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KEY=MARKETS - TRUJILLO JAMARCUS

APPLICATIONS AND MARKETS FOR COOPERATING OBJECTS

Springer Science & Business Media **This book provides an overview and an insight in cooperative objects and defines the classification of topics into the different areas. A significant number of researchers and industrial partners were contacted in order to prepare the roadmap. The book presents of the main results provided by the corresponding European project "CONET".**

INTERNET OF THINGS FOR SMART CITIES

TECHNOLOGIES, BIG DATA AND SECURITY

Springer This book introduces the concept of smart city as the potential solution to the challenges created by urbanization. The Internet of Things (IoT) offers novel features with minimum human intervention in smart cities. This book describes different components of Internet of Things (IoT) for smart cities including sensor technologies, communication technologies, big data analytics and security.

THE EMERGING DOMAIN OF COOPERATING OBJECTS

DEFINITIONS AND CONCEPTS

Springer This book provides a classification of current and future applications for the domain of Cooperating Objects. The book has been created with a very strong participation of the industry and taking into account current research trends and industrial roadmaps

BASICS OF COMPUTER NETWORKING

Springer Science & Business Media **Springer Brief Basics of Computer Networking** provides a non-mathematical introduction to the world of networks. This book covers both technology for wired and wireless networks. Coverage includes transmission media, local area networks, wide area networks, and network security. Written in a very accessible style for the interested layman by the author of a widely used textbook with many years of experience explaining concepts to the beginner.

SPARSE REPRESENTATIONS AND COMPRESSIVE SENSING FOR IMAGING AND VISION

Springer Science & Business Media **Compressed sensing or compressive sensing** is a new concept in signal processing where one measures a small number of non-adaptive linear combinations of the signal. These measurements are usually much smaller than the number of samples that define the signal. From these small numbers of measurements, the signal is then reconstructed by non-linear procedure. Compressed sensing has recently emerged as a powerful tool for efficiently processing data in non-traditional ways. In this book, we highlight some of the key mathematical insights underlying sparse representation and compressed sensing and illustrate the role of these theories in classical vision, imaging and biometrics problems.

COMPLEX BINARY NUMBER SYSTEM

ALGORITHMS AND CIRCUITS

Springer Science & Business Media This book is a compilation of the entire research work on the topic of Complex Binary Number System (CBNS) carried out by the author as the principal investigator and members of his research groups at various universities during the years 2000-2012. Pursuant to these efforts spanning several years, the realization of CBNS as a viable alternative to represent complex numbers in an “all-in-one” binary number format has become possible and efforts are underway to build computer hardware based on this unique number system. It is hoped that this work will be of interest to anyone involved in computer arithmetic and digital logic design and kindle renewed enthusiasm among the engineers working in the areas of digital signal and image processing for developing newer and efficient algorithms and techniques incorporating CBNS.

RECOMMENDER SYSTEMS FOR LEARNING

Springer Science & Business Media Technology enhanced learning (TEL) aims to design, develop and test sociotechnical innovations that will support and enhance learning practices of both individuals and organisations. It is therefore an application domain that generally covers technologies that support all forms of teaching and learning activities. Since information retrieval (in terms of searching for relevant learning resources to support teachers or learners) is a pivotal activity in TEL, the deployment of recommender systems has attracted increased interest. This brief attempts to provide an introduction to recommender systems for TEL settings, as well as to highlight their particularities compared to recommender systems for other application domains.

A REMOTE INTEGRATED TESTBED FOR COOPERATING OBJECTS

Springer Science & Business Media Testbeds are gaining increasing relevance in research domains and also in industrial applications. However, very few books devoted to testbeds have been published. To the best of my knowledge no book on this topic has been published. This book is particularly interesting for the growing community of testbed developers. I believe the book is also very interesting for researchers in robot-WSN cooperation. This book provides detailed description of a system that can be considered the first testbed that allows full peer-to-peer interoperability between heterogeneous robots and ubiquitous systems such as Wireless Sensor Networks, camera networks and

pervasive computing systems. The system architecture includes modules that allows full bidirectional communication between robots and WSN. One robot can The book describes the current state of the art in development of testbeds integrating Cooperating Object technologies. It describes in detail the testbed specification and design using requirements extracted from surveys among experts in robotics and ubiquitous systems in academia and industry. The book also describes the testbed novel architecture and its hardware and software components. Moreover, it includes details on user support tools to facilitate its use such as remote use using a virtual private network and sets of functionalities of interest for members from the robotics, WSN and robot-WSN communities. Finally, the book illustrates its capabilities and potentialities describing the implementation of some of the experiments that have been performed. Examples from the robotics, WSN and robot-WSN communities are described.

DESIGN AND CONTROL OF HYBRID ACTIVE POWER FILTERS

Springer Science & Business Media **Design and Control of Hybrid Active Power Filters** presents an overview of the current quality problems and their compensators. To get a balance between the system cost and performance, hybrid active power filters (HAPFs) are valuable. The book presents the coverage of resonance phenomena prevention capability, filtering performance and system robustness analysis of HAPF; nonlinear inverter current slope characteristics and their linear operation region requirement analysis of the hysteresis PWM for the HAPF; minimum inverter capacity design procedure of HAPF, adaptive dc-link voltage controller for the HAPF and the real design example of a 220V 10kVA HAPF, in which the system performance analysis method, minimum dc voltage deduction concept and adaptive dc voltage idea can be further extended into the other active compensators, such as APF, static synchronous compensator STATCOM, etc. This book will benefit researchers, graduate students, and electrical power engineers in the field of power-quality compensation. Dr. Chi-Seng Lam and Dr. Man-Chung Wong are both from the University of Macau, Macao, China.

THE EMERGING DOMAIN OF COOPERATING OBJECTS

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MOVING OBJECTS DETECTION USING MACHINE LEARNING

Springer Nature

INTERNET OF THINGS

BUILDING BLOCKS AND BUSINESS MODELS

Springer This book describes the building blocks and introductory business models for Internet of Things (IoT). The author provide an overview of the entire IoT architecture and constituent layers, followed by detail description of each block . Various inter-connecting technologies and sensors are discussed in context of IoT networks. In addition to this, concepts of Big Data and Fog Computing are presented and characterized as per data generated by versatile IoT applications . Smart parking system and context aware services are presented as an hybrid model of cloud and Fog Afterwards, various IoT applications and respective business models are discussed. Finally, author summarizes the IoT building blocks and identify research issues in each, and suggest potential research projects worthy of pursuing.

LINEAR PARAMETER-VARYING CONTROL FOR ENGINEERING APPLICATIONS

Springer Science & Business Media The subject of this brief is the application of linear parameter-varying (LPV) control to a class of dynamic systems to provide a systematic synthesis of gain-scheduling controllers with guaranteed stability and performance. An important step in LPV control design, which is not well covered in the present literature, is the selection of weighting functions. The proper selection of weighting functions tunes the controller to obtain the desired closed-loop response. The selection of appropriate weighting functions is difficult and sometimes appears arbitrary. In this brief, gain-scheduling control with engineering applications is covered in detail, including the LPV modeling, the control problem formulation, and the weighting function optimization. In addition, an iterative algorithm for obtaining optimal output weighting functions with respect to the H2 norm bound is presented in this brief. Using this algorithm, the selection of appropriate weighting functions becomes an automatic process. The LPV design and control synthesis procedures in this brief are illustrated using: • air-to-fuel ratio control for port-fuel-injection engines; • variable valve timing control; and • application to a vibration control problem. After reading this brief, the reader will be able to apply its concepts to design gain-scheduling controllers for their own engineering applications. This brief provides detailed step-by-step LPV modeling and control design strategies along with an automatic weight-selection algorithm

so that engineers can apply state-of-the-art LPV control synthesis to solve their own engineering problems. In addition, this brief should serve as a bridge between the H-infinity and H2 control theory and the real-world application of gain-scheduling control.

AGENT-BASED SEMANTIC WEB SERVICE COMPOSITION

Springer Science & Business Media **Agent-based Semantic Web Service Composition** closely examines the various aspects of SWS composition, and explores the concept that a Multi-Agent system can serve as an SWS composition system in which its agents can interact with one another to satisfy a high-level goal. In addition to surveying various proposed multi-agent-based SWS composition models, the book also highlights the cognitive parameter-based semantic web service selection models that can be used in multi-agent-based SWS composition, and outlines a new negotiation agreement-based SWS composition that can outperform existing techniques. **Agent-based Semantic Web Service Composition** is intended for researchers and practitioners as a reference guide for optimizing SWS composition and implementing multi-agent systems. Instructors and other academics working in a related field will also find the book invaluable.

SECURITY CHALLENGES AND APPROACHES IN INTERNET OF THINGS

Springer This book provides a comprehensive survey of the security and privacy research advancements in Internet of Things (IoT). The book lays the context for the discussion by introducing a system model for IoT. Since IoT is very varied and has been introduced in many different contexts, the system model introduced plays a crucial role in integrating the concepts into a coherent framework. After the system model, the book introduces the vulnerable features of the IoT. By providing a comprehensive discussion of the vulnerable features, the book highlights the problem areas of IoT that should be studied concerning security and privacy. Using the vulnerable features as a motivation, the book presents a vast survey of existing security and privacy approaches for IoT. The survey is a good way for the reader to pick up interesting directions of research that have already been explored and also hints at directions that could take additional investigation. Finally, the book presents four case studies that provide a detailed view of how some of the security and privacy concerns are addressed in specific problem areas.

SECURE AND PRIVACY-PRESERVING DATA COMMUNICATION IN INTERNET OF THINGS

Springer This book mainly concentrates on protecting data security and privacy when participants communicate with each other in the Internet of Things (IoT). Technically, this book categorizes and introduces a collection of secure and privacy-preserving data communication schemes/protocols in three traditional scenarios of IoT: wireless sensor networks, smart grid and vehicular ad-hoc networks recently. This book presents three advantages which will appeal to readers. Firstly, it broadens reader's horizon in IoT by touching on three interesting and complementary topics: data aggregation, privacy protection, and key agreement and management. Secondly, various cryptographic schemes/protocols used to protect data confidentiality and integrity is presented. Finally, this book will illustrate how to design practical systems to implement the algorithms in the context of IoT communication. In summary, readers can simply learn and directly apply the new technologies to communicate data in IoT after reading this book.

CONVERGENCE OF ENERGY, COMMUNICATION AND COMPUTATION IN B5G CELLULAR INTERNET OF THINGS

Springer Nature This book focuses on the convergence of energy, communication and computation in the beyond 5G (B5G) cellular Internet of Things (IoT). It addresses both theory and techniques, with more weight placed on the latter. This is achieved by providing in-depth studies on a number of major topics such as wireless power transfer, non-orthogonal multiple access, massive multiple-input multiple-output, and over-air computation. In turn, four typical convergence scenarios are studied in detail: the convergence of energy and communication, convergence of energy and computation, convergence of communication and computation, and convergence of energy, communication and computation. The comprehensive and systematic coverage of key techniques in the convergence of energy, communication and computation in the B5G cellular IoT is one of the book's major features, making it particularly well suited for readers who are interested in learning about practical solutions in B5G wireless networks. Accordingly, the book offers a valuable resource for researchers, engineers, and graduate students in the fields of information engineering, telecommunications engineering, computer engineering, etc.

IEEE 802.15.4 AND ZIGBEE AS ENABLING TECHNOLOGIES FOR LOW-POWER WIRELESS SYSTEMS WITH QUALITY-OF-SERVICE CONSTRAINTS

Springer Science & Business Media This book outlines the most important characteristics of IEEE 802.15.4 and ZigBee and how they can be used to engineer Wireless Sensor Network (WSN) systems and applications, with a particular focus on

Quality-of-Service (QoS) aspects. It starts by providing a snapshot of the most relevant features of these two protocols, identifying some gaps in the standard specifications. Then it describes several state-of-the-art open-source implementations, models and tools that have been designed by the authors and have been widely used by the international community. The book also outlines the fundamental performance limits of IEEE 802.15.4/ZigBee networks, based on well-sustained analytical, simulation and experimental models, including how to dimension such networks to optimize delay/energy trade-offs.

RADIO LINK QUALITY ESTIMATION IN LOW-POWER WIRELESS NETWORKS

Springer Science & Business Media This book provides a comprehensive survey on related work for radio link quality estimation, which covers the characteristics of low-power links, the fundamental concepts of link quality estimation in wireless sensor networks, a taxonomy of existing link quality estimators and their performance analysis. It then shows how link quality estimation can be used for designing protocols and mechanisms such as routing and hand-off. The final part is dedicated to radio interference estimation, generation and mitigation.

ADVANCES IN INTERDISCIPLINARY ENGINEERING

SELECT PROCEEDINGS OF FLAME 2020

Springer Nature This book comprises the select proceedings of the International Conference on Future Learning Aspects of Mechanical Engineering (FLAME) 2020. This volume focuses on several emerging interdisciplinary areas involving mechanical engineering. Some of the topics covered include automobile engineering, mechatronics, applied mechanics, structural mechanics, hydraulic mechanics, human vibration, biomechanics, biomedical Instrumentation, ergonomics, biodynamic modeling, nuclear engineering, and agriculture engineering. The contents of this book will be useful for students, researchers as well as professionals interested in interdisciplinary topics of mechanical engineering.

MASSIVE ACCESS FOR CELLULAR INTERNET OF THINGS THEORY AND TECHNIQUE

Springer This book focuses on massive access to the cellular internet of things (IoT). Both theory and technique are addressed, with more weight placed on the latter. This is achieved by providing in-depth studies on a number of central topics such as channel state information acquisition, user clustering, superposition coding, and successive

interference cancellation. Four typical application scenarios are examined in detail, namely the stationary IoT device scenario, frequency division duplex-based low-mobility IoT device scenario, time-division duplex-based IoT device scenario, and high-mobility IoT device scenario. The comprehensive and systematic treatment of key techniques in massive access to the cellular IoT is one of the major features of the book, which is particularly suited for readers who are interested in finding practical solutions for the cellular IoT. As such, it will benefit researchers, engineers, and graduate students in the fields of information engineering, telecommunications engineering, computer engineering, etc.

DEVICE-FREE OBJECT TRACKING USING PASSIVE TAGS

Springer This SpringerBrief examines the use of cheap commercial passive RFID tags to achieve accurate device-free object-tracking. It presents a sensitive detector, named Twins, which uses a pair of adjacent passive tags to detect uncooperative targets (such as intruders). Twins leverages a newly observed phenomenon called critical state that is caused by interference among passive tags. The author expands on the previous object tracking methods, which are mostly device-based, and reveals a new interference model and their extensive experiments for validation. A prototype implementation of the Twins-based intrusion detection scheme with commercial off-the-shelf reader and tags is also covered in this SpringerBrief. Device-Free Object Tracking Using Passive Tags is designed for researchers and professionals interested in smart sensing, localization, RFID and Internet of Things applications. The content is also useful for advanced-level students studying electrical engineering and computer science.

SECURITY, PRIVACY AND TRUST IN THE IOT ENVIRONMENT

Springer The Internet of Things (IoT) is a network of devices and smart things that provides a pervasive environment in which people can interact with both the cyber and physical worlds. As the number and variety of connected objects continue to grow and the devices themselves become smarter, users' expectations in terms of adaptive and self-governing digital environments are also on the rise. Although, this connectivity and the resultant smarter living is highly attractive to general public and profitable for the industry, there are also inherent concerns. The most challenging of these refer to the privacy and security of data, user trust of the digital systems, and relevant authentication mechanisms. These aspects call for novel network architectures and middleware platforms based on new communication technologies; as well as the adoption of novel context-aware management approaches and more

efficient tools and devices. In this context, this book explores central issues of privacy, security and trust with regard to the IoT environments, as well as technical solutions to help address them. The main topics covered include:• Basic concepts, principles and related technologies• Security/privacy of data, and trust issues• Mechanisms for security, privacy, trust and authentication• Success indicators, performance metrics and future directions. This reference text is aimed at supporting a number of potential audiences, including• Network Specialists, Hardware Engineers and Security Experts • Students, Researchers, Academics and Practitioners.

DESIGNING A NEW CLASS OF DISTRIBUTED SYSTEMS

Springer Science & Business Media **Designing a New Class of Distributed Systems** closely examines the Distributed Intelligent Managed Element (DIME) Computing Model, a new model for distributed systems, and provides a guide to implementing Distributed Managed Workflows with High Reliability, Availability, Performance and Security. The book also explores the viability of self-optimizing, self-monitoring autonomous DIME-based computing systems. **Designing a New Class of Distributed Systems** is designed for practitioners as a reference guide for innovative distributed systems design. Researchers working in a related field will also find this book valuable.

DATABASE OF PIANO CHORDS

AN ENGINEERING VIEW OF HARMONY

Springer Science & Business Media **Database of Piano Chords: An Engineering View of Harmony** includes a unique database of piano chords developed exclusively for music research purposes, and outlines the key advantages to using this dataset to further one's research. The book also describes the physical bases of the occidental music chords and the influence used in the detection and transcription of the music, enabling researchers to intimately understand the construction of each occidental chord. The online database contains more than 275,000 chords with different degrees of polyphony and with different playing styles. Together, the database and the book are an invaluable tool for researchers in this field.

PERSUASIVE RECOMMENDER SYSTEMS

CONCEPTUAL BACKGROUND AND IMPLICATIONS

Springer Science & Business Media **Whether users are likely to accept the recommendations provided by a recommender system is of utmost importance to system designers and the marketers who implement them. By conceptualizing the advice seeking and giving relationship as a fundamentally social process, important avenues for understanding the persuasiveness of recommender systems open up. Specifically, research regarding influential factors in advice seeking relationships, which is abundant in the context of human-human relationships, can provide an important framework for identifying potential influence factors in recommender system context. This book reviews the existing literature on the factors in advice seeking relationships in the context of human-human, human-computer, and human-recommender system interactions. It concludes that many social cues that have been identified as influential in other contexts have yet to be implemented and tested with respect to recommender systems. Implications for recommender system research and design are discussed.**

VLSI DESIGN

A PRACTICAL GUIDE FOR FPGA AND ASIC IMPLEMENTATIONS

Springer Science & Business Media **This book provides insight into the practical design of VLSI circuits. It is aimed at novice VLSI designers and other enthusiasts who would like to understand VLSI design flows. Coverage includes key concepts in CMOS digital design, design of DSP and communication blocks on FPGAs, ASIC front end and physical design, and analog and mixed signal design. The approach is designed to focus on practical implementation of key elements of the VLSI design process, in order to make the topic accessible to novices. The design concepts are demonstrated using software from Mathworks, Xilinx, Mentor Graphics, Synopsys and Cadence.**

ADVANCES IN COMPUTING AND INTELLIGENT SYSTEMS

PROCEEDINGS OF ICACM 2019

Springer Nature **This book gathers selected papers presented at the International Conference on Advancements in Computing and Management (ICACM 2019). Discussing current research in the field of artificial intelligence and machine learning, cloud computing, recent trends in security, natural language processing and machine translation,**

parallel and distributed algorithms, as well as pattern recognition and analysis, it is a valuable resource for academics, practitioners in industry and decision-makers.

THE EMERGING DOMAIN OF COOPERATING OBJECTS

Springer There are a number of different system concepts that have gained much relevance in the area of embedded systems over the past couple of years. First, there is the classic concept of embedded systems where the focus is on control systems for physical processes. Secondly, the notion of pervasive computing has evolved, where the vision foresees everyday objects having some form of computation capacity and, in most cases, sensing and communication facilities. Thirdly, the notion of wireless sensor networks has arisen, where small computing devices are able to sense their environment and cooperate in order to achieve a well-defined goal. These three types of quite diverse systems share a lot of commonalities on the one hand and, on the other hand, have some complementary aspects in common that make a combination of these systems into a coherent system vision promising. In particular, the important notions of control, heterogeneity, wireless communication, dynamic and ad-hoc nature and cost are prevalent to various degrees in each of these systems. A future system concept needs to combine the strong points of all three system concepts in at least these functional aspects. It has to provide support for the control of physical processes like today's embedded systems do, have as good support for device heterogeneity and spontaneity of usage as required by pervasive and ubiquitous computing approaches, and has to be as cost efficient and wirelessly agile as wireless sensor networks are. These new systems consist, therefore, of individual entities or objects that jointly strive to reach a common goal, which will typically be a goal in sensing or control, and are dynamically and loosely federating themselves for cooperation, taking care not to overtax their available resources. This book presents a roadmap to these concepts which are summarized as cooperating objects.

HIGH-BANDWIDTH MEMORY INTERFACE

Springer Science & Business Media This book provides an overview of recent advances in memory interface design at both the architecture and circuit levels. Coverage includes signal integrity and testing, TSV interface, high-speed serial interface including equalization, ODT, pre-emphasis, wide I/O interface including crosstalk, skew cancellation, and clock generation and distribution. Trends for further bandwidth enhancement are also covered.

UNDERWATER ACOUSTIC NETWORKING TECHNIQUES

Springer Science & Business Media This literature study presents an overview of underwater acoustic networking. It provides a background and describes the state of the art of all networking facets that are relevant for underwater applications. This report serves both as an introduction to the subject and as a summary of existing protocols, providing support and inspiration for the development of network architectures.

COMPUTATIONALLY INTELLIGENT SYSTEMS AND THEIR APPLICATIONS

Springer Nature This book covers all core technologies like neural networks, fuzzy systems, and evolutionary computation and their applications in the systems. Computationally intelligent system is a new concept for advanced information processing. The objective of this system is to realize a new approach for analyzing and creating flexible information processing of sensing, learning, recognizing, and action taking. Computational intelligent is a part of artificial intelligence (AI) which includes the study of versatile components to empower or encourage savvy practices in intricate and evolving situations. The computationally intelligent system highly relies on numerical information supplied by manufacturers unlike AI.

ARTIFICIAL INTELLIGENCE-BASED INTERNET OF THINGS SYSTEMS

Springer Nature The book discusses the evolution of future generation technologies through Internet of Things (IoT) in the scope of Artificial Intelligence (AI). The main focus of this volume is to bring all the related technologies in a single platform, so that undergraduate and postgraduate students, researchers, academicians, and industry people can easily understand the AI algorithms, machine learning algorithms, and learning analytics in IoT-enabled technologies. This book uses data and network engineering and intelligent decision support system-by-design principles to design a reliable AI-enabled IoT ecosystem and to implement cyber-physical pervasive infrastructure solutions. This book brings together some of the top IoT-enabled AI experts throughout the world who contribute their knowledge regarding different IoT-based technology aspects.

SENSING TECHNOLOGIES FOR PRECISION IRRIGATION

Springer Science & Business Media This brief provides an overview of state-of-the-art sensing technologies relevant to the

problem of precision irrigation, an emerging field within the domain of precision agriculture. Applications of wireless sensor networks, satellite data and geographic information systems in the domain are covered. This brief presents the basic concepts of the technologies and emphasizes the practical aspects that enable the implementation of intelligent irrigation systems. The authors target a broad audience interested in this theme and organize the content in five chapters, each concerned with a specific technology needed to address the problem of optimal crop irrigation. Professionals and researchers will find the text a thorough survey with practical applications.

A RAPID INTRODUCTION TO ADAPTIVE FILTERING

Springer Science & Business Media In this book, the authors provide insights into the basics of adaptive filtering, which are particularly useful for students taking their first steps into this field. They start by studying the problem of minimum mean-square-error filtering, i.e., Wiener filtering. Then, they analyze iterative methods for solving the optimization problem, e.g., the Method of Steepest Descent. By proposing stochastic approximations, several basic adaptive algorithms are derived, including Least Mean Squares (LMS), Normalized Least Mean Squares (NLMS) and Sign-error algorithms. The authors provide a general framework to study the stability and steady-state performance of these algorithms. The affine Projection Algorithm (APA) which provides faster convergence at the expense of computational complexity (although fast implementations can be used) is also presented. In addition, the Least Squares (LS) method and its recursive version (RLS), including fast implementations are discussed. The book closes with the discussion of several topics of interest in the adaptive filtering field.

INNOVATIONS IN SMART CITIES APPLICATIONS EDITION 3

THE PROCEEDINGS OF THE 4TH INTERNATIONAL CONFERENCE ON SMART CITY APPLICATIONS

Springer Nature This book highlights original research and recent advances in various fields related to smart cities and their applications. It gathers papers presented at the Fourth International Conference on Smart City Applications (SCA19), held on October 2-4, 2019, in Casablanca, Morocco. Bringing together contributions by prominent researchers from around the globe, the book offers an invaluable instructional and research tool for courses on computer science, electrical engineering, and urban sciences. It is also an excellent reference guide for professionals, researchers, and academics in the field of smart cities. This book covers topics including: • Smart Citizenship • Smart Education • Digital Business and Smart Governance • Smart Health Care • New Generation of Networks and Systems for Smart Cities •

Smart Grids and Electrical Engineering • Smart Mobility • Smart Security • Sustainable Building • Sustainable Environment

SECURE COMPRESSIVE SENSING IN MULTIMEDIA DATA, CLOUD COMPUTING AND IOT

Springer This book gives a comprehensive and systematic review of secure compressive sensing (CS) for applications in various fields such as image processing, pattern recognition, Internet of things (IoT), and cloud computing. It will help readers grasp the knowledge of secure CS and its applications, and stimulate more readers to work on the research and development of secure CS. It discusses how CS becomes a cryptosystem, followed by the corresponding designs and analyses. The application of CS in multimedia data encryption is presented, in which the general design framework is given together with several particular frameworks including parallel CS, involvement of image processing techniques, and double protection mechanism. It also describes the applications of CS in cloud computing security and IoT security, i.e., privacy-preserving reconstruction in cloud computing and secure low-cost sampling in IoT, respectively.

INTERNATIONAL CONFERENCE ON COMPUTER NETWORKS AND COMMUNICATION TECHNOLOGIES

ICCNCT 2018

Springer The book features research papers presented at the International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT 2018), offering significant contributions from researchers and practitioners in academia and industry. The topics covered include computer networks, network protocols and wireless networks, data communication technologies, and network security. Covering the main core and specialized issues in the areas of next-generation wireless network design, control, and management, as well as in the areas of protection, assurance, and trust in information security practices, these proceedings are a valuable resource, for researchers, instructors, students, scientists, engineers, managers, and industry practitioners.

CONTENT-CENTRIC NETWORKS

AN OVERVIEW, APPLICATIONS AND RESEARCH CHALLENGES

Springer This book introduces Content-Centric Networking (CCN), a networking paradigm that provides a simple and

effective solution to the challenging demands of future wired and wireless communications. It provides an overview of the recent developments in the area of future internet technologies, bringing together the advancements that have been made in Information-Centric Networking (ICN) in general, with a focus on CCN. It begins with an introduction to the basics of CCN is followed by an overview of the current internet paradigm and its challenges. Next, an application perspective has been included, where the authors encompass the selected applications for CCN with recent refereed research and developments. These applications include Internet of Things (IoT), Smart Grid, Vehicular Ad hoc Networks (VANETs), and Wireless Sensor Networks (WSNs). The book is a useful reference source for practising researchers, and can be used as supporting material for undergraduate and graduate level courses in computer science and electrical engineering.

NETWORK INFERENCE IN MOLECULAR BIOLOGY

A HANDS-ON FRAMEWORK

Springer Science & Business Media **Inferring gene regulatory networks is a difficult problem to solve due to the relative scarcity of data compared to the potential size of the networks. While researchers have developed techniques to find some of the underlying network structure, there is still no one-size-fits-all algorithm for every data set. Network Inference in Molecular Biology examines the current techniques used by researchers, and provides key insights into which algorithms best fit a collection of data. Through a series of in-depth examples, the book also outlines how to mix-and-match algorithms, in order to create one tailored to a specific data situation. Network Inference in Molecular Biology is intended for advanced-level students and researchers as a reference guide. Practitioners and professionals working in a related field will also find this book valuable.**