

2013 Ieee Paper On Web Mining

This book constitutes the refereed proceedings of the 11th International Conference on Service-Oriented Computing, ICSSOC 2012, held in Berlin, Germany, in December 2012. The 29 full papers and 27 short papers presented were carefully reviewed and selected from 205 submissions. The papers are organized in topical sections on service engineering, service operations and management; services in the cloud; and service applications and implementations.

This book explores the internet and mobile ecosystems which are powered by cloud computing – an essential, if not indispensable, part of our everyday lives. Billions of users world-wide use this technology for information sharing, communication and social networking and a high proportion of activity is driven by massive media content such as images, videos and other emerging 3D visual media. However, managing, searching and visualizing this gigantic amount of data to facilitate communication is difficult which has led to an influx of innovation and research in these areas. The research is from academics from all around the world, focusing on the intersection of mobile, cloud, visual and multimedia computing and is split into five clear parts. Topics covered in the book include mobile augmented reality, computational photography, mobile visual recognition and search, and human-computer interaction (HCI). The findings discussed is meant to spur on further creative development in both academia and industry within this area. Mobile Cloud Visual Media Computing would of great interest to researchers and academics wishing to see how the state-of-the-art in media computing research is applied to innovative applications, whilst engineers and software designers from industry will gain an insight into the key set of technologies which support mobile and cloud media computing.

IoT is empowered by various technologies used to detect, gather, store, act, process, transmit, oversee, and examine information. The combination of emergent technologies for information processing and distributed security, such as Cloud computing, Artificial intelligence, and Blockchain, brings new challenges in addressing distributed security methods that form the foundation of improved and eventually entirely new products and services. As systems interact with each other, it is essential to have an agreed interoperability standard, which is safe and valid. This book aims at providing an introduction by illustrating state-of-the-art security challenges and threats in IoT and the latest developments in IoT with Cloud, AI, and Blockchain security challenges. Various application case studies from domains such as science, engineering, and healthcare are introduced, along with their architecture and how they leverage various technologies Cloud, AI, and Blockchain. This book provides a comprehensive guide to researchers and students to design IoT integrated AI, Cloud, and Blockchain projects and to have an overview of the next generation challenges that may arise in the coming years.

This book constitutes the proceedings of the 14th International Conference on Perspectives in Business Informatics Research, BIR 2015, held in Tartu, Estonia, in August 2015. Overall, 49 submissions from 16 countries were rigorously reviewed by 47 members of the Program Committee representing 23 countries. The selected 16 full papers and 4 short papers are included in this volume. The conference theme was "making business information systems interoperable and adaptive in highly interconnected and changing contexts". The papers have been organized in topical sections on business information systems interoperability, business information system requirements and architecture, business process and decision management, business information systems development, and research in progress.

Databases and Information Systems VIII Selected Papers from the Eleventh International Baltic Conference, DB&IS 2014 IOS Press
This book features selected papers presented at Second International Conference on International Conference on Information Management & Machine Intelligence (ICIMMI 2020) held at Poornima Institute of Engineering & Technology, Jaipur, Rajasthan, India during 24 – 25 July 2020. It covers a range of topics, including data analytics; AI; machine and deep learning; information management, security, processing techniques and interpretation; applications of artificial intelligence in soft computing and pattern recognition; cloud-based applications for machine learning; application of IoT in power distribution systems; as well as wireless sensor networks and adaptive wireless communication.

This book constitutes the thoroughly refereed post conference papers of the First International Conference on Blockchain and Trustworthy Systems, Blocksys 2019, held in Guangzhou, China, in December 2019. The 50 regular papers and the 19 short papers were carefully reviewed and selected from 130 submissions. The papers are focus on Blockchain and trustworthy systems can be applied to many fields, such as financial services, social management and supply chain management.

This book constitutes the refereed post-conference proceedings of the Second International Workshop on Information & Operational Technology (IT & OT) security systems, IOsec 2019, the First International Workshop on Model-driven Simulation and Training Environments, MSTEC 2019, and the First International Workshop on Security for Financial Critical Infrastructures and Services, FINSEC 2019, held in Luxembourg City, Luxembourg, in September 2019, in conjunction with the 24th European Symposium on Research in Computer Security, ESORICS 2019. The IOsec Workshop received 17 submissions from which 7 full papers were selected for presentation. They cover topics related to security architectures and frameworks for enterprises, SMEs, public administration or critical infrastructures, threat models for IT & OT systems and communication networks, cyber-threat detection, classification and profiling, incident management, security training and awareness, risk assessment safety and security, hardware security, cryptographic engineering, secure software development, malicious code analysis as well as security testing platforms. From the MSTEC Workshop 7 full papers out of 15 submissions are included. The selected papers deal focus on the verification and validation (V&V) process, which provides the operational community with confidence in knowing that cyber models represent the real world, and discuss how defense training may benefit from cyber models. The FINSEC Workshop received 8 submissions from which 3 full papers and 1 short paper were accepted for publication. The papers reflect the objective to rethink cyber-security in the light of latest technology developments (e.g., FinTech, cloud computing, blockchain, BigData, AI, Internet-of-Things (IoT), mobile-first services, mobile payments).

This book covers the state of the art in learning algorithms with an inclusion of semi-supervised methods to provide a broad scope of clustering and classification solutions for big data applications. Case studies and best practices are included along with theoretical models of learning for a comprehensive reference to the field. The book is organized into eight chapters that cover the following topics: discretization, feature extraction and selection, classification, clustering, topic modeling, graph analysis and applications. Practitioners and graduate students can use the volume as an important reference for their current and future research and faculty will find the volume useful for assignments in presenting current approaches to unsupervised and semi-supervised learning in graduate-level seminar courses. The book is based on selected, expanded papers from the Fourth International Conference on Soft Computing in Data Science (2018). Includes new advances in clustering and classification using semi-supervised and unsupervised learning; Address new challenges arising in feature extraction and selection using semi-supervised and unsupervised learning; Features applications from healthcare, engineering, and text/social media mining that exploit techniques from semi-supervised and unsupervised learning.

The Quarterly Review of Distance Education is a rigorously refereed journal publishing articles, research briefs, reviews, and editorials dealing with the theories, research, and practices of distance education. The Quarterly Review publishes articles that utilize various methodologies that permit generalizable results which help guide the practice of the field of distance education in the public and private sectors. The Quarterly Review publishes full-length manuscripts as well as research briefs, editorials, reviews of programs and scholarly works, and columns. The Quarterly Review defines distance education as institutionally-based formal education in which the learning group is separated and interactive technologies are used to unite the learning group.

This double volumes LNCS 10573-10574 constitutes the refereed proceedings of the Confederated International Conferences: Cooperative

Information Systems, CoopIS 2017, Ontologies, Databases, and Applications of Semantics, ODBASE 2017, and Cloud and Trusted Computing, C&TC, held as part of OTM 2017 in October 2017 in Rhodes, Greece. The 61 full papers presented together with 19 short papers were carefully reviewed and selected from 180 submissions. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, information systems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

The book is a collection of papers presented at First Doctoral Symposium on Natural Computing Research (DSNCR 2020), held during 8 August 2020 in Pune, India. The book covers different topics of applied and natural computing methods having applications in physical sciences and engineering. The book focuses on computer vision and applications, soft computing, security for Internet of Things, security in heterogeneous networks, signal processing, intelligent transportation system, VLSI design and embedded systems, privacy and confidentiality, big data and cloud computing, bioinformatics and systems biology, remote healthcare, software security, mobile and pervasive computing, biometrics-based authentication, natural language processing, analysis and verification techniques, large scale networking, distributed systems, digital forensics, and human-computer interaction.

The seven-volume set comprising LNCS volumes 8689-8695 constitutes the refereed proceedings of the 13th European Conference on Computer Vision, ECCV 2014, held in Zurich, Switzerland, in September 2014. The 363 revised papers presented were carefully reviewed and selected from 1444 submissions. The papers are organized in topical sections on tracking and activity recognition; recognition; learning and inference; structure from motion and feature matching; computational photography and low-level vision; vision; segmentation and saliency; context and 3D scenes; motion and 3D scene analysis; and poster sessions.

This book constitutes the thoroughly refereed proceedings of the 11th International Conference on Collaborative Computing: Networking, Applications, and Worksharing, CollaborateCom 2015, held in Wuhan, China, in November 2015. The 24 full papers and 8 short papers presented were carefully reviewed and selected from numerous submissions. They address topics around networking, technology and systems, including but not limited to collaborative cloud computing, architecture and evaluation, collaborative applications, sensors and Internet of Things (IoT), security.

This book shares key insights into system performance and management analytics, demonstrating how the field of analytics is currently changing and how it is used to monitor companies' efforts to drive performance. Managing business performance facilitates the effective accomplishment of strategic and operational goals, and there is a clear and direct correlation between using performance management applications and improved business and organizational results. As such, performance and management analytics can yield a range of direct and indirect benefits, boost operational efficiency and unlock employees' latent potential, while at the same time aligning services with overarching goals. The book addresses a range of topics, including software reliability assessment, testing, quality management, system-performance management, analysis using soft-computing techniques, and management analytics. It presents a balanced, holistic approach to viewing the world from both a technical and managerial perspective by considering performance and management analytics. Accordingly, it offers a comprehensive guide to one of the most pressing issues in today's technology-dominated world, namely, that most companies and organizations find themselves awash in a sea of data, but lack the human capital, appropriate tools and knowledge to use it to help them create a competitive edge.

The term Intelligent Environments (IEs) refers to physical spaces in which IT and other pervasive computing technologies are combined and used to achieve specific goals for the user, the environment, or both. The ultimate objective of IEs is to enrich user experience, improve management of the environment in question and increase user awareness. This book presents the proceedings of the following workshops, which formed part of the 12th International Conference on Intelligent Environments (IE16), held in London, UK, in September 2016: the 5th International Workshop on Smart Offices and Other Workplaces (SOOW'16); the 5th International Workshop on the Reliability of Intelligent Environments (WoRIE'16); the 1st International Workshop on Legal Issues in Intelligent Environments (LIIE'2016); the 2nd International Symposium on Future Intelligent Educational Environments and Learning (SOFIEE'16); the 2nd International Workshop on Future Internet and Smart Networks (FI&SN'2016); the International Workshop on Intelligent Environments Supporting Healthcare and Well-being (WISHWell'2016); the International Workshop on Computation Sustainability, Technologies and Applications (CoSTA'2016); the Creative Science 2016 (CS'16) and Cloud-of-Things 2016 (CoT'16); the Workshop on Wireless Body Area Networks for Personal Monitoring in Intelligent Environments (WBAN-PMIE); and the Physical Computing Workshop. The workshops focused on the development of advanced intelligent environments, as well as newly emerging and rapidly evolving topics, emphasizing the multi-disciplinary and transversal aspects of IEs, as well as cutting-edge topics. The book will be of interest to all those whose work involves them in the use of intelligent environments. This book addresses the issue of smart and sustainable development in the Mediterranean (MED) region, a distinct part of the world, full of challenges and risks but also opportunities. Above all, the book focuses on smartening up small and medium-sized cities and insular communities, taking into account their geographical peculiarities, the pattern of MED urban settlements and the abundance of island complexes in the MED Basin. Taking for granted that sustainability in the MED is the overarching policy goal that needs to be served, the book explores different aspects of smartness in support of this goal's achievement. In this respect, evidence from concrete smart developments adopted by forerunners in the MED region is collected and analyzed; coupled with experiences gathered from successful, non-MED, examples of smart efforts in European countries. More specifically, current research and empirical results from MED urban environments are discussed, as well as findings from or concerning other parts of the world, which are of relevance to the MED region. The book's primary goal is to enable policymakers, planners and decision-making bodies to recognize the challenges and options available; and make to more informed policy decisions towards smart, sustainable, inclusive and resilient urban and regional futures in the MED.

This volume publishes new trends and findings in hot topics related to ubiquitous computing/networking. It is the outcome of UNet - an international scientific event that took place on September 08-10, 2015, in the fascinating city of Casablanca, Morocco. UNet'15 is technically sponsored by IEEE Morocco Section and IEEE COMSOC Morocco Chapter.

A new era of innovation is enabled by the integration of social sciences and information systems research. In this context, the adoption of Big Data and analytics technology brings new insight to the social sciences. It also delivers new, flexible responses to crucial social problems and challenges. We are proud to deliver this edited volume on the social impact of big data research. It is one of the first initiatives worldwide analyzing of the impact of this kind of research on individuals and social issues. The organization of the relevant debate is arranged around three pillars: Section A: Big Data Research for Social Impact: • Big Data and Their Social Impact; • (Smart) Citizens from Data Providers to Decision-Makers; • Towards Sustainable Development of Online Communities; • Sentiment from Online Social Networks; • Big Data for Innovation. Section B. Techniques and Methods for Big Data driven research for Social Sciences and Social Impact: •

Opinion Mining on Social Media; • Sentiment Analysis of User Preferences; • Sustainable Urban Communities; • Gender Based Check-In Behavior by Using Social Media Big Data; • Web Data-Mining Techniques; • Semantic Network Analysis of Legacy News Media Perception. Section C. Big Data Research Strategies: • Skill Needs for Early Career Researchers—A Text Mining Approach; • Pattern Recognition through Bibliometric Analysis; • Assessing an Organization's Readiness to Adopt Big Data; • Machine Learning for Predicting Performance; • Analyzing Online Reviews Using Text Mining; • Context–Problem Network and Quantitative Method of Patent Analysis. Complementary social and technological factors including: • Big Social Networks on Sustainable Economic Development; Business Intelligence.

This book presents the proceedings of the 3rd International Conference of Reliable Information and Communication Technology 2018 (IRICT 2018), which was held in Kuala Lumpur, Malaysia, on July 23–24, 2018. The main theme of the conference was “Data Science, AI and IoT Trends for the Fourth Industrial Revolution.” A total of 158 papers were submitted to the conference, of which 103 were accepted and considered for publication in this book. Several hot research topics are covered, including Advances in Data Science and Big Data Analytics, Artificial Intelligence and Soft Computing, Business Intelligence, Internet of Things (IoT) Technologies and Applications, Intelligent Communication Systems, Advances in Computer Vision, Health Informatics, Reliable Cloud Computing Environments, Recent Trends in Knowledge Management, Security Issues in the Cyber World, and Advances in Information Systems Research, Theories and Methods.

This book uses the conceptual tools of philosophy to shed light on digital media and on the way in which they bear upon our existence. At the turn of the century, the rise of digital media significantly changed our world. The digitizing of traditional media has extraordinarily increased the circulation of texts, sound, and images. Digital media have also widened our horizons and altered our relationship with others and with ourselves. Information production and communication are still undoubtedly significant aspects of digital media and life. Recently, however, recording, registration and keeping track have taken the upper hand in both online practices and the imaginaries related to them. The essays in this book therefore focus primarily on the idea that digital media involve a significant overlapping between communication and recording.

This book constitutes the thoroughly refereed proceedings of the First International Conference on Simulation of Urban Mobility, SUMO 2013, held in Berlin, Germany, in May 2013. The 12 revised full papers presented in this book were carefully selected and reviewed from 22 submissions. The papers are organized in two topical sections: models and technical innovations and applications and surveys.

This book provides the state-of-the-art development on security and privacy for fog/edge computing, together with their system architectural support and applications. This book is organized into five parts with a total of 15 chapters. Each area corresponds to an important snapshot. The first part of this book presents an overview of fog/edge computing, focusing on its relationship with cloud technology and the future with the use of 5G communication. Several applications of edge computing are discussed. The second part of this book considers several security issues in fog/edge computing, including the secure storage and search services, collaborative intrusion detection method on IoT-fog computing, and the feasibility of deploying Byzantine agreement protocols in untrusted environments. The third part of this book studies the privacy issues in fog/edge computing. It first investigates the unique privacy challenges in fog/edge computing, and then discusses a privacy-preserving framework for the edge-based video analysis, a popular machine learning application on fog/edge. This book also covers the security architectural design of fog/edge computing, including a comprehensive overview of vulnerabilities in fog/edge computing within multiple architectural levels, the security and intelligent management, the implementation of network-function-virtualization-enabled multicasting in part four. It explains how to use the blockchain to realize security services. The last part of this book surveys applications of fog/edge computing, including the fog/edge computing in Industrial IoT, edge-based augmented reality, data streaming in fog/edge computing, and the blockchain-based application for edge-IoT. This book is designed for academics, researchers and government officials, working in the field of fog/edge computing and cloud computing. Practitioners, and business organizations (e.g., executives, system designers, and marketing professionals), who conduct teaching, research, decision making, and designing fog/edge technology will also benefit from this book. The content of this book will be particularly useful for advanced-level students studying computer science, computer technology, and information systems, but also applies to students in business, education, and economics, who would benefit from the information, models, and case studies therein.

In today's age of wireless and mobile computing, network and computer security is paramount. Case Studies in Secure Computing: Achievements and Trends gathers the latest research from researchers who share their insights and best practices through illustrative case studies. This book examines the growing security attacks and countermeasures in the stand-alone and networking worlds, along with other pertinent security issues. The many case studies capture a truly wide range of secure computing applications. Surveying the common elements in computer security attacks and defenses, the book: Describes the use of feature selection and fuzzy logic in a decision tree model for intrusion detection Introduces a set of common fuzzy-logic-based security risk estimation techniques with examples Proposes a secure authenticated multiple-key establishment protocol for wireless sensor networks Investigates various malicious activities associated with cloud computing and proposes some countermeasures Examines current and emerging security threats in long-term evolution backhaul and core networks Supplies a brief introduction to application-layer denial-of-service (DoS) attacks Illustrating the security challenges currently facing practitioners, this book presents powerful security solutions proposed by leading researchers in the field. The examination of the various case studies will help to develop the practical understanding required to stay one step ahead of the security threats on the horizon. This book will help

those new to the field understand how to mitigate security threats. It will also help established practitioners fine-tune their approach to establishing robust and resilient security for next-generation computing systems.

This volume constitutes the refereed proceedings of the following 9 international workshops: OTM Academy, OTM Industry Case Studies Program, Cloud and Trusted Computing, C&TC, Enterprise Integration, Interoperability, and Networking, EI2N, Industrial and Business Applications of Semantic Web Technologies, INBAST, Information Systems, om Distributed Environment, ISDE, Methods, Evaluation, Tools and Applications for the Creation and Consumption of Structured Data for the e-Society, META4eS, Mobile and Social Computing for collaborative interactions, MSC, and Ontology Content, OnToContent 2014. These workshops were held as associated events at OTM 2014, the federated conferences "On The Move Towards Meaningful Internet Systems and Ubiquitous Computing", in Amantea, Italy, in October 2014. The 56 full papers presented together with 8 short papers, 6 posters and 5 keynotes were carefully reviewed and selected from a total of 96 submissions. The focus of the workshops were on the following subjects models for interoperable infrastructures, applications, privacy and access control, reliability and performance, cloud and configuration management, interoperability in (System-of-)Systems, distributed information systems applications, architecture and process in distributed information system, distributed information system development and operational environment, ontology is use for eSociety, knowledge management and applications for eSociety, social networks and social services, social and mobile intelligence, and multimodal interaction and collaboration.

Databases and information systems are the backbone of modern information technology and are crucial to the IT systems which support all aspects of our everyday life; from government, education and healthcare, to business processes and the storage of our personal photos and archives. This book presents 22 of the best revised papers accepted following stringent peer review for the 11th International Baltic Conference on Databases and Information Systems (Baltic DB&IS 2014), held in Tallinn, Estonia, in June 2014. The conference provided a forum for the exchange of scientific achievements between the research communities of the Baltic countries and the rest of the world in the area of databases and information systems, bringing together researchers, practitioners and Ph.D. students from many countries. The subject areas covered at the conference focused on big data processing, data warehouses, data integration and services, data and knowledge management, e-government, as well as e-services and e-learning.

Presents an Cyber-Assurance approach to the Internet of Things (IoT) This book discusses the cyber-assurance needs of the IoT environment, highlighting key information assurance (IA) IoT issues and identifying the associated security implications. Through contributions from cyber-assurance, IA, information security and IoT industry practitioners and experts, the text covers fundamental and advanced concepts necessary to grasp current IA issues, challenges, and solutions for the IoT. The future trends in IoT infrastructures, architectures and applications are also examined. Other topics discussed include the IA protection of IoT systems and information being stored, processed or transmitted from unauthorized access or modification of machine-2-machine (M2M) devices, radio-frequency identification (RFID) networks, wireless sensor networks, smart grids, and supervisory control and data acquisition (SCADA) systems. The book also discusses IA measures necessary to detect, protect, and defend IoT information and networks/systems to ensure their availability, integrity, authentication, confidentiality, and non-repudiation. Discusses current research and emerging trends in IA theory, applications, architecture and information security in the IoT based on theoretical aspects and studies of practical applications Aids readers in understanding how to design and build cyber-assurance into the IoT Exposes engineers and designers to new strategies and emerging standards, and promotes active development of cyber-assurance Covers challenging issues as well as potential solutions, encouraging discussion and debate amongst those in the field Cyber-Assurance for the Internet of Things is written for researchers and professionals working in the field of wireless technologies, information security architecture, and security system design. This book will also serve as a reference for professors and students involved in IA and IoT networking. Tyson T. Brooks is an Adjunct Professor in the School of Information Studies at Syracuse University; he also works with the Center for Information and Systems Assurance and Trust (CISAT) at Syracuse University, and is an information security technologist and science-practitioner. Dr. Brooks is the founder/Editor-in-Chief of the International Journal of Internet of Things and Cyber-Assurance, an associate editor for the Journal of Enterprise Architecture, the International Journal of Cloud Computing and Services Science, and the International Journal of Information and Network Security. This book explains IoT technology, its potential applications, the security and privacy aspects, the key necessities like governance, risk management, regulatory compliance needs, the philosophical aspects of this technology that are necessary to support an ethical, safe and secure digitally enhanced environment in which people can live smarter. It describes the inherent technology of IoT, the architectural components and the philosophy behind this emerging technology. Then it shows the various potential applications of the Internet of Things that can bring benefits to the human society. Finally, it discusses various necessities to provide a secured and trustworthy IoT service.

This book analyses the impact of web design parameters on user experience and the behaviour of website users. Website design is considered one of the key parameters of a company's Internet presentation, affecting consumer attitudes and buying behaviour. The authors examine the concept of website quality based on the identification of patterns of user behaviour in the online environment, particularly focusing on the functional and aesthetic parameters of web design and causal relationships between them. Using website traffic analysis and best practices from professionals, they describe a methodical procedure for measuring the quality of web pages and developing optimised websites.

This books objective is to explore the concepts and applications related to Internet of Things with the vision to identify and address existing challenges. Additionally, the book provides future research directions in this domain, and explores the different applications of IoT and its associated technologies. Studies investigate applications for crowd sensing and sourcing, as well as smart applications to healthcare solutions, agriculture and intelligent disaster management. This book will appeal to students, practitioners, industry professionals and researchers working in the field of IoT and its integration with other technologies to develop comprehensive solutions to real-life problems

Internet of Things (IoT) has become a valuable tool for connection and information exchange between devices. This book provides a brief introduction to this new field, focuses on wearable medical devices, and covers the basic concepts by providing the reader with enough information to solve various practical problems. This book provides the latest applications, experiments, fundamentals concepts, and cutting-edge topics for the ehealth and wearable devices field. The book also offers topics related to Security in IoT and Wearable Devices, Wearable Devices and Internet of Medical Devices (IoMT), IoT for Medical Applications, and Tools and

study cases. The book brings new and valuable information to PhD researchers, students, professors, and professionals working in IoT and related fields.

This book constitutes the proceedings of the 14th IFIP WG 10.3 International Conference on Network and Parallel Computing, NPC 2017, held in Hefei, China, in October 2017. The 9 full papers and 10 short papers presented in this book were carefully reviewed and selected from 88 submissions. The papers cover traditional areas of network and parallel computing including parallel applications, distributed algorithms, software environments, and distributed tools.

This book constitutes the proceedings of the 15th International Conference on Risks and Security of Internet and Systems, CRiTIS 2020, which took place during November 4-6, 2020. The conference was originally planned to take place in Paris, France, but had to change to an online format due to the COVID-19 pandemic. The 16 full and 7 short papers included in this volume were carefully reviewed and selected from 44 submissions. In addition, the book contains one invited talk in full paper length. The papers were organized in topical sections named: vulnerabilities, attacks and intrusion detection; TLS, openness and security control; access control, risk assessment and security knowledge; risk analysis, neural networks and Web protection; infrastructure security and malware detection.

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

This book explores fundamental scientific problems essential for autonomous cyber defense. Specific areas include: Game and control theory-based moving target defenses (MTDs) and adaptive cyber defenses (ACDs) for fully autonomous cyber operations; The extent to which autonomous cyber systems can be designed and operated in a framework that is significantly different from the human-based systems we now operate; On-line learning algorithms, including deep recurrent networks and reinforcement learning, for the kinds of situation awareness and decisions that autonomous cyber systems will require; Human understanding and control of highly distributed autonomous cyber defenses; Quantitative performance metrics for the above so that autonomous cyber defensive agents can reason about the situation and appropriate responses as well as allowing humans to assess and improve the autonomous system. This book establishes scientific foundations for adaptive autonomous cyber systems and ultimately brings about a more secure and reliable Internet. The recent advances in adaptive cyber defense (ACD) have developed a range of new ACD techniques and methodologies for reasoning in an adaptive environment. Autonomy in physical and cyber systems promises to revolutionize cyber operations. The ability of autonomous systems to execute at scales, scopes, and tempos exceeding those of humans and human-controlled systems will introduce entirely new types of cyber defense strategies and tactics, especially in highly contested physical and cyber environments. The development and automation of cyber strategies that are responsive to autonomous adversaries pose basic new technical challenges for cyber-security. This book targets cyber-security professionals and researchers (industry, governments, and military). Advanced-level students in computer science and information systems will also find this book useful as a secondary textbook.

The book presents selected research papers on current developments in the field of soft computing and signal processing from the International Conference on Soft Computing and Signal Processing (ICSCSP 2018). It includes papers on current topics such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning, discussing various aspects of these topics, like technological, product implementation, contemporary research as well as application issues.

This book presents original contributions on the theories and practices of emerging Internet, Data and Web technologies and their applications in businesses, engineering and academia. As a key feature, it addresses advances in the life-cycle exploitation of data generated by digital ecosystem technologies. The Internet has become the most proliferative platform for emerging large-scale computing paradigms. Among these, Data and Web technologies are two of the most prominent paradigms, manifesting in a variety of forms such as Data Centers, Cloud Computing, Mobile Cloud, Mobile Web Services, and so on. These technologies altogether create a digital ecosystem whose cornerstone is the data cycle, from capturing to processing, analysis and visualization. The need to investigate various research and development issues in this digital ecosystem has been made even more pressing by the ever-increasing demands of real-life applications, which are based on storing and processing large amounts of data. Given its scope, the book offers a valuable asset for all researchers, software developers, practitioners and students interested in the field of Data and Web technologies.

The Internet of Things (IoT) is one of the core technologies of current and future information and communications technology (ICT) sectors. IoT technologies will be deployed in numerous industries, including health, transport, smart cities, utility sectors, environment, security, and many other areas. In a manner suitable to a broad range of readers, this book introduces various key IoT technologies focusing on algorithms, process algebra, network architecture, energy harvesting, wireless communications, and network security. It presents IoT system design techniques, international IoT standards, and recent research outcomes relevant to the IoT system developments and provides existing and emerging solutions to the design and development of IoT platforms for multi-sector industries, particularly for Industry 4.0. The book also addresses some of the regulatory issues and design challenges related to IoT system deployments and proposes guidelines for possible future applications.

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