Wireless Power Theft Detection International Journal Of

This, the 31st issue of the Transactions on Computational Science, focusses on signal processing and security in distributed systems. The areas of application include facial recognition, musical analysis, the diagnosis of retinal disorder, quantum circuits, intrusion detection, information leakage analysis, and the minimization of aliasing effects on text images.

This proceeding constitutes the thoroughly refereed proceedings of the 1st International Conference on Combinatorial and Optimization, ICCAP 2021, December 7-8, 2021. This event was organized by the group of Professors in Chennai. The Conference aims to provide the opportunities for informal conversations, have proven to be of great interest to other scientists and analysts employing these mathematical sciences in their professional work in business, industry, and government. The Conference continues to promote better understanding of the roles of modern applied mathematics, combinatorics, and computer science to acquaint the investigator in each of these areas with the various techniques and algorithms which are available to assist in his or her research. We selected 257 papers were carefully reviewed and selected from 741 submissions. The presentations covered multiple research fields like Computer Science, Artificial Intelligence, internet technology, smart health care etc., brought the discussion on how to shape optimization methods around human and social needs.

A smart building is the state-of-art in building with features that facilitates informed decision making based on the available data through smart metering and IoT sensors. This set provides useful information for developing smart buildings including significant improvement of energy efficiency, implementation of operational improvements and targeting sustainable environment to create an effective customer experience. It includes case studies from industrial results which provide cost effective solutions and integrates the digital SCADE solution. Describes complete implication of smart buildings via industrial, commercial and community platforms Systematically defines energy-efficient buildings, employing power consumption optimization techniques with inclusion of renewable energy sources Covers data centre and cyber security with excellent data storage features for smart buildings Includes systematic and detailed strategies for building air conditioning and lighting Details smart building security propulsion. This set is aimed at graduate students, researchers and

professionals in building systems, architectural, and electrical engineering.
Recent developments in the fields of intelligent computing and communication have paved the way
for the handling of current and upcoming problems and brought about significant technological
advancements. This book presents the proceedings of IConIC 2021, the 4th International
Conference on Intelligent Computing, held on 26 and 27 March 2021 in Chennai, India. The
principle objective of the annual IConIC conference is to provide an international scientific
forum where participants can exchange innovative ideas in relevant fields and interact in depth
through discussion with their peer group. The theme of the 2021 conference and this book is
'Smart Intelligent Computing and Communication Technology', and the 109 papers included here
focus on the technological innovations and trendsetting initiatives in medicine, industry,
education and security that are improving and optimizing business and technical processes and
enabling inclusive growth. The papers are grouped under 2 headings: Evolution of Computing
Intelligence; and Computing and Communication, and cover a broad range of intelligent-computing
research and applications. The book provides an overview of the cutting-edge developments and
emerging areas of study in the technological fields of intelligent computing, and will be of
interest to researchers and practitioners from both academia and industry.
11th International Conference, WASA 2016, Bozeman, MT, USA, August 8-10, 2016. Proceedings
Proceedings of the 2nd International Conference on Advanced Technologies for Societal
Applications - Volume 1
2020 International Conference on Electrical and Electronics Engineering (ICE3)
Proceedings of International Conference on Wireless Communication
Special Issue on Signal Processing and Security in Distributed Systems
Smart Buildings Digitalization, Two Volume Set
Proceedings of ICTIS 2021
This book includes the proceedings of the 15th International Conference on Complex, Intelligent, and Software
Intensive Systems, which took place in Asan, Korea, on July 1–3, 2021. Software intensive systems are systems,
which heavily interact with other systems, sensors, actuators, devices, and other software systems and users.
More and more domains are involved with software intensive systems, e.g., automotive, telecommunication
systems, embedded systems in general, industrial automation systems, and business applications. Moreover,
the outcome of web services delivers a new platform for enabling software intensive systems. Complex systems

research is focused on the overall understanding of systems rather than its components. Complex systems are very much characterized by the changing environments in which they act by their multiple internal and external interactions. They evolve and adapt through internal and external dynamic interactions. The development of intelligent systems and agents, which is each time more characterized by the use of ontologies and their logical foundations build a fruitful impulse for both software intensive systems and complex systems. Recent research in the field of intelligent systems, robotics, neuroscience, artificial intelligence, and cognitive sciences is very important factor for the future development and innovation of software intensive and complex systems. The aim of the book is to deliver a platform of scientific interaction between the three interwoven challenging areas of research and development of future ICT-enabled applications: Software intensive systems, complex systems, and intelligent systems.

This book addresses major challenges faced by farmers and the technological solutions based on Internet of Things (IoT). A major challenge in agriculture is cultivating and supplying high-quality produce at the best. Currently, around 50% of global farm produce never reaches the end consumer due to wastage and suboptimal prices. The book presents solutions that reduce the transport costs, improve the predictability of prices based on data analytics and the current market conditions, and reduce the number of middle steps and agents between the farmer and the end consumer. It discusses the design of an IoT-based monitoring system to analyze crop environments and a method to improve the efficiency of decision-making by analyzing harvest statistics. Further, it explores climate-smart methods, known as smart agriculture, that have been adopted by a number of Indian farmers.

This book gathers selected papers presented at the 4th International Conference on Wireless Communications and Applications (ICWCA 2020), held at Hainan University, China. The first volume of the proceedings will focus on the newest methods and algorithms in smart wireless communications in the areas of multimedia communications over wireless; smart antenna and space-time signal processing; antenna, wireless propagation, and channel modeling; OFDM and multi-carrier techniques; localization and navigation techniques; software-defined networking (SDN) and network function virtualization (NFV); knowledge-defined networking (KDN) and the applications of artificial intelligence (AI) in future networks; future data-center networks; resource allocation and orchestration in future networks and many others.

The conference is being organized by Madan Mohan Malaviya University of Technology Gorakhpur with an aim to provide a platform for researchers, scientists, technocrats, academicians and engineers to exchange their

innovative ideas and new challenges facing in the field of Electrical and Electronics Engineering This Conference will be a platform to focus on the core technological developments in the emerging fields like wireless communication, RF microwave Radar, Electrical machine, power system, energy system, Image computing, intelligent information retrieval, intelligent agents, electrical and electronics materials, Fuzzy logic control, control system, evolutionary computing and so on

Proceedings of Third International Conference on Communication, Computing and Electronics Systems

Smart Intelligent Computing and Communication Technology

Deforestation Around the World

Official Gazette of the United States Patent and Trademark Office

Data-Intensive Computing in Smart Microgrids

Proceedings of First International Conference on Computational Electronics for Wireless Communications

Deep Learning Applications for Cyber Security

This book includes papers presented at SOCO 2018, CISIS 2018 and ICEUTE 2018, all held in the beautiful and historic city of San Sebastian (Spain), in June 2018. Soft computing represents a collection or set of computational techniques in machine learning, computer science and some engineering disciplines, which investigate, simulate, and analyze highly complex issues and phenomena. After a rigorous peer-review process, the 13th SOCO 2018 International Program Committee selected 41 papers, with a special emphasis on optimization, modeling and control using soft computing techniques and soft computing applications in the field of industrial and environmental enterprises. The aim of the 11th CISIS 2018 conference was to offer a meeting opportunity for academic and industry researchers from the vast areas of computational intelligence, information security, and data mining. The need for intelligent, flexible behaviour by large, complex systems, especially in mission-critical domains, was the catalyst for the overall event.Eight of the papers included in the book were selected by the CISIS 2018 International Program Committee. The International Program Committee of ICEUTE 2018 selected 11 papers for inclusion in these conference proceedings.

Cybercrime remains a growing challenge in terms of security and privacy practices. Working together, deep learning and cyber security experts have recently made significant advances in the fields of intrusion detection, malicious code analysis and forensic identification. This book addresses questions of how deep learning methods can be used to advance cyber security objectives, including detection, modeling, monitoring and analysis of as well as defense against various threats to sensitive data and security systems. Filling an important gap between deep learning and cyber security communities, it discusses topics covering a wide range of modern and practical deep learning techniques, frameworks and development

tools to enable readers to engage with the cutting-edge research across various aspects of cyber security. The book focuses on mature and proven techniques, and provides ample examples to help readers grasp the key points. All over the world, vast research is in progress on the domain of Industry 4.0 and related techniques. Industry 4.0 is expected to have a very high impact on labor markets, global value chains, education, health, environment, and many social economic aspects. Industry 4.0 Interoperability, Analytics, Security, and Case Studies provides a deeper understanding of the drivers and enablers of Industry 4.0. It includes real case studies of various applications related to different fields, such as cyber physical systems (CPS), Internet of Things (IoT), cloud computing, machine learning, virtualization, decentralization, blockchain, fog computing, and many other related areas. Also discussed are interoperability, design, and implementation challenges. Researchers, academicians, and those working in industry around the globe will find this book of interest. FEATURES Provides an understanding of the drivers and enablers of Industry 4.0 Includes real case studies of various applications for different fields Discusses technologies such as cyber physical systems (CPS), Internet of Things (IoT), cloud computing, machine learning, virtualization, decentralization, blockchain, fog computing, and many other related areas Covers design, implementation challenges, and interoperability Offers detailed knowledge on Industry 4.0 and its underlying technologies, research challenges, solutions, and case studies The book includes high-quality research papers presented at the International Conference on Innovative Computing and Communication (ICICC 2018), which was held at the Guru Nanak Institute of Management (GNIM), Delhi, India on 5–6 May 2018. 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. Proceedings of the 16th International Conference on Remote Engineering and Virtual Instrumentation ICCWC 2021 4th International Conference, ICAICR 2020, Gurugram, India, December 26–27, 2020, Revised Selected Papers, Part II Proceedings of MDCWC 2020 ICCAP 2021 Cyber-physical Systems and Digital Twins Big Data Analytics in Future Power Systems This book, divided in two volumes, originates from Techno-Societal 2018: the 2nd International Conference on Advanced Technologies for Societal Applications, Maharashtra, India, that brings together faculty members of various engineering colleges to solve Indian regional relevant problems under the guidance of eminent researchers from various reputed organizations. The focus is on technologies that help

develop and improve society, in particular on issues such as the betterment of differently abled people, environment impact, livelihood, rural employment, agriculture, healthcare, energy, transport, sanitation, water, education. This conference aims to help innovators to share their best practices or products developed to solve specific local problems which in turn may help the other researchers to take inspiration to solve problems in their region. On the other hand, technologies proposed by expert researchers may find applications in different regions. This offers a multidisciplinary platform for researchers from a broad range of disciplines of Science, Engineering and Technology for reporting innovations at different levels.

The book comprises selected papers presented at the International Conference on Wireless Communication (ICWiCOM), which is organized by D. J. Sanghvi College of Engineering's Department of Electronics and Telecommunication Engineering. The book focuses on specific topics of wireless communication, like signal and image processing applicable to wireless domains, networking, microwave and antenna design, and telemedicine systems. Covering three main areas – networking, antenna designs and embedded systems applicable to communication – it is a valuable resource for postgraduate and doctoral students.

Deforestation and forest degradation represent a significant fraction of the annual worldwide human-induced emission of greenhouse gases to the atmosphere, the main source of biodiversity losses and the destruction of millions of people's homes. Despite local/regional causes, its consequences are global. This book provides a general view about deforestation dynamics around the world, incorporating analyses of its causes, impacts and actions to prevent it. Its 17 Chapters, organized in three sections, refer to deforestation impacts on climate, soil, biodiversity and human population, but also describe several initiatives to prevent it. A special emphasis is given to different remote-sensing and mapping techniques that could be used as a source for decision-makers and society to promote forest conservation and control deforestation.

With the increasing worldwide trend in population migration into urban centers, we are beginning to see the emergence of the kinds of mega-cities which were once the stuff of science fiction. It is clear to most urban planners and developers that accommodating the needs of the tens of millions of inhabitants of those megalopolises in an orderly and uninterrupted manner will require the seamless integration of and real-time monitoring and response services for public utilities and transportation systems. Part speculative look into the future of the world's urban centers, part technical blueprint, this visionary book helps lay the groundwork for the communication networks and services on which tomorrow's "smart cities" will run. Written by a uniquely well-qualified author team, this book provides detailed insights into the technical requirements for the wireless sensor and actuator networks required to make smart cities a reality.

International Conference on Innovative Computing and Communications
Internet of Things and Analytics for Agriculture, Volume 2
6GN for Future Wireless Networks
Techno-Societal 2018
Industry 4.0 Interoperability, Analytics, Security, and Case Studies
IoT with Smart Systems

Artificial Intelligence Techniques for a Scalable Energy Transition

We are delighted to introduce the proceedings of the first edition of the 2022 International Conference on Intelligent Technologies in Security and Privacy for Wireless Communication (ITSPWC 2022). This conference has brought researchers, developers and practitioners around the world who are leveraging and developing the Wireless Communication. The theme of ITSPWC 2022 was "Security and Challenges for Wireless Communication and Power Energy". The technical program of ITSPWC 2022 consisted of 33 full papers, including 5 invited papers in oral presentation sessions at the main conference tracks. The conference tracks were: Track 1 – Recent Trends in IoT; Track 2 – Recent Trends in Smart Energy Systems and Transmission; Track 3 – Recent Trends in Embedded Systems; and Track 4 – Recent Trends in Communication Systems. Aside from the high quality technical paper presentations, the technical program also featured one invited talk and two technical workshops. The invited talk was presented by Prof. Kaushik Pal from Universidade Federal do Rio de Janeiro, Brazil. The ITSPWC workshop aimed to gain insights into key challenges, understanding and design criteria of employing wireless technologies to develop and implement future related services and applications. It was a great pleasure to work with such an excellent organizing committee team for their hard work in organizing and supporting the conference. In particular, the Technical Program Committee, led by our Co-Chairs, Dr.R.Nagarajan, Dr.George Ghinea, Dr.Alagar Karthick, Dr.Bassim Alhadidi and Prof. Kanagaraj Venusamy who have completed the peer-review process of technical papers and made a high-quality technical program. We are also grateful to all the authors who submitted their papers to the ITSPWC 2022 conference and workshops. We strongly believe that ITSPWC conference provides a good forum for all researcher, developers and practitioners to discuss all science and technology aspects that are relevant to Security and Privacy in Wireless Communication. We also expect that the future Wireless Communication conference will be as successful and stimulating, as indicated by the contributions presented in this volume. Dr.S.Kannadhasan

This book presents research in artificial techniques using intelligence for energy transition, outlining several applications including production systems, energy

production, energy distribution, energy management, renewable energy production, cyber security, industry 4.0 and internet of things etc. The book goes beyond standard application by placing a specific focus on the use of AI techniques to address the challenges related to the different applications and topics of energy transition. The contributions are classified according to the market and actor interactions (service providers, manufacturers, customers, integrators, utilities etc.), to the SG architecture model (physical layer, infrastructure layer, and business layer), to the digital twin of SG (business model, operational model, fault/transient model, and asset model), and to the application domain (demand side management, load monitoring, micro grids, energy consulting (residents, utilities), energy saving, dynamic pricing revenue management and smart meters, etc.).

This book provides insights into the 3rd International Conference on Communication, Devices and Computing (ICCDC 2021), which was held in Haldia, India, on August 1618, 2021. It covers new ideas, applications, and the experiences of research engineers, scientists, industrialists, scholars, and students from around the globe. The proceedings highlight cutting-edge research on communication, electronic devices, and computing and address diverse areas such as 5G communication, spread spectrum systems, wireless sensor networks, and signal processing for secure communication, error control coding, printed antennas, analysis of wireless networks, antenna array systems, analog and digital signal processing for communication systems, frequency selective surfaces, radar communication, and substrate integrated waveguide and microwave passive components, which are key to state-of-the-art innovations in communication technologies. .

This book is a collection of best selected research papers presented at the Conference on Machine Learning, Deep Learning and Computational Intelligence for Wireless Communication (MDCWC 2020) held during October 22nd to 24th 2020, at the Department of Electronics and Communication Engineering, National Institute of Technology Tiruchirappalli, India. The presented papers are grouped under the following topics (a) Machine Learning, Deep learning and Computational intelligence algorithms (b)Wireless communication systems and (c) Mobile data applications and are included in the book. The topics include the latest

research and results in the areas of network prediction, traffic classification, call detail record mining, mobile health care, mobile pattern recognition, natural language processing, automatic speech processing, mobility analysis, indoor localization, wireless sensor networks (WSN), energy minimization, routing, scheduling, resource allocation, multiple access, power control, malware detection, cyber security, flooding attacks detection, mobile apps sniffing, MIMO detection, signal detection in MIMO-OFDM, modulation recognition, channel estimation, MIMO nonlinear equalization, super-resolution channel and direction-of-arrival estimation. The book is a rich reference material for academia and industry.

Machine Learning, Deep Learning and Computational Intelligence for Wireless Communication

Smart Communications, Intelligent Algorithms and Interactive Methods

Proceedings of the International Workshop on Computational Intelligence in Security for Information Systems CISIS 2008

Proceedings of ICICI 2021

Advanced Methods, Digital Technologies, Decision Support Tools, and Applications

ICCDC 2021

Case Studies on Data Centers and Automation

Microgrids have recently emerged as the building block of a smart grid, combining distributed renewable energy sources, energy storage devices, and load management in order to improve power system reliability, enhance sustainable development, and reduce carbon emissions. At the same time, rapid advancements in sensor and metering technologies, wireless and network communication, as well as cloud and fog computing are leading to the collection and accumulation of large amounts of data (e.g., device status data, energy generation data, consumption data). The application of big data analysis techniques (e.g., forecasting, classification, clustering) on such data can optimize the power generation and operation in real time by accurately predicting electricity demands, discovering electricity consumption patterns, and developing dynamic pricing mechanisms. An efficient and intelligent analysis of the data will enable smart microgrids to detect and recover from failures quickly, respond to electricity demand swiftly, supply more reliable and economical energy, and enable customers to have more control over their energy use. Overall, data-intensive analytics can provide effective and efficient decision support for all of the producers, operators, customers, and regulators in smart microgrids, in order to achieve holistic smart energy management, including energy generation, transmission, distribution, and demand-side management. This book contains an assortment of relevant novel research contributions that provide real-world applications of data-intensive analytics in smart grids and contribute to the dissemination of new ideas in this area.

This book includes high-quality papers presented at Proceedings of First International Conference on Computational Electronics for

Wireless Communications (ICCWC 2021), held at National Institute of Technology, Kurukshetra, Haryana, India, during June 11–12, 2021. The book presents original research work of academics and industry professionals to exchange their knowledge of the state-of-the-art research and development in computational electronics with an emphasis on wireless communications. The topics covered in the book are radio frequency and microwave, signal processing, microelectronics and wireless networks.

This book covers cutting-edge and advanced research on data processing techniques and applications for cyber-physical systems, gathering the proceedings of the International Conference on Data Processing Techniques and Applications for Cyber-Physical Systems (DPTA 2020), held in Laibin City, Guangxi Province, China, on December 11–12, 2020. It examines a wide range of topics, including distributed processing for sensor data in CPS networks; approximate reasoning and pattern recognition for CPS networks; data platforms for efficient integration with CPS networks; machine learning algorithms for CPS networks; and data security and privacy in CPS networks. Outlining promising future research directions, the book offers a valuable resource for students, researchers, and professionals alike, while also providing a useful reference guide for newcomers to the field.

This book constitutes the proceedings of the 16th International Conference on Remote Engineering and Virtual Instrumentation (REV), held at the BMS College of Engineering, Bangalore, India on 3–6 February 2019. Today, online technologies are at the core of most fields of engineering, as well as of society as a whole, and are inseparably connected with Internet of Things, cyber-physical systems, collaborative networks and grids, cyber cloud technologies, service architectures, to name but a few. Since it was first held in, 2004, the REV conference has focused on the increasing use of the Internet for engineering tasks and the problems surrounding it. The 2019 conference demonstrated and discussed the fundamentals, applications and experiences in the field of online engineering and virtual instrumentation. It also presented guidelines for university-level courses on these topics, in view of the increasing globalization of education and the demand for teleworking, remote services and collaborative working environments.

Proceedings of ICICC 2018, Volume 2

DPTA 2020

Application of Intelligent Systems in Multi-modal Information Analytics

2020 International Conference on Data Processing Techniques and Applications for Cyber-Physical Systems

Patents

Advanced Informatics for Computing Research

Proceedings of ICISC 2021

This two-volume set (CCIS 1393 and CCIS 1394) constitutes selected and revised papers of the 4th International Conference on Advanced Informatics for Computing Research, ICAICR 2020, held in Gurugram, India, in December 2020. The 34 revised full papers and 51 short papers presented were carefully reviewed and selected from 306 submissions. The papers are organized in topical sections on computing methodologies; hardware; networks; security and privacy.

This book constitutes the proceedings of the Third International Conference on 6G for Future Wireless Networks, 6GN 2020, held in Tianjin, China, in August 2020. The conference was held virtually due to the COVID-19 pandemic. The 45 full papers were selected from 109 submissions and present the state of the

art and practical applications of 6G technologies. The papers are arranged thematically on network scheduling and optimization; wireless system and platform; intelligent applications; network performance evaluation; cyber security and privacy; technologies for private 5G/6G.

This book explains the concept of data centers, including data collection, public parking systems, smart metering, and sanitizer dispensers. Electric urban transport systems and effective electric distribution in smart cities are discussed as well. The extensive role of power electronics in smart building applications, such as electric vehicles, rooftop terracing, and renewable energy integration, is included. Case studies on automation in smart homes and commercial and official buildings are elaborated. This book describes the complete implication of smart buildings via industrial, commercial, and community platforms. FEATURES Systematically defines energy-efficient buildings employing power consumption optimization techniques with the inclusion of renewable energy sources Covers data centers and cybersecurity with excellent data storage features for smart buildings Includes systematic and detailed strategies for building air-conditioning and lighting Details smart building security propulsion This book is aimed at graduate students, researchers, and professionals in building systems engineering, architectural engineering, and electrical engineering.

How 5G technology can support the demands of multiple vertical industries Recent advances in technologyhave created new vertical industries that are highly dependent on the availability and reliability of data between multiple locations. The 5G system, unlike previous generations, will be entirely data driven—addressing latency, resilience, connection density, coverage area, and other vertical industry criteria. Enabling 5G Communication Systems to Support Vertical Industries demonstrates how 5G communication systems can meet the needs unique to vertical industries for efficient, cost-effective delivery of service. Covering both theory and practice, this book explores solutions to problems in specific industrial sectors including smart transportation, smart agriculture, smart grid, environmental monitoring, and disaster management. The 5G communication system will have to provide customized solutions to accommodate each vertical industry's specific requirements. Whether an industry practitioner designingthe next generation of wireless communications or a researcher needing to identify open issues and classify their research, this timely book: Covers the much-discussed topics of supporting multiple vertical industries and new ICT challenges Addresses emerging issues and real-world problems surrounding 5G technology in wireless communication and networking Explores a comprehensive array of essential topics such as connected health, smart transport, smart manufacturing, and more Presents important topics in a clear, concise style suitable for new learners and professionals alike Includes contributions from experts and industry leaders, system diagrams, charts, tables, and examples Enabling 5G Communication Systems to Support Vertical Industries is a valuable resource telecom engineers industry professionals, researchers, professors, doctorate, and postgraduate students

requiring up-to-date information on supporting vertical industries with 5G technology systems.
San Sebastián, Spain, June 6-8, 2018 Proceedings
ICWiCOM 2019
Smart Buildings Digitalization
2021 International Conference on Multi-modal Information Analytics (MMIA 2021), Volume 2
Intelligent Data Communication Technologies and Internet of Things

Proceedings of the 15th International Conference on Complex, Intelligent and Software Intensive Systems (CISIS-2021)

This book gathers papers addressing state-of-the-art research in all areas of information and communication technologies and their applications in intelligent computing, cloud storage, data mining and software analysis. It presents the outcomes of the Fifth International Conference on Information and Communication Technology for Intelligent Systems (ICTIS 2021), held in Ahmedabad, India. The book is divided into two volumes. It discusses the fundamentals of various data analysis techniques and algorithms, making it a valuable resource for researchers and practitioners alike.

Alarm Systems and Theft Prevention, Second Edition, recounts the sometimes sad, sometimes humorous, and nearly always unfortunate experiences of manufacturers, distributors, retailers, and individuals who have lost valuable merchandise, money, jewelry, or securities to criminal attacks. In most cases the losses occurred because there was a weak link: a vulnerability in the total security defense. The book presents in practical terms those weaknesses in physical security, alarm systems, or related security procedures that, when blended together, result in vulnerability. In addition to analyzing these cases and identifying the key elements of vulnerability, remedies for curing the weakness are also offered. Other sections of this book deal with the application, strengths, and limitations of security equipment. For the most part, equipment is presented from the practical viewpoint—what a security device or system will do (or not do) and how it should be applied and operated, rather than the detail of mechanical design, electrical circuitry, or laboratory theories. This book is written in layman's language and is intended to be read by people who supply, use, or need security services and equipment.

This book gathers selected papers presented at the 5th International Conference on Intelligent Data Communication Technologies and Internet of Things (ICICI 2021), organized by JCT College of Engineering and Technology, Coimbatore, Tamil Nadu, India during 27 28 August 2021. This book solicits the innovative research ideas and solutions for almost all the intelligent data intensive theories and application domains. The general scope of this book covers the design, architecture, modeling, software, infrastructure and applications of intelligent communication architectures and systems for big data or data-intensive applications. In particular, this book reports the novel and recent research works on big data, mobile and wireless networks, artificial intelligence, machine learning, social network mining, intelligent computing technologies, image analysis, robotics and autonomous systems, data security and privacy.

This book presents selected papers from the 5th International Conference on Inventive Systems and Control (ICISC 2021), held on 7 8 January 2021 at JCT College of Engineering and Technology, Coimbatore, India. The book includes an analysis of the class of intelligent systems and control techniques that utilises various artificial intelligence technologies, where there are no mathematical models and systems available to make them remain controlled. Inspired by various existing intelligent techniques, the primary goal is to present the emerging innovative models to tackle the challenges faced by the existing computing and communication technologies. The proceedings of ICISC 2021 aim at presenting the state-of-the-art research developments, trends, and solutions for the challenges faced by the intelligent systems and control community with the real-world applications. The included research articles feature the novel and unpublished research works on intelligent system representation and control.

Power systems are increasingly collecting large amounts of data due to the expansion of the Internet of Things into power grids. In a smart grids scenario, a huge number of intelligent devices will be connected with almost no human intervention characterizing a machine-to-machine scenario, which is one of the pillars of the Internet of Things. The book characterizes and evaluates how the emerging growth of data in communications networks applied to smart grids will impact the grid efficiency and reliability. Additionally, this book discusses the various security concerns that become manifest with Big Data and expanded communications in power grids. Provide a general description and definition of big data, which has been gaining significant attention in the research community. Introduces a comprehensive overview of big data optimization methods in power system. Reviews the communication devices used in critical infrastructure, especially power systems; security methods available to vet the identity of devices; and general security threats in CI networks. Presents applications in power systems, such as power flow and protection. Reviews electricity theft concerns and the wide variety of data-driven techniques and applications developed for electricity theft detection.

This book provides an insight into recent technological trends and innovations in mobility solutions and platforms to improve mobility of visually impaired people. The authors' goal is to help to contribute to the social and societal inclusion of the visually impaired. The book's topics include, but are not limited to, obstacle detection systems, indoor and outdoor navigation, transportation sustainability systems, and hardware/devices to aid visually impaired people. The book has a strong focus on practical applications, tested in a real environment. Applications include city halls, municipalities, and companies that can keep up to date with recent trends in platforms, methodologies and technologies to promote urban mobility. Also discussed are broader realms including education, health, electronics, tourism, and transportation. Contributors include a variety of researchers and practitioners around the world. Features practical, tested applications of technological mobility solutions for visual impaired people; Presents topics such as obstacle detection systems, urban mobility, smart home services, and ambient assisted living; Includes a number of application examples in education, health,

electronics, tourism, and transportation.

Proceedings of First International Conference on Computational Electronics for Wireless CommunicationsICCWC 2021Springer Nature

Power and Energy Engineering are important and pressing topics globally, covering issues such as shifting paradigms of energy generation and consumption, intelligent grids, green energy and environmental protection. The 11th Asia-Pacific Power and Energy Engineering Conference (APPEEC 2019) was held in Xiamen, China from April 19 to 21, 2019. APPEEC has been an annual conference since 2009 and has been successfully held in Wuhan (2009 & 2011), Chengdu (2010 & 2017), Shanghai (2012 & 2014), Beijing (2013 & 2015), Suzhou (2016) and Guilin (2018), China. The objective of APPEEC 2019 was to provide scientific and professional interactions for the advancement of the fields of power and energy engineering. APPEEC 2019 facilitated the exchange of insights and innovations between industry and academia. A group of excellent speakers have delivered keynote speeches on emerging technologies in the field of power and energy engineering. Attendees were given the opportunity to give oral and poster presentations and to interface with invited experts.

Proceedings of the First International Conference on Combinatorial and Optimization, ICCAP 2021, December 7-8 2021, Chennai, India

International Joint Conference SOCO'18-CISIS'18-ICEUTE'18

Enabling 5G Communication Systems to Support Vertical Industries

Technological Trends in Improved Mobility of the Visually Impaired

Alarm Systems and Theft Prevention

Communication Networks and Services

ITSPWC 2022

This book provides comprehensive coverage of the latest advances and trends in information technology, science and engineering. Specifically, it addresses a number of broad themes, including multi-modal informatics, data mining, agent-based and multi-agent systems for health and education informatics, which inspire the development of intelligent information technologies. The contributions cover a wide range of topics such as AI applications and innovations in health and education informatics; data and knowledge management; multi-modal application management; and web/social media mining for multi-modal informatics. Outlining promising future research directions, the book is a valuable resource for students, researchers and professionals, and a useful reference guide for newcomers to the field. This book is a compilation of the papers presented in the 2021 International Conference

on Multi-modal Information Analytics, held in Huhehaote, China, on April 23–24, 2021.

The research scenario in advanced systems for protecting critical infrastructures and for deeply networked information tools highlights a growing link between security issues and the need for intelligent processing abilities in the area of information s- tems. To face the ever-evolving nature of cyber-threats, monitoring systems must have adaptive capabilities for continuous adjustment and timely, effective response to modifications in the environment. Moreover, the risks of improper access pose the need for advanced identification methods, including protocols to enforce comput- security policies and biometry-related technologies for physical authentication. C- putational Intelligence methods offer a wide variety of approaches that can be fruitful in those areas, and can play a crucial role in the adaptive process by their ability to learn empirically and adapt a system's behaviour accordingly. The International Workshop on Computational Intelligence for Security in Inf- mation Systems (CISIS) proposes a meeting ground to the various communities - volved in building intelligent systems for security, namely: information security, data mining, adaptive learning methods and soft computing among others. The main goal is to allow experts and researchers to assess the benefits of learning methods in the data-mining area for information-security applications. The Workshop offers the opportunity to interact with the leading industries actively involved in the critical area of security, and have a picture of the current solutions adopted in practical domains. This volume of Advances in Soft Computing contains accepted papers presented at CISIS'08, which was held in Genova, Italy, on October 23rd–24th, 2008.

This book constitutes the proceedings of the 11th International Conference on Wireless Algorithms, Systems, and Applications, WASA 2016, held in Bozeman, MT, USA, in August 2016.The 50 full papers and 9 invited papers presented werde carefully reviewed and selected from 148 submissions. WASA is designed to be a forum for theoreticians, system and application designers, protocol developers and practitioners to discuss and express their views on the current trends, challenges, and state-of-the-art solutions related to various issues in wireless networks. Topics of interests include, but not limited to, effective and efficient state-of-the-art algorithm design and analysis, reliable and secure system development and implementations, experimental study and testbed validation, and new application exploration in wireless networks.

This book includes high quality research papers presented at the International Conference on Communication, Computing and Electronics Systems 2021, held at the PPG Institute of Technology, Coimbatore, India, on 28-29 October 2021. The volume focuses mainly on the research trends in cloud computing, mobile computing, artificial intelligence and advanced electronics systems. The topics covered are automation, VLSI, embedded systems, optical

communication, RF communication, microwave engineering, artificial intelligence, deep learning, pattern recognition, communication networks, Internet of Things, cyber-physical systems, and healthcare informatics.
Emerging Developments in the Power and Energy Industry
Proceedings of the 11th Asia-Pacific Power and Energy Engineering Conference (APPEEC 2019), April 19-21, 2019, Xiamen, China
Proceedings of the International Conference on Intelligent Technologies in Security and Privacy for Wireless Communication, ITSPWC 2022, 14-15 May 2022, Karur, Tamilnadu, India
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