

Raspberry Pi Based Smart Home For Deployment In The Smart Grid

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Proceedings of the International Conference on Ubiquitous Computing & Ambient Intelligence (UCAmI 2022) - José Bravo
2022-11-20

This book reports a set of novel research initiatives on ambient intelligence and ubiquitous computing that help researchers and practitioners identify recent advances, as well as the frontiers in these study domains. During the last two decades, both study areas have gained great interest in industry and academia due to the benefits of using smart solutions in various application domains, such as health care, ambient-assisted living, personal security and privacy, citizen participation, provision of urban services, and precision agriculture and farming. The articles included in this book report solutions and provide empirical results on their suitability to address problems and opportunities in these application domains. The articles also include discussions on how the proposals and their evaluation results inform the design of the

next generation of ubiquitous and smart systems. Researchers, practitioners, and graduate students take advantage of this knowledge to address innovation and engineering aspects of smart and ubiquitous solutions for the next decade.

Applications in Electronics Pervading Industry, Environment and Society - Sergio Saponara
2020-03-20

This book provides a thorough overview of cutting-edge research on electronics applications relevant to industry, the environment, and society at large. It covers a broad spectrum of application domains, from automotive to space and from health to security, while devoting special attention to the use of embedded devices and sensors for imaging, communication and control. The book is based on the 2019 ApplePies Conference, held in Pisa, Italy in September 2019, which brought together researchers and stakeholders to consider the most significant current trends in the field of

applied electronics and to debate visions for the future. Areas addressed by the conference included information communication technology; biotechnology and biomedical imaging; space; secure, clean and efficient energy; the environment; and smart, green and integrated transport. As electronics technology continues to develop apace, constantly meeting previously unthinkable targets, further attention needs to be directed toward the electronics applications and the development of systems that facilitate human activities. This book, written by industrial and academic professionals, represents a valuable contribution in this endeavor.

Data Analytics and Applications of the Wearable Sensors in Healthcare - Shabbir Syed-Abdul

2020-06-17

This book provides a collection of comprehensive research articles on data analytics and applications of wearable devices in healthcare. This Special Issue presents 28 research studies from 137 authors representing 37 institutions

from 19 countries. To facilitate the understanding of the research articles, we have organized the book to show various aspects covered in this field, such as eHealth, technology-integrated research, prediction models, rehabilitation studies, prototype systems, community health studies, ergonomics design systems, technology acceptance model evaluation studies, telemonitoring systems, warning systems, application of sensors in sports studies, clinical systems, feasibility studies, geographical location based systems, tracking systems, observational studies, risk assessment studies, human activity recognition systems, impact measurement systems, and a systematic review. We would like to take this opportunity to invite high quality research articles for our next Special Issue entitled “Digital Health and Smart Sensors for Better Management of Cancer and Chronic Diseases” as a part of Sensors journal.

The Internet of Things in the Industrial Sector - Zaigham Mahmood 2019-08-02

This book has a focus on the development and deployment of the Industrial Internet of Things (IIoT) paradigm, discussing frameworks, methodologies, benefits and limitations, as well as providing case studies of employing the IoT vision in the industrial domain. IIoT is becoming an attractive business reality for many organisations such as manufacturing, logistics, oil and gas, energy and other utilities, mining, aviation, and many more. The opportunities for this paradigm are huge, and according to one report, the IIoT market is predicted to reach \$125 billion by 2021. The driving philosophy behind the IIoT is that smart machines are better than humans at accurately capturing, analysing and communicating real-time data. The underlying technologies include distributed computing, machine learning, artificial intelligence, and machine-to-machine communication, with a typical IIoT system consisting of intelligent systems (applications, controllers, sensors, and security mechanisms),

data communication infrastructure (cloud computing, edge computing, etc.), data analytics (to support business intelligence and corporate decision making), and most importantly the human element. The promised benefits of the IIoT include enhanced safety, better reliability, smart metering, inventory management, equipment tracking, and facilities management. There are, however, numerous issues that are also becoming the focus of active research, such as concerns regarding service availability, data security, and device communication. Lack of ubiquitous interoperability between heterogeneous devices is also a major concern. This book intends to fill a gap in the IIoT literature by providing the scientific contributions and latest developments from researchers and practitioners of international repute, focusing on frameworks, methodologies, benefits, and inherent issues/barriers to connected environments, especially in industrial settings. The intended audience includes

network specialists, hardware engineers, and security experts who wish to adopt newer approaches for device connectivity, IoT security, and sensor-based devices design. University level students, researchers and practitioners will also find the latest innovation in technology and newer approaches relevant to the IIoT from a distributed computing perspective.

What Every Engineer Should Know About the Internet of Things - Joanna F. DeFranco
2021-11-14

Internet of Things (IoT) products and cyber-physical systems (CPS) are being utilized in almost every discipline and there continues to be significant increases in spending on design, development, and deployment of IoT applications and analytics within every domain, from our homes, schools, government, and industry. This practical text provides an introduction to IoT that can be understood by every engineering discipline and discusses detailed applications of IoT. Developed to help engineers navigate this

increasingly important and cross-disciplinary topic, this work: Offers research-based examples and case studies to facilitate the understanding of each IoT primitive Highlights IoT's connection to blockchain Provides and understanding of benefits and challenges of IoT and its importance to a variety of engineering disciplines Written to be accessible to non-experts in the subject, What Every Engineer Should Know About the Internet of Things communicates the importance of this technology and how it can support and challenge all interrelated actors as well as all involved assets across many domains.

Handbook of Clean Energy Systems, 6 Volume Set - Jinyue Yan 2015-06-22

The Handbook of Clean Energy Systems brings together an international team of experts to present a comprehensive overview of the latest research, developments and practical applications throughout all areas of clean energy systems. Consolidating information which is

currently scattered across a wide variety of literature sources, the handbook covers a broad range of topics in this interdisciplinary research field including both fossil and renewable energy systems. The development of intelligent energy systems for efficient energy processes and mitigation technologies for the reduction of environmental pollutants is explored in depth, and environmental, social and economic impacts are also addressed. Topics covered include: Volume 1 - Renewable Energy: Biomass resources and biofuel production; Bioenergy Utilization; Solar Energy; Wind Energy; Geothermal Energy; Tidal Energy. Volume 2 - Clean Energy Conversion Technologies: Steam/Vapor Power Generation; Gas Turbines Power Generation; Reciprocating Engines; Fuel Cells; Cogeneration and Polygeneration. Volume 3 - Mitigation Technologies: Carbon Capture; Negative Emissions System; Carbon Transportation; Carbon Storage; Emission Mitigation Technologies; Efficiency

Improvements and Waste Management; Waste to Energy. Volume 4 - Intelligent Energy Systems: Future Electricity Markets; Diagnostic and Control of Energy Systems; New Electric Transmission Systems; Smart Grid and Modern Electrical Systems; Energy Efficiency of Municipal Energy Systems; Energy Efficiency of Industrial Energy Systems; Consumer Behaviors; Load Control and Management; Electric Car and Hybrid Car; Energy Efficiency Improvement. Volume 5 - Energy Storage: Thermal Energy Storage; Chemical Storage; Mechanical Storage; Electrochemical Storage; Integrated Storage Systems. Volume 6 - Sustainability of Energy Systems: Sustainability Indicators, Evaluation Criteria, and Reporting; Regulation and Policy; Finance and Investment; Emission Trading; Modeling and Analysis of Energy Systems; Energy vs. Development; Low Carbon Economy; Energy Efficiencies and Emission Reduction. Key features: Comprising over 3,500 pages in 6 volumes, HCES presents a comprehensive

overview of the latest research, developments and practical applications throughout all areas of clean energy systems, consolidating a wealth of information which is currently scattered across a wide variety of literature sources. In addition to renewable energy systems, HCES also covers processes for the efficient and clean conversion of traditional fuels such as coal, oil and gas, energy storage systems, mitigation technologies for the reduction of environmental pollutants, and the development of intelligent energy systems. Environmental, social and economic impacts of energy systems are also addressed in depth. Published in full colour throughout. Fully indexed with cross referencing within and between all six volumes. Edited by leading researchers from academia and industry who are internationally renowned and active in their respective fields. Published in print and online. The online version is a single publication (i.e. no updates), available for one-time purchase or through annual subscription.

Intelligent Computing in Engineering -

Vijender Kumar Solanki 2020-04-09

This book comprises select papers from the international conference on Research in Intelligent and Computing in Engineering (RICE 2019) held at Hanoi University of Industry, Hanoi, Vietnam. The volume focuses on current research on various computing models such as centralized, distributed, cluster, grid and cloud. The contents cover recent advances in wireless sensor networks, mobile ad hoc networks, internet of things, machine learning, grid and cloud computing, and their various applications. The book will help researchers as well as professionals to gain insight into the rapidly evolving fields of internet computing and data mining.

Advances in Decision Sciences, Image Processing, Security and Computer Vision -

Suresh Chandra Satapathy 2019-07-12

This book constitutes the proceedings of the First International Conference on Emerging

Trends in Engineering (ICETE), held at University College of Engineering and organised by the Alumni Association, University College of Engineering, Osmania University, in Hyderabad, India on 22–23 March 2019. The proceedings of the ICETE are published in three volumes, covering seven areas: Biomedical, Civil, Computer Science, Electrical & Electronics, Electronics & Communication, Mechanical, and Mining Engineering. The 215 peer-reviewed papers from around the globe present the latest state-of-the-art research, and are useful to postgraduate students, researchers, academics and industry engineers working in the respective fields. Volume 1 presents papers on the theme “Advances in Decision Sciences, Image Processing, Security and Computer Vision - International Conference on Emerging Trends in Engineering (ICETE)”. It includes state-of-the-art technical contributions in the area of biomedical and computer science engineering, discussing sustainable developments in the field, such as

instrumentation and innovation, signal and image processing, Internet of Things, cryptography and network security, data mining and machine learning.

Computational Science - ICCS 2022 - Derek Groen 2022-06-21

The four-volume set LNCS 13350, 13351, 13352, and 13353 constitutes the proceedings of the 22nd International Conference on Computational Science, ICCS 2022, held in London, UK, in June 2022.* The total of 175 full papers and 78 short papers presented in this book set were carefully reviewed and selected from 474 submissions. 169 full and 36 short papers were accepted to the main track; 120 full and 42 short papers were accepted to the workshops/ thematic tracks. *The conference was held in a hybrid format

IoT Based Smart Applications - Nidhi Sindhwani 2022-11-01

This book provides insights into IoT, its applications, and various implementation

techniques. The authors first discuss the IoT design methodology to define the domain model. They then cover various connection methodologies used in IoT such as Ethernet, Wi-Fi, low powered wide area network (LPWAN), Bluetooth, RFID, cellular, and satellite, and more, along with their challenges. An example is made on the designing process using Arduino, which offers smart, connected, and secure elements; they also illustrate the integration of IoT with Blockchain, cloud, machine learning, big data, embedded software, sensors, etc. The book going on to cover the future of IoT in various sectors and how IoT will continue to be game-changing technology.

Privacy and Identity Management. Fairness, Accountability, and Transparency in the Age of Big Data - Eleni Kosta 2019-04-15

This book contains selected papers presented at the 13th IFIP WG 9.2, 9.6/11.7, 11.6/SIG 9.2.2 International Summer School on Privacy and Identity Management, held in Vienna, Austria, in

August 2018. The 10 full papers included in this volume were carefully reviewed and selected from 27 submissions. Also included are reviewed papers summarizing the results of workshops and tutorials that were held at the Summer School as well as papers contributed by several of the invited speakers. The papers combine interdisciplinary approaches to bring together a host of perspectives: technical, legal, regulatory, socio-economic, social, societal, political, ethical, anthropological, philosophical, historical, and psychological.

Emerging Real-World Applications of Internet of Things - Anshul Verma 2022-11-24

The Internet of things (IoT) is a network of connected physical objects or things that are working along with sensors, wireless transceiver modules, processors, and software required for connecting, processing, and exchanging data among the other devices over the Internet.

These objects or things are devices ranging from simple handheld devices to complex industrial

heavy machines. A thing in IoT can be any living or non-living object that can be provided capabilities to sense, process, and exchange data over a network. The IoT provides people with the ability to handle their household works to industrial tasks smartly and efficiently without the intervention of another human. The IoT provides smart devices for home automation as well as business solutions for delivering insights into everything from real-time monitoring of working systems to supply chain and logistics operations. The IoT has become one of the most prominent technological inventions of the 21st century. Due to the versatility of IoT devices, there are numerous real-world applications of the IoT in various domains such as smart home, smart city, health care, agriculture, industry, and transportation. The IoT has emerged as a paradigm-shifting technology that is influencing various industries. Many companies, governments, and civic bodies are shifting to IoT applications to improve their works and to

become more efficient. The world is slowly transforming toward a "smart world" with smart devices. As a consequence, it shows many new opportunities coming up in the near "smart" future for IoT professionals. Therefore, there is a need to keep track of advancements related to IoT applications and further investigate several research challenges related to the applicability of IoT in different domains to make it more adaptable for practical and industrial use. With this goal, this book provides the most recent and prominent applications of IoT in different domains as well as issues and challenges in developing IoT applications for various new domains.

Cybersecurity in Smart Homes - Rida Khatoun
2022-05-24

Smart homes use Internet-connected devices, artificial intelligence, protocols and numerous technologies to enable people to remotely monitor their home, as well as manage various systems within it via the Internet using a

smartphone or a computer. A smart home is programmed to act autonomously to improve comfort levels, save energy and potentially ensure safety; the result is a better way of life. Innovative solutions continue to be developed by researchers and engineers and thus smart home technologies are constantly evolving. By the same token, cybercrime is also becoming more prevalent. Indeed, a smart home system is made up of connected devices that cybercriminals can infiltrate to access private information, commit cyber vandalism or infect devices using botnets. This book addresses cyber attacks such as sniffing, port scanning, address spoofing, session hijacking, ransomware and denial of service. It presents, analyzes and discusses the various aspects of cybersecurity as well as solutions proposed by the research community to counter the risks. Cybersecurity in Smart Homes is intended for people who wish to understand the architectures, protocols and different technologies used in smart homes.

Proceedings of Seventh International Congress on Information and Communication Technology - Xin-She Yang 2022-09-03

This book gathers selected high-quality research papers presented at the Seventh International Congress on Information and Communication Technology, held at Brunel University, London, on February 21-24, 2022. 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 work is presented in four volumes.

Agents and Multi-Agent Systems: Technologies and Applications 2020 - G.

Ježić 2020-05-20

The book highlights new trends and challenges in research on agents and the new digital and

knowledge economy. It includes papers on business process management, agent-based modeling and simulation and anthropic-oriented computing that were originally presented at the 14th International KES Conference on Agents and Multi-Agent Systems: Technologies and Applications (KES-AMSTA 2020), being held as a Virtual Conference in June 17-19, 2020. The respective papers cover topics such as software agents, multi-agent systems, agent modeling, mobile and cloud computing, big data analysis, business intelligence, artificial intelligence, social systems, computer embedded systems and nature inspired manufacturing, all of which contribute to the modern digital economy.

Computational Intelligence: Theories, Applications and Future Directions - Volume I - Nishchal K. Verma 2018-07-31

This book presents selected proceedings of ICCI-2017, discussing theories, applications and future directions in the field of computational intelligence (CI). ICCI-2017 brought together

international researchers presenting innovative work on self-adaptive systems and methods. This volume covers the current state of the field and explores new, open research directions. The book serves as a guide for readers working to develop and validate real-time problems and related applications using computational intelligence. It focuses on systems that deal with raw data intelligently, generate qualitative information that improves decision-making, and behave as smart systems, making it a valuable resource for researchers and professionals alike.

[Inventive Computation Technologies](#) - S. Smys 2019-11-02

With the intriguing development of technologies in several industries, along with the advent of ubiquitous computational resources, there are now ample opportunities to develop innovative computational technologies in order to solve a wide range of issues concerning uncertainty, imprecision, and vagueness in various real-life problems. The challenge of blending modern

computational techniques with traditional computing methods has inspired researchers and academics alike to focus on developing innovative computational techniques. In the near future, computational techniques may provide vital solutions by effectively using evolving technologies such as computer vision, natural language processing, deep learning, machine learning, scientific computing, and computational vision. A vast number of intelligent computational algorithms are emerging, along with increasing computational power, which has significantly expanded the potential for developing intelligent applications. These proceedings of the International Conference on Inventive Computation Technologies [ICICT 2019] cover innovative computing applications in the areas of data mining, big data processing, information management, and security.

AI-Based Services for Smart Cities and Urban Infrastructure - Lyu, Kangjuan 2020-09-04

Cities are the next frontier for artificial intelligence to permeate. As smart urban environments become possible, probable, and even preferred, artificial intelligence offers the chance for even further advancement through infrastructure and industry boosting. Opportunity overflows, but without thorough research to guide a complicated development and implementation process, urban environments can become disorganized and outright dangerous for citizens. *AI-Based Services for Smart Cities and Urban Infrastructure* is a collection of innovative research that explores artificial intelligence (AI) applications in urban planning. In addition, the book looks at how the internet of things and AI can work together to enable a real smart city and discusses state-of-the-art techniques in urban infrastructure design, construction, operation, maintenance, and management. While highlighting a broad range of topics including construction management, public transportation,

and smart agriculture, this book is ideally designed for engineers, entrepreneurs, urban planners, architects, policymakers, researchers, academicians, and students.

Foundations and Practice of Security -

Gabriela Nicolescu 2021-03-30

This book constitutes the revised selected papers of the 13th International Symposium on Foundations and Practice of Security, FPS 2020, held in Montréal, QC, Canada, in December 2020. The 11 full papers and 1 short paper presented in this book were carefully reviewed and selected from 23 submissions. They cover a range of topics such as Analysis and Detection; Prevention and Efficiency; and Privacy by Design.

Proceedings of International Conference on Computational Intelligence and Data Engineering - Nabendu Chaki 2022

This book covers various topics, including collective intelligence, intelligent transportation systems, fuzzy systems, Bayesian network, ant

colony optimization, data privacy and security, data mining, data warehousing, big data analytics, cloud computing, natural language processing, swarm intelligence, and speech processing. This book is a collection of high-quality research work on cutting-edge technologies and the most-happening areas of computational intelligence and data engineering. It includes selected papers from the International Conference on Computational Intelligence and Data Engineering (ICCIDE 2021).

IoT Product Design and Development -

Ahmad Fattahi 2022-09-20

IoT Product Design and Development Learn to incorporate IoT products into the process of building a product Internet of Things (or IoT) is currently one of the central building blocks of industry. It is the driving technology of the connected world—be it smart cars, smart homes, smart factories, or smart cities. Industrial IoT (IIoT) is one of the most impactful areas of the

global market, where it has fundamentally altered industries as varied as manufacturing, electronics, automotive, consumer goods, healthcare, and process industries like oil and gas, among others. As such, it is essential that engineers working in these fields improve their IoT knowledge to keep pace with this growing demand. IoT Product Design and Development offers an accessible entry point to the methods, techniques, and best practices necessary to add IoT onto an existing product or to build new IoT products wholesale. To accomplish this, the volume examines product design requirements for industrial, business, and consumer applications. Relying on real-world examples, the book provides a blueprint of the creation process, including tips on best practices and common pitfalls. Readers will thereby gain the tools to bring IoT to specific industries and job functions. IoT Product Design and Development readers will also find: Concise content that is targeted to what practitioners need to know

without the academic jargon In-depth case studies related to power distribution systems, airports, and consumer home products Diagrams and tables used liberally to present concepts in a visual way Additional sidebar examples are included throughout the book to highlight key issues like IoT security and product lifecycle IoT Product Design and Development is a useful reference for professional mechanical, electrical, and industrial engineers, as well as IoT product managers, business leads, software and hardware professionals, and data professionals.

Convergence of Internet of Things and Blockchain Technologies - H L Gururaj

2021-08-31

This book presents chapters from diverse range of authors on different aspects of how Blockchain and IoT are converging and the impacts of these developments. The book provides an extensive cross-sectional and multi-disciplinary look into this trend and how it affects artificial intelligence, cyber-physical

systems, and robotics with a look at applications in aerospace, agriculture, automotive, critical infrastructures, healthcare, manufacturing, retail, smart transport systems, smart cities, and smart healthcare. Cases include the impact of Blockchain for IoT Security; decentralized access control systems in IoT; Blockchain architecture for scalable access management in IoT; smart and sustainable IoT applications incorporating Blockchain, and more. The book presents contributions from international academics, researchers, and practitioners from diverse perspectives. Presents how Blockchain and IoT are converging and the impacts of these developments on technology and its application; Discusses IoT and Blockchain from cross-sectional and multi-disciplinary perspectives; Includes contributions from researchers, academics, and professionals from around the world.

Trends in Applied Knowledge-Based Systems and Data Science - Hamido Fujita

2016-07-13

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

Sensors, Cloud, and Fog - Sudip Misra

2019-06-20

This book provides an in-depth understanding of

Internet of Things (IoT) technology. It highlights several of today's research and technological challenges of translating the concept of the IoT into a practical, technologically feasible, and business-viable solution. It introduces two novel technologies--sensor-cloud and fog computing--as the crucial enablers for the sensing and compute backbone of the IoT. The book discusses these two key enabling technologies of IoT that include a wide range of practical design issues and the futuristic possibilities and directions involving sensor networks and cloud and fog computing environments towards the realization and support of IoT. Classroom presentations and solutions to end of chapter questions are available to instructors who use the book in their classes.

Internet of Things: A Hands-On Approach -
Arshdeep Bahga 2014-08-09

Internet of Things (IoT) refers to physical and virtual objects that have unique identities and are connected to the internet to facilitate

intelligent applications that make energy, logistics, industrial control, retail, agriculture and many other domains "smarter". Internet of Things is a new revolution of the Internet that is rapidly gathering momentum driven by the advancements in sensor networks, mobile devices, wireless communications, networking and cloud technologies. Experts forecast that by the year 2020 there will be a total of 50 billion devices/things connected to the internet. This book is written as a textbook on Internet of Things for educational programs at colleges and universities, and also for IoT vendors and service providers who may be interested in offering a broader perspective of Internet of Things to accompany their own customer and developer training programs. The typical reader is expected to have completed a couple of courses in programming using traditional high-level languages at the college-level, and is either a senior or a beginning graduate student in one of the science, technology, engineering or

mathematics (STEM) fields. Like our companion book on Cloud Computing, we have tried to write a comprehensive book that transfers knowledge through an immersive "hands on" approach, where the reader is provided the necessary guidance and knowledge to develop working code for real-world IoT applications. Additional support is available at the book's website: www.internet-of-things-book.com Organization

The book is organized into 3 main parts, comprising of a total of 11 chapters. Part I covers the building blocks of Internet of Things (IoTs) and their characteristics. A taxonomy of IoT systems is proposed comprising of various IoT levels with increasing levels of complexity. Domain specific Internet of Things and their real-world applications are described. A generic design methodology for IoT is proposed. An IoT system management approach using NETCONF-YANG is described. Part II introduces the reader to the programming aspects of Internet of Things with a view towards rapid prototyping of

complex IoT applications. We chose Python as the primary programming language for this book, and an introduction to Python is also included within the text to bring readers to a common level of expertise. We describe packages, frameworks and cloud services including the WAMP-AutoBahn, Xively cloud and Amazon Web Services which can be used for developing IoT systems. We chose the Raspberry Pi device for the examples in this book. Reference architectures for different levels of IoT applications are examined in detail. Case studies with complete source code for various IoT domains including home automation, smart environment, smart cities, logistics, retail, smart energy, smart agriculture, industrial control and smart health, are described. Part III introduces the reader to advanced topics on IoT including IoT data analytics and Tools for IoT. Case studies on collecting and analyzing data generated by Internet of Things in the cloud are described.

Machine Learning for Cyber Security -

Xiaofeng Chen 2020-11-10

This three volume book set constitutes the proceedings of the Third International Conference on Machine Learning for Cyber Security, ML4CS 2020, held in Xi'an, China in October 2020. The 118 full papers and 40 short papers presented were carefully reviewed and selected from 360 submissions. The papers offer a wide range of the following subjects: Machine learning, security, privacy-preserving, cyber security, Adversarial machine Learning, Malware detection and analysis, Data mining, and Artificial Intelligence.

Mobile and Wireless Technologies 2017 -

Kuinam J. Kim 2017-06-14

This book gathers the proceedings of the 4th International Conference on Mobile and Wireless Technology (ICMWT), held in Kuala Lumpur, Malaysia in June 2017, an event that provides researchers and practitioners from both academia and industry with a platform to keep them abreast of cutting-edge developments in

the field. The peer-reviewed and accepted papers presented here address topics in a number of major areas: Mobile, Wireless Networks and Applications; Security in Mobile and Wireless; Mobile Data Management and Applications; Mobile Software; Multimedia Communications; Wireless Communications; and Services, Application and Business.

Internet of Things A to Z - Qusay F. Hassan

2018-05-09

A comprehensive overview of the Internet of Things' core concepts, technologies, and applications Internet of Things A to Z offers a holistic approach to the Internet of Things (IoT) model. The Internet of Things refers to uniquely identifiable objects and their virtual representations in an Internet-like structure. Recently, there has been a rapid growth in research on IoT communications and networks, that confirms the scalability and broad reach of the core concepts. With contributions from a panel of international experts, the text offers

insight into the ideas, technologies, and applications of this subject. The authors discuss recent developments in the field and the most current and emerging trends in IoT. In addition, the text is filled with examples of innovative applications and real-world case studies.

Internet of Things A to Z fills the need for an up-to-date volume on the topic. This important book: Covers in great detail the core concepts, enabling technologies, and implications of the Internet of Things Addresses the business, social, and legal aspects of the Internet of Things Explores the critical topic of security and privacy challenges for both individuals and organizations Includes a discussion of advanced topics such as the need for standards and interoperability Contains contributions from an international group of experts in academia, industry, and research Written for ICT researchers, industry professionals, and lifetime IT learners as well as academics and students, Internet of Things A to Z provides a much-

needed and comprehensive resource to this burgeoning field.

Multimedia Big Data Computing for IoT Applications - Sudeep Tanwar 2019-07-17

This book considers all aspects of managing the complexity of Multimedia Big Data Computing (MMBD) for IoT applications and develops a comprehensive taxonomy. It also discusses a process model that addresses a number of research challenges associated with MMBD, such as scalability, accessibility, reliability, heterogeneity, and Quality of Service (QoS) requirements, presenting case studies to demonstrate its application. Further, the book examines the layered architecture of MMBD computing and compares the life cycle of both big data and MMBD. Written by leading experts, it also includes numerous solved examples, technical descriptions, scenarios, procedures, and algorithms.

Advances in Conceptual Modeling - Sebastian Link 2016-10-17

This book constitutes the refereed proceedings of seven workshops and a symposium, held at the 35th International Conference on Conceptual Modeling, ER 2016, in Gifu, Japan. The 19 revised full and 3 keynote papers were carefully reviewed and selected out of 52 submissions to the following events: Conceptual Modeling for Ambient Assistance and Healthy Ageing, AHA 2016; Modeling and Management of Big Data, MoBiD 2016; Modeling and Reasoning for Business Intelligence, MORE-BI 2016; Conceptual Modeling in Requirements and Business Analysis, MREBA 2016; Quality of Models and Models of Quality, QMMQ 2016; and the Symposium on Conceptual Modeling Education, SCME 2016; and Models and Modeling on Security and Privacy, WM2SP 2016. Wireless Mobile Communication and Healthcare - Paolo Perego 2017-06-05

This book constitutes the refereed post-conference proceedings of the 6th International Conference on Mobile Communication and

Healthcare, MobiHealth 2016, held in Milan, Italy, in November 2016. The 50 revised full papers were reviewed and selected from numerous submissions and are organized in topical sections covering: Technological development for m-health application user engagement.- IoT - Internet of Things.- Advances in soft wearable technology for mobile-health.- Emerging experiences into receiving and delivering healthcare through mobile and embedded solutions.- Advances in personalized healthcare services.- Mobile monitoring, and social media pervasive technologies. *MODEL-BASED APPROACHES TO THE INTERNET OF THINGS* - PASCAL. HIRMER 2023

Start-Up Creation - Fernando Pacheco-Torgal 2020-05-24

Start-up creation is the most distinctive feature of the entrepreneurial knowledge-based economy. It is also essential for economic

growth and especially important in the current context of young graduate's high unemployment rates that are expected to increase in the next few decades. There are other books on the creation of start-up companies, designed to be of value to academics wishing to exploit the commercial value of a new technology or business solution, but none of these existing titles focus on start-up creation in the construction industry. In the second edition of this extremely successful title the editors present a state-of-the-art review on advanced technologies, and their application in several areas of the built environment covering energy efficiency, structural performance, air and water quality to inspire the creation of start-up companies from university research. Part One begins with the key factors behind successful start-up companies from university research, including the development of a business plan, start-up financing, and the importance of intellectual property. Part Two focuses on the

use of Big Data, Intelligent decision support systems, the Internet of Things and their use in the energy efficiency of the built environment. Finally, Part three is an entire new section that focuses on several smartphone applications for the smart built environment. While in the first edition the section concerning apps for smart buildings had just two chapters, one for app programming basics and a second a case study on building security in this second edition the core of the book is about app development that constitutes 50% of the book. Entire new section that was not available in the first edition on smart-phone applications and virtual assistance for infrastructure monitoring Chapters on business plans, start-up financing and intellectual property have been brought fully up to date as well as algorithms, big data and the Internet of Things for eco-efficient smart buildings Comprehensive guide to start-ups that arise from college and university research and how the application of advanced technology can

be applied to the built environment

Future Data and Security Engineering. Big Data, Security and Privacy, Smart City and Industry 4.0 Applications - Tran Khanh Dang
2022-12-21

This book constitutes the refereed proceedings of the 9th International Conference on Future Data and Security Engineering, FDSE 2022, held in Ho Chi Minh City, Vietnam, during November 23-25, 2022. The 41 full papers(including 4 invited keynotes) and 12 short papers included in this book were carefully reviewed and selected from 170 submissions. They were organized in topical sections as follows: invited keynotes; big data analytics and distributed systems; security and privacy engineering; machine learning and artificial intelligence for security and privacy; smart city and industry 4.0 applications; data analytics and healthcare systems; and security and data engineering.
Internet of Things (IoT) for Automated and Smart Applications - Yasser Ismail 2019-11-27

Internet of Things (IoT) is a recent technology paradigm that creates a global network of machines and devices that are capable of communicating with each other. Security cameras, sensors, vehicles, buildings, and software are examples of devices that can exchange data between each other. IoT is recognized as one of the most important areas of future technologies and is gaining vast recognition in a wide range of applications and fields related to smart homes and cities, military, education, hospitals, homeland security systems, transportation and autonomous connected cars, agriculture, intelligent shopping systems, and other modern technologies. This book explores the most important IoT automated and smart applications to help the reader understand the principle of using IoT in such applications.
IMDC-IST 2021 - Abd-Alhameed Raed

2022-01-26

This book contains the proceedings of the Second International Conference on Integrated

Sciences and Technologies (IMDC-IST-2021). Where held on 7th-9th Sep 2021 in Sakarya, Turkey. This conference was organized by University of Bradford, UK and Southern Technical University, Iraq. The papers in this conference were collected in a proceedings book entitled: Proceedings of the second edition of the International Multi-Disciplinary Conference Theme: “Integrated Sciences and Technologies” (IMDC-IST-2021). The presentation of such a multi-discipline conference provides a lot of exciting insights and new understanding on recent issues in terms of Green Energy, Digital Health, Blended Learning, Big Data, Meta-material, Artificial-Intelligence powered applications, Cognitive Communications, Image Processing, Health Technologies, 5G Communications. Referring to the argument, this conference would serve as a valuable reference for future relevant research activities. The committee acknowledges that the success of this conference are closely intertwined by the

contributions from various stakeholders. As being such, we would like to express our heartfelt appreciation to the keynote speakers, invited speakers, paper presenters, and participants for their enthusiastic support in joining the second edition of the International Multi-Disciplinary Conference Theme: “Integrated Sciences and Technologies” (IMDC-IST-2021). We are convinced that the contents of the study from various papers are not only encouraged productive discussion among presenters and participants but also motivate further research in the relevant subject. We appreciate for your enthusiasm to attend our conference and share your knowledge and experience. Your input was important in ensuring the success of our conference. Finally, we hope that this conference serves as a forum for learning in building togetherness and academic networks. Therefore, we expect to see you all at the next IMDC-IST.

Green Information and Communication

Systems for a Sustainable Future - Rajshree Srivastava 2020-11-18

Green Information and Communication Systems for a Sustainable Future covers the fundamental concepts, applications, algorithms, protocols, new trends, challenges, and research results in the area of Green Information and Communication Systems. This book provides the reader with up-to-date information on core and specialized issues, making it highly suitable for both the novice and the experienced researcher in the field. The book covers theoretical and practical perspectives on network design. It includes how green ICT initiatives and applications can play a major role in reducing CO2 emissions, and focuses on industry and how it can promote awareness and implementation of Green ICT. The book discusses scholarship and research in green and sustainable IT for business and organizations and uses the power of IT to usher sustainability into other parts of an organization. Business and management

educators, management researchers, doctoral scholars, university teaching personnel and policy makers as well as members of higher academic research organizations will all discover this book to be an indispensable guide to Green Information and Communication Systems. It will also serve as a key resource for Industrial and Management training organizations all over the world.

Fog-Enabled Intelligent IoT Systems - Yang Yang 2019-10-16

This book first provides a comprehensive review of state-of-the-art IoT technologies and applications in different industrial sectors and public services. The authors give in-depth analyses of fog computing architecture and key technologies that fulfill the challenging requirements of enabling computing services anywhere along the cloud-to-thing continuum. Further, in order to make IoT systems more intelligent and more efficient, a fog-enabled service architecture is proposed to address the

latency requirements, bandwidth limitations, and computing power issues in realistic cross-domain application scenarios with limited prior domain knowledge, i.e. physical laws, system statuses, operation principles and execution rules. Based on this fog-enabled architecture, a series of data-driven self-learning applications in different industrial sectors and public services are investigated and discussed, such as robot SLAM and formation control, wireless network self-optimization, intelligent transportation system, smart home and user behavior recognition. Finally, the advantages and future directions of fog-enabled intelligent IoT systems are summarized. Provides a comprehensive review of state-of-the-art IoT technologies and applications in different industrial sectors and public services Presents a fog-enabled service architecture with detailed technical approaches for realistic cross-domain application scenarios with limited prior domain knowledge Outlines a series of data-driven self-learning applications

(with new algorithms) in different industrial sectors and public services

Emerging Research in Data Engineering Systems and Computer Communications - P. Venkata Krishna 2020-02-10

This book gathers selected papers presented at the 2nd International Conference on Computing, Communications and Data Engineering, held at Sri Padmavati Mahila Visvavidyalayam, Tirupati, India from 1 to 2 Feb 2019. Chiefly discussing major issues and challenges in data engineering systems and computer communications, the topics covered include wireless systems and IoT, machine learning, optimization, control, statistics, and social computing.

Advanced Practical Approaches to Web Mining Techniques and Application - Obaid, Ahmed J. 2022-03-18

The rapid increase of web pages has introduced new challenges for many organizations as they attempt to extract information from a massive corpus of web pages. Finding relevant

information, eliminating irregular content, and retrieving accurate results has become extremely difficult in today's world where there is a surplus of information available. It is crucial to further understand and study web mining in order to discover the best ways to connect users with appropriate information in a timely manner. *Advanced Practical Approaches to Web Mining Techniques and Application* aims to illustrate all the concepts of web mining and fosters transformative, multidisciplinary, and novel

approaches that introduce the practical method of analyzing various web data sources and extracting knowledge by taking into consideration the unique challenges present in the environment. Covering a range of topics such as data science and security threats, this reference work is ideal for industry professionals, researchers, academicians, practitioners, scholars, instructors, and students.