Proceedings. All the contributions to the Proceedings are classified into the following 11 sections: Information Systems and Technologies in the Era of Digital Transformation Smart Business Models and Processes Entrepreneurship, Innovation and Sustainable Development Smart Environment for Marketing and Communications Digital Human Resource Management Smart E-Business Quality 4.0 and International Standards Application of Artificial Intelligence in Project Management Digital and Lean Operations Management Transformation of Financial Services Methods and Applications of Data Science in Business and Society We are very grateful to our distinguished keynote speakers: Prof. Moshe Vardi, Rice University, USA, Prof. Blaž Zupan, University of Ljubljana, Slovenia, Prof. Vladan Devedžić, University of Belgrade, Serbia, Milica Đurić-Jovičić, PhD, Director, Science Fund of the Republic of Serbia, and Harri Ketamo, PhD, Founder & Chairman of HeadAI Ltd., Finland. Also, special thanks to Prof. Dragan Vukmirović, University of Belgrade, Serbia and Prof. Zoran Ševarec, University of Belgrade, Serbia for organizing workshops in fields of Data Science and Machine Learning and to Prof. Rade Matić, Belgrade Business and Arts Academy of Applied Studies and Milan Dobrota, PhD, CEO at Agremo, Serbia, for their valuable contribution in presenting Serbian experiences in the field of AI. The Faculty of Or-

ganizational Sciences would to express its gratitude to the Ministry of Education, Science and Technological Development and all the individuals who have supported and contributed to the organization of the Symposium. We are particularly grateful to the contributors and reviewers who made this issue possible. But above all, we are especially thankful to the authors and presenters for making the SymOrg 2020 a success!

This comprehensive text/reference presents a broad-ranging overview of device connectivity in distributed computing environments, supporting the vision of an Internet of Things (IoT). Expert perspectives are provided by an international selection of researchers from both industry and academia, covering issues of communication, security, privacy, interoperability, networking, access control, and authentication. In addition to discussing state-of-the-art research and practice, the book includes corporate analyses offering a balanced view of benefits and limitations, and numerous case studies illustrating the challenges and practical solutions. Topics and features: discusses issues of security and privacy in connected environments, with a specific focus on the impact of the IoT paradigm on enterprise information systems; examines the challenges of managing big data in IoT environments, and proposes cloud computing-based solutions to the limitations inherent in the IoT paradigm; suggests approaches to overcome service-level interoperability problems in the IoT environment; introduces a mobile IoT simulator designed to evaluate the behavior of IoT systems, in addition to a novel approach to manage hyper-connectivity in the IoT; describes the use of the Essence framework to model software development methods, and highlights the

benefits of integrating data from smart buildings and IoT devices; presents an asymmetric schema matching mechanism for IoT interoperability, and explores the topic of automatic provenance capture at the middleware level; reviews emerging network topologies and communication technologies, and advises on the adoption of a data distribution service as a middleware platform for IoT systems. This practically-oriented volume serves as a complete reference for students, researchers and practitioners of distributed computing, providing insights into the latest approaches, technologies, and frameworks relevant to the IoT environment.

This book provides a simplified visionary approach about the future direction of IoT, addressing its wide-scale adoption in many markets, its interception with advanced technology, the explosive growth in data, and the emergence of data analytics. IoT business applications span multiple vertical markets. The objective is to inspire creative thinking and collaboration among startups and entrepreneurs which will breed innovation and deliver IoT solutions that will positively impact us by making business processes more efficient, and improving our quality of life. With increasing proliferation of smart-phones and social media, data generated by user wearable/mobile devices continue to be key sources of information about us and the markets around us. Better insights will be gained through cognitive computation coupled with business intelligence and visual analytics that are GIS-based.

Industry X.0 takes an insightful look at the business impact of the Internet of Things movement on the industrial sphere. Eric Schaeffer combines deep analysis with practical strategic guidance, and offers tangible and actionable recommendations on how to realise value in the current digital age. Based on exten-

sive research and insights into the six core competencies that have been identified by Accenture, Industry X.0 explores critical aspects of the Industrial Internet of Things (IIoT), discussing and defining them in an engaging and accessible manner. These include managing smart data, handling digital product development, skilling up the workforce, mastering innovation, making the most of platforms and ecosystems, and much more. Meticulously researched and clearly explained, Industry X.0 makes a stringent case for companies to actively shift mind-sets away from products, towards services, value and outcomes. Complemented by a wealth of case studies and real world examples, this book provides invaluable, practical 'how-to' advice for business organizations as they embark on their journeys into the era of the IIoT.

Although the Internet of Things (IoT) is a vast and dynamic territory that is evolving rapidly, there has been a need for a book that offers a holistic view of the technologies and applications of the entire IoT spectrum. Filling this void, *The Internet of Things in the Cloud: A Middleware Perspective* provides a comprehensive introduction to the IoT and its development worldwide. It gives you a panoramic view of the IoT landscape—focusing on the overall technological architecture and design of a tentatively unified IoT framework underpinned by Cloud computing from a middleware perspective. Organized into three sections, it: Describes the many facets of Internet of Things—including the four pillars of IoT and the three layer value chain of IoT Focuses on middleware, the glue and building blocks of a holistic IoT system on every layer of the architecture Explores Cloud computing and IoT as well as their synergy based on the common background of distributed processing The book is based on the author's two previous best-

selling books (in Chinese) on IoT and Cloud computing and more than two decades of hands-on software/middleware programming and architecting experience at organizations such as the Oak Ridge National Laboratory, IBM, BEA Systems, and Silicon Valley startup Doubletwise. Tapping into this wealth of knowledge, the book categorizes the many facets of the IoT and proposes a number of paradigms and classifications about Internet of Things' mass and niche markets and technologies.

This book constitutes the proceedings of the satellite workshops held around the 17th International Conference on Applied Cryptography and Network Security, ACNS 2019, in Bogota, Colombia, in June 2019. The 10 papers presented in this volume were carefully reviewed and selected from 30 submissions. They stem from the following workshops: AIBlock 2019: First International Workshop on Application Intelligence and Blockchain SecurityAIoTS 2019:First International Workshop on Artificial Intelligence and Industrial Internet-of-Things SecurityCloud S&P 2019:First International Workshop on Cloud Security and PrivacyPriDA 2019:First International Workshop on Privacy-preserving Distributed Data AnalysisSiMLA 2019: First International Workshop on Security in Machine Learning and its Applications

As population growth accelerates, researchers and professionals face challenges as they attempt to plan for the future. E-planning is a significant component in addressing the key concerns as the world population moves towards urban environments. E-Planning and Collaboration: Concepts, Methodologies, Tools, and Applications contains a compendium of the latest academic material on the emerging interdisciplinary areas of e-planning and collabora-

tion. Including innovative studies on data management, urban development, and crowdsourcing, this multi-volume book is an ideal source for planners, policymakers, researchers, and graduate students interested in how recent technological advancements are enhancing the traditional practices in e-planning.

This proceedings book covers the theory, design and applications of computer networks, distributed computing and information systems. Today's networks are evolving rapidly, and there are several developing areas and applications. These include heterogeneous networking supported by recent technological advances in power wireless communications, along with silicon integration of various functionalities such as sensing, communications, intelligence and actuations, which is emerging as a critically important disruptive computer class based on a new platform, networking structure and interface that enables novel, low-cost and high-volume applications. However, implementing these applications has sometimes been difficult due to interconnection problems. As such, different networks need to collaborate, and wired and next-generation wireless systems need to be integrated in order to develop high-performance computing solutions to address the problems arising from these networks' complexities. This ebook presents the latest research findings, as well as theoretical and practical perspectives on the innovative methods and development techniques related to the emerging areas of information networking and applications

The bright future of green IoT will change our tomorrow environment to become healthier and green, with very high quality of service that is socially, environmentally, and economically sustainable. This book covers the most recent advances in IoT, it discuss-

es Smart City implementation, and offers both quantitative and qualitative research. It focuses on greening things such as green communication and networking, green design and implementations, green IoT services and applications, energy saving strategies, integrated RFIDs and sensor networks, mobility and network management, the cooperation of homogeneous and heterogeneous networks, smart objects, and green localization. This book with its wide range of related topics in IoT and Smart City, will be useful for graduate students, researchers, academicians, institutions, and professionals that are interested in exploring the areas of IoT and Smart City.

Faced with increased budget cuts, libraries must continue to advance their services through new technologies and practices in order to keep pace with the rapid changes society is currently facing. The once traditional in-person services offered can no longer be the only option, and to keep themselves afloat, libraries must offer more in terms of digital services. The convenience of offering mobile and digital services brings a new wave of accessibility to libraries and a new question on just how much libraries will need to change to meet the newfound needs of its patrons. Beyond offering these digital services, libraries are incorporating other types of technology in multifaceted ways such as utilizing artificial intelligence practices, social media, and big data management. Moreover, libraries are increasingly looking for ways to partner and collaborate with the community, faculty, students, and other libraries in order to keep abreast of the best practices and needs of their users. The Research Anthology on Collaboration, Digital Services, and Resource Management for the Sustaina-

bility of Libraries explores emerging strategies and technologies that are redefining the role of the library within communities and academia. This reference book covers extensive ground on all the ways libraries have shifted to manage their resources, digitalize their services, and market themselves within the new technological revolution. These continued shifts for libraries come with benefits, challenges, and future projections that are critical for discussion as libraries continue to strive to remain updated and relevant in times of change. This book is ideal for librarians, archivists, collection managers, IT specialists, electronic resource librarians, practitioners, stakeholders, researchers, academicians, and students who are interested in the current state of libraries and how they are transforming to fit modern needs.

In *The Zero Marginal Cost Society*, New York Times bestselling author Jeremy Rifkin describes how the emerging Internet of Things is speeding us to an era of nearly free goods and services, precipitating the meteoric rise of a global Collaborative Commons and the eclipse of capitalism. Rifkin uncovers a paradox at the heart of capitalism that has propelled it to greatness but is now taking it to its death—the inherent entrepreneurial dynamism of competitive markets that drives productivity up and marginal costs down, enabling businesses to reduce the price of their goods and services in order to win over consumers and market share. (Marginal cost is the cost of producing additional units of a good or service, if fixed costs are not counted.) While economists have always welcomed a reduction in marginal cost, they never anticipated the possibility of a technological revolution that might bring marginal costs to near zero, making goods and services priceless, nearly free, and abundant, and no longer subject to market forces. Now,

a formidable new technology infrastructure—the Internet of things (IoT)—is emerging with the potential of pushing large segments of economic life to near zero marginal cost in the years ahead. Rifkin describes how the Communication Internet is converging with a nascent Energy Internet and Logistics Internet to create a new technology platform that connects everything and everyone. Billions of sensors are being attached to natural resources, production lines, the electricity grid, logistics networks, recycling flows, and implanted in homes, offices, stores, vehicles, and even human beings, feeding Big Data into an IoT global neural network. Prosumers can connect to the network and use Big Data, analytics, and algorithms to accelerate efficiency, dramatically increase productivity, and lower the marginal cost of producing and sharing a wide range of products and services to near zero, just like they now do with information goods. The plummeting of marginal costs is spawning a hybrid economy—part capitalist market and part Collaborative Commons—with far reaching implications for society, according to Rifkin. Hundreds of millions of people are already transferring parts of their economic lives to the global Collaborative Commons. Prosumers are plugging into the fledgling IoT and making and sharing their own information, entertainment, green energy, and 3D-printed products at near zero marginal cost. They are also sharing cars, homes, clothes and other items via social media sites, rentals, redistribution clubs, and cooperatives at low or near zero marginal cost. Students are enrolling in free massive open online courses (MOOCs) that operate at near zero marginal cost. Social entrepreneurs are even bypassing the banking establishment and using crowdfunding to finance startup businesses as well as creating alternative curren-

cies in the fledgling sharing economy. In this new world, social capital is as important as financial capital, access trumps ownership, sustainability supersedes consumerism, cooperation ousts competition, and "exchange value" in the capitalist marketplace is increasingly replaced by "sharable value" on the Collaborative Commons. Rifkin concludes that capitalism will remain with us, albeit in an increasingly streamlined role, primarily as an aggregator of network services and solutions, allowing it to flourish as a powerful niche player in the coming era. We are, however, says Rifkin, entering a world beyond markets where we are learning how to live together in an increasingly interdependent global Collaborative Commons.

Internet-of-Things (IoT) Analytics are an integral element of most IoT applications, as it provides the means to extract knowledge, drive actuation services and optimize decision making. IoT analytics will be a major contributor to IoT business value in the coming years, as it will enable organizations to process and fully leverage large amounts of IoT data, which are nowadays largely underutilized. The Building Blocks of IoT Analytics is devoted to the presentation the main technology building blocks that comprise advanced IoT analytics systems. It introduces IoT analytics as a special case of BigData analytics and accordingly presents leading edge technologies that can be deployed in order to successfully confront the main challenges of IoT analytics applications. Special emphasis is paid in the presentation of technologies for IoT streaming and semantic interoperability across diverse IoT streams. Furthermore, the role of cloud computing and BigData technologies in IoT analytics are presented, along with practical tools for implementing, deploying and operating non-trivial IoT ap-

plications. Along with the main building blocks of IoT analytics systems and applications, the book presents a series of practical applications, which illustrate the use of these technologies in the scope of pragmatic applications. Technical topics discussed in the book include: Cloud Computing and BigData for IoT analytics Searching the Internet of Things Development Tools for IoT Analytics Applications IoT Analytics-as-a-Service Semantic Modelling and Reasoning for IoT Analytics IoT analytics for Smart Buildings IoT analytics for Smart Cities Operationalization of IoT analytics Ethical aspects of IoT analytics This book contains both research oriented and applied articles on IoT analytics, including several articles reflecting work undertaken in the scope of recent European

Commission funded projects in the scope of the FP7 and H2020 programmes. These articles present results of these projects on IoT analytics platforms and applications. Even though several articles have been contributed by different authors, they are structured in a well thought order that facilitates the reader either to follow the evolution of the book or to focus on specific topics depending on his/her background and interest in IoT and IoT analytics technologies. The compilation of these articles in this edited volume has been largely motivated by the close collaboration of the co-authors in the scope of working groups and IoT events organized by the Internet-of-Things Research Cluster (IERC), which is currently a part of EU's Alliance for Internet of Things Innovation (AIOTI).