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Wireless Sensor Networks Concepts, Applications, Experimentation and Analysis *Springer* This book focuses on the principles of wireless sensor networks (WSNs), their applications, and their analysis tools, with meticulous attention paid to definitions and terminology. This book presents the adopted technologies and their manufacturers in detail, making WSNs tangible for the reader. In introductory computer networking books, chapter sequencing follows the bottom-up or top-down architecture of the 7-layer protocol. This book addresses subsequent steps in this process, both horizontally and vertically, thus fostering a clearer and deeper understanding through chapters that elaborate on WSN concepts and issues. With such depth, this book is intended for a wide audience; it is meant to be a helper and motivator for senior undergraduates, postgraduates, researchers, and practitioners. It lays out important concepts and WSN-relate applications; uses appropriate literature to back research and practical issues; and focuses on new trends. Senior undergraduate students can use it to familiarize themselves with conceptual foundations and practical project implementations. For graduate students and researchers, test beds and simulators provide vital insights into analysis methods and tools for WSNs. Lastly, in addition to applications and deployment, practitioners will be able to learn more about WSN manufacturers and components within several platforms and test beds. **Concepts, Applications, Experimentation and Analysis of Wireless Sensor Networks** *Springer Nature* The new edition of this popular book has

been transformed into a hands-on textbook, focusing on the principles of wireless sensor networks (WSNs), their applications, their protocols and standards, and their analysis and test tools; a meticulous care has been accorded to the definitions and terminology. To make WSNs felt and seen, the adopted technologies as well as their manufacturers are presented in detail. In introductory computer networking books, chapters sequencing follows the bottom up or top down architecture of the seven layers protocol. This book starts some steps later, with chapters ordered based on a topic's significance to the elaboration of wireless sensor networks (WSNs) concepts and issues. With such a depth, this book is intended for a wide audience, it is meant to be a helper and motivator, for both the senior undergraduates, postgraduates, researchers, and practitioners; concepts and WSNs related applications are laid out, research and practical issues are backed by appropriate literature, and new trends are put under focus. For senior undergraduate students, it familiarizes readers with conceptual foundations, applications, and practical project implementations. For graduate students and researchers, transport layer protocols and cross-layering protocols are presented and testbeds and simulators provide a must follow emphasis on the analysis methods and tools for WSNs. For practitioners, besides applications and deployment, the manufacturers and components of WSNs at several platforms and testbeds are fully explored. Computational Methods and Experimental Measurements XVII *WIT Press* Containing papers presented at the seventeenth in a series of biennial meetings organised by the Wessex Institute and first held in 1984, this book includes the latest research from scientists who perform experiments, researchers who develop computer codes, and those who carry out measurements on prototypes and whose work may interact. Progress in the engineering sciences is dependent on the orderly and concurrent development of all three fields. Continuous improvement in computer efficiency, coupled with diminishing costs and rapid development of numerical procedures have generated an ever-increasing expansion of computational simulations that permeate all fields of science and technology. As these procedures continue to grow in magnitude and complexity, it is essential to be certain of their reliability, i.e. to validate their results. This can be achieved by performing dedicated and accurate experiments. At the same time, current experimental techniques have become more complex and sophisticated so that they require the exploitation of computers, both for running experiments as well as acquiring and processing the resulting data. The papers contained in the book address advances in the interaction between these three areas. They cover such topics as: Computational and Experimental Methods; Fluid Flow; Structural and Stress Analysis; Materials Characterisation; Heat Transfer and Thermal Processes; Advances in Computational Methods; Automotive Applications; Applications in Industry; Process Simulations; Environmental Modelling and Applications; Computer Modelling; Validation of Computer Modelling; Computation in Measurements; Data Processing of Experiments; Virtual Testing and Verification; Simulation and

Forecasting; Measurements in Engineering. Wireless Sensor Networks Security, Coverage, and Localization *Springer* This book presents a comprehensive overview of wireless sensor networks (WSNs) with an emphasis on security, coverage, and localization. It offers a structural treatment of WSN building blocks including hardware and protocol architectures and also provides a systems-level view of how WSNs operate. These building blocks will allow readers to program specialized applications and conduct research in advanced topics. A brief introductory chapter covers common applications and communication protocols for WSNs. Next, the authors review basic mathematical models such as Voroni diagrams and Delaunay triangulations. Sensor principles, hardware structure, and medium access protocols are examined. Security challenges ranging from defense strategies to network robustness are explored, along with quality of service measures. Finally, this book discusses recent developments and future directions in WSN platforms. Each chapter concludes with classroom-tested exercises that reinforce key concepts. This book is suitable for researchers and for practitioners in industry. Advanced-level students in electrical engineering and computer science will also find the content helpful as a textbook or reference.

Wireless Sensor and Actuator Networks for Smart Cities *MDPI* This book is a printed edition of the Special Issue "Wireless Sensor and Actuator Networks for Smart Cities" that was published in *JSAN Medical Image Computing and Computer Assisted Intervention - MICCAI 2019 22nd International Conference, Shenzhen, China, October 13-17, 2019, Proceedings, Part III* *Springer Nature* The six-volume set LNCS 11764, 11765, 11766, 11767, 11768, and 11769 constitutes the refereed proceedings of the 22nd International Conference on Medical Image Computing and Computer-Assisted Intervention, MICCAI 2019, held in Shenzhen, China, in October 2019. The 539 revised full papers presented were carefully reviewed and selected from 1730 submissions in a double-blind review process. The papers are organized in the following topical sections: Part I: optical imaging; endoscopy; microscopy. Part II: image segmentation; image registration; cardiovascular imaging; growth, development, atrophy and progression. Part III: neuroimage reconstruction and synthesis; neuroimage segmentation; diffusion weighted magnetic resonance imaging; functional neuroimaging (fMRI); miscellaneous neuroimaging. Part IV: shape; prediction; detection and localization; machine learning; computer-aided diagnosis; image reconstruction and synthesis. Part V: computer assisted interventions; MIC meets CAI. Part VI: computed tomography; X-ray imaging.

Cognitive Radio Oriented Wireless Networks 11th International Conference, CROWNCOM 2016, Grenoble, France, May 30 - June 1, 2016, Proceedings *Springer* This book constitutes the thoroughly refereed conference proceedings of the 11th International Conference on Cognitive Radio Oriented Wireless Networks, CROWNCOM 2016, held in Grenoble, France, May 30 - April 1, 2016. The 62 revised full papers presented were carefully reviewed and selected from numerous submissions and cover the evolution of cognitive radio technology pertaining to

5G networks. The papers are clustered to topics on dynamic spectrum access/management, networking protocols for CR, modeling and theory, HW architecture and implementations, next generation of cognitive networks, standards and business models, emerging applications for cognitive networks. Intelligent Information and Database Systems 7th Asian Conference, ACIIDS 2015, Bali, Indonesia, March 23-25, 2015, Proceedings, Part II *Springer* The two-volume proceedings of the ACIIDS 2015 conference, LNAI 9011 + 9012, constitutes the refereed proceedings of the 7th Asian Conference on Intelligent Information and Database Systems, held in Bali, Indonesia, in March 2015. The total of 117 full papers accepted for publication in these proceedings was carefully reviewed and selected from 332 submissions. They are organized in the following topical sections: semantic web, social networks and recommendation systems; text processing and information retrieval; intelligent database systems; intelligent information systems; decision support and control systems; machine learning and data mining; multiple model approach to machine learning; innovations in intelligent systems and applications; bio-inspired optimization techniques and their applications; machine learning in biometrics and bioinformatics with applications; advanced data mining techniques and applications; collective intelligent systems for e-market trading, technology opportunity discovery and collaborative learning; intelligent information systems in security and defense; analysis of image, video and motion data in life sciences; augmented reality and 3D media; cloud based solutions; internet of things, big data and cloud computing; and artificial intelligent techniques and their application in engineering and operational research. The Oxford Handbook of Social Networks *Oxford University Press, USA* "Social networks fundamentally shape our lives. Networks channel the ways that information, emotions, and diseases flow through populations. Networks reflect differences in power and status in settings ranging from small peer groups to international relations across the globe. Network tools even provide insights into the ways that concepts, ideas and other socially generated contents shape culture and meaning. As such, the rich and diverse field of social network analysis has emerged as a central tool across the social sciences. This Handbook provides an overview of the theory, methods, and substantive contributions of this field. The thirty-three chapters move through the basics of social network analysis aimed at those seeking an introduction to advanced and novel approaches to modeling social networks statistically. The Handbook includes chapters on data collection and visualization, theoretical innovations, links between networks and computational social science, and how social network analysis has contributed substantively across numerous fields. As networks are everywhere in social life, the field is inherently interdisciplinary and this Handbook includes contributions from leading scholars in sociology, archaeology, economics, statistics, and information science among others"-- Neural Information Processing 25th International Conference, ICONIP 2018, Siem Reap, Cambodia, December 13-16, 2018, Proceedings, Part VI *Springer* The

seven-volume set of LNCS 11301-11307 constitutes the proceedings of the 25th International Conference on Neural Information Processing, ICONIP 2018, held in Siem Reap, Cambodia, in December 2018. The 401 full papers presented were carefully reviewed and selected from 575 submissions. The papers address the emerging topics of theoretical research, empirical studies, and applications of neural information processing techniques across different domains. The 6th volume, LNCS 11306, is organized in topical sections on time-series analysis; social systems; and image and signal processing. The United States Government Manual Data Science 30th British International Conference on Databases, BICOD 2015, Edinburgh, UK, July 6-8, 2015, Proceedings *Springer* This book constitutes the refereed conference proceedings of the 30th British International Conference on Databases, BICOD 2015 - formerly known as BNCOD (British National Conference on Databases) - held in Edinburgh, UK, in July 2015. The 19 revised full papers, presented together with three invited keynotes and three invited lectures were carefully reviewed and selected from 37 submissions. Special focus of the conference has been "Data Science" and so the papers cover a wide range of topics related to databases and data-centric computation. Using Games and Simulations for Teaching and Assessment Key Issues *Routledge* Using Games and Simulations for Teaching and Assessment: Key Issues comprises a multidisciplinary investigation into the issues that arise when using games and simulations for educational purposes. Using both theoretical and empirical analyses, this collection examines cognitive, motivational, and psychometric issues with a focus on STEM content. Unlike other research-based volumes that focus solely on game design or the theoretical basis behind gaming, this book unites previously disparate communities of researchers—from civilian to military contexts as well as multiple disciplines—to critically explore current problems and illustrate how instructionally effective games and simulations should be planned and evaluated. While computer-based simulations and games have the potential to improve the quality of education and training, Using Games and Simulations for Teaching and Assessment: Key Issues shows how the science of learning should underlie the use of such technologies. Through a wide-ranging yet detailed examination, chapter authors provide suggestions for designing and developing games, simulations, and intelligent tutoring systems that are scientifically-based, outcomes-driven, and cost-conscious. Water-Related Natural Disasters in Mountainous Area *Frontiers Media SA Informatics, Networking and Intelligent Computing Proceedings of the 2014 International Conference on Informatics, Networking and Intelligent Computing (INIC 2014)*, 16-17 November 2014, Shenzhen, China *CRC Press* This proceedings volume contains selected papers presented at the 2014 International Conference on Informatics, Networking and Intelligent Computing, held in Shenzhen, China. Contributions cover the latest developments and advances in the field of Informatics, Networking and Intelligent Computing. Scientific and Technical Aerospace Reports Index Multi-omic Data Integration *Frontiers Media*

SA Stable, predictive biomarkers and interpretable disease signatures are seen as a significant step towards personalized medicine. In this perspective, integration of multi-omic data coming from genomics, transcriptomics, glycomics, proteomics, metabolomics is a powerful strategy to reconstruct and analyse complex multi-dimensional interactions, enabling deeper mechanistic and medical insight. At the same time, there is a rising concern that much of such different omic data -although often publicly and freely available- lie in databases and repositories underutilised or not used at all. Issues coming from lack of standardisation and shared biological identities are also well-known. From these considerations, a novel, pressing request arises from the life sciences to design methodologies and approaches that allow for these data to be interpreted as a whole, i.e. as intertwined molecular signatures containing genes, proteins, mRNAs and miRNAs, able to capture inter-layers connections and complexity. Papers discuss data integration approaches and methods of several types and extents, their application in understanding the pathogenesis of specific diseases or in identifying candidate biomarkers to exploit the full benefit of multi-omic datasets and their intrinsic information content. Topics of interest include, but are not limited to:

- **Methods for the integration of layered data, including, but not limited to, genomics, transcriptomics, glycomics, proteomics, metabolomics;**
- **Application of multi-omic data integration approaches for diagnostic biomarker discovery in any field of the life sciences;**
- **Innovative approaches for the analysis and the visualization of multi-omic datasets;**
- **Methods and applications for systematic measurements from single/undivided samples (comprising genomic, transcriptomic, proteomic, metabolomic measurements, among others);**
- **Multi-scale approaches for integrated dynamic modelling and simulation;**
- **Implementation of applications, computational resources and repositories devoted to data integration including, but not limited to, data warehousing, database federation, semantic integration, service-oriented and/or wiki integration;**
- **Issues related to the definition and implementation of standards, shared identities and semantics, with particular focus on the integration problem.**

Research papers, reviews and short communications on all topics related to the above issues were welcomed. Soft Computing Applications Proceedings of the 6th International Workshop Soft Computing Applications (SOFA 2014), Volume 2 *Springer* These volumes constitute the Proceedings of the 6th International Workshop on Soft Computing Applications, or SOFA 2014, held on 24-26 July 2014 in Timisoara, Romania. This edition was organized by the University of Belgrade, Serbia in conjunction with Romanian Society of Control Engineering and Technical Informatics (SRAIT) - Arad Section, The General Association of Engineers in Romania - Arad Section, Institute of Computer Science, Iasi Branch of the Romanian Academy and IEEE Romanian Section. The Soft Computing concept was introduced by Lotfi Zadeh in 1991 and serves to highlight the emergence of computing methodologies in which the accent is on exploiting the tolerance for imprecision and uncertainty to achieve

tractability, robustness and low solution cost. Soft computing facilitates the use of fuzzy logic, neurocomputing, evolutionary computing and probabilistic computing in combination, leading to the concept of hybrid intelligent systems. The combination of such intelligent systems tools and a large number of applications introduce a need for a synergy of scientific and technological disciplines in order to show the great potential of Soft Computing in all domains. The conference papers included in these proceedings, published post conference, were grouped into the following area of research: · Image, Text and Signal Processing Intelligent Transportation Modeling and Applications Biomedical Applications Neural Network and Applications Knowledge-Based Technologies for Web Applications, Cloud Computing, Security, Algorithms and Computer Networks Knowledge-Based Technologies Soft Computing Techniques for Time Series Analysis Soft Computing and Fuzzy Logic in Biometrics Fuzzy Applications Theory and Fuzzy Control Business Process Management Methods and Applications in Electrical Engineering The volumes provide useful information to professors, researchers and graduated students in area of soft computing techniques and applications, as they report new research work on challenging issues. Reproducibility and Rigour in Computational Neuroscience *Frontiers Media SA* Scientific Computing and Algorithms in Industrial Simulations Projects and Products of Fraunhofer SCAI *Springer* The contributions gathered here provide an overview of current research projects and selected software products of the Fraunhofer Institute for Algorithms and Scientific Computing SCAI. They show the wide range of challenges that scientific computing currently faces, the solutions it offers, and its important role in developing applications for industry. Given the exciting field of applied collaborative research and development it discusses, the book will appeal to scientists, practitioners, and students alike. The Fraunhofer Institute for Algorithms and Scientific Computing SCAI combines excellent research and application-oriented development to provide added value for our partners. SCAI develops numerical techniques, parallel algorithms and specialized software tools to support and optimize industrial simulations. Moreover, it implements custom software solutions for production and logistics, and offers calculations on high-performance computers. Its services and products are based on state-of-the-art methods from applied mathematics and information technology. Integration of Machine Learning and Computer Simulation in Solving Complex Physiological and Medical Questions *Frontiers Media SA* Design Technology for Heterogeneous Embedded Systems *Springer Science & Business Media* Design technology to address the new and vast problem of heterogeneous embedded systems design while remaining compatible with standard “More Moore” flows, i.e. capable of simultaneously handling both silicon complexity and system complexity, represents one of the most important challenges facing the semiconductor industry today and will be for several years to come. While the micro-electronics industry, over the years and with its spectacular and unique evolution, has built its own specific design methods to

focus mainly on the management of complexity through the establishment of abstraction levels, the emergence of device heterogeneity requires new approaches enabling the satisfactory design of physically heterogeneous embedded systems for the widespread deployment of such systems. **Heterogeneous Embedded Systems**, compiled largely from a set of contributions from participants of past editions of the Winter School on Heterogeneous Embedded Systems Design Technology (FETCH), proposes a necessarily broad and holistic overview of design techniques used to tackle the various facets of heterogeneity in terms of technology and opportunities at the physical level, signal representations and different abstraction levels, architectures and components based on hardware and software, in all the main phases of design (modeling, validation with multiple models of computation, synthesis and optimization). It concentrates on the specific issues at the interfaces, and is divided into two main parts. The first part examines mainly theoretical issues and focuses on the modeling, validation and design techniques themselves. The second part illustrates the use of these methods in various design contexts at the forefront of new technology and architectural developments.

Electronics, Communications and Networks IV Proceedings of the 4th International Conference on Electronics, Communications and Networks (CECNET IV), Beijing, China, 12-15 December 2014 *CRC Press* The 4th International Conference on Electronic, Communications and Networks (CECNet2014) inherits the fruitfulness of the past three conferences and lays a foundation for the forthcoming next year in Shanghai. CECNet2014 was hosted by Hubei University of Science and Technology, China, with the main objective of providing a comprehensive global forum.

Ad Hoc Networks 8th International Conference, ADHOCNETS 2016, Ottawa, Canada, September 26-27, 2016, Revised Selected Papers *Springer* This book constitutes the proceedings of the 8th International Conference on Ad Hoc Networks, ADHOCNETS 2016, held in Ottawa, Canada, September 26-27, 2016. The 34 revised full papers presented were carefully reviewed and selected from 46 submissions. The papers provide visions, trends, challenges and opportunities in the area of ad hoc networking and emerging applications. The conference also features two workshops on ad hoc network security and vulnerability, and convergence of wireless directional network systems and software defined networking, respectively.

Autonomous Guided Vehicles Methods and Models for Optimal Path Planning *Springer* This book provides readers with extensive information on path planning optimization for both single and multiple Autonomous Guided Vehicles (AGVs), and discusses practical issues involved in advanced industrial applications of AGVs. After discussing previously published research in the field and highlighting the current gaps, it introduces new models developed by the authors with the goal of reducing costs and increasing productivity and effectiveness in the manufacturing industry. The new models address the increasing complexity of manufacturing networks, due for example to the adoption of flexible manufacturing systems that involve automated material handling systems, robots,

numerically controlled machine tools, and automated inspection stations, while also considering the uncertainty and stochastic nature of automated equipment such as AGVs. The book discusses and provides solutions to important issues concerning the use of AGVs in the manufacturing industry, including material flow optimization with AGVs, programming manufacturing systems equipped with AGVs, reliability models, the reliability of AGVs, routing under uncertainty, and risks involved in AGV-based transportation. The clear style and straightforward descriptions of problems and their solutions make the book an excellent resource for graduate students. Moreover, thanks to its practice-oriented approach, the novelty of the findings and the contemporary topic it reports on, the book offers new stimulus for researchers and practitioners in the broad field of production engineering. **Modern Risk Quantification in Complex Projects Non-Linear Monte Carlo and System Dynamics Methodologies** *Oxford University Press, USA* Project practitioners and decision makers complain that both parametric and Monte Carlo methods fail to produce accurate project duration and cost contingencies in the majority of cases. Apparently, these methods have unacceptably high systematic errors as they miss out critically important components of project risk exposure. In the case of complex projects, the components associated with structural and delivery complexity are often overlooked. **Modern Risk Quantification in Complex Projects: Non-linear Monte Carlo and System Dynamics Methodologies** zeroes in on the most crucial but systematically overlooked characteristics of complex projects. Any mismatches between two fundamental interacting subsystems - a project structure subsystem and a project delivery subsystem - result in non-linear interactions of project risks. Three kinds of the interactions are distinguished - internal risk amplifications stemming from long-term ('chronic') project system issues, knock-on interactions, and risk compounding. Affinities of interacting risks compose dynamic risk patterns supported by a project system. A new methodology to factor the patterns into Monte Carlo modelling referred to as "non-linear Monte Carlo schedule and cost risk analysis" (N-SCRA) is developed and demonstrated. It is capable of forecasting project outcomes with high accuracy even in the case of most complex and difficult projects, including notorious projects-outliers, and it has a much lower rate of systematic error. In this book, the power of project system dynamics is uncovered. It can be adopted as an accurate risk quantification methodology in complex projects, and the results produced by the system dynamics and the non-linear Monte Carlo methodologies are well-aligned. All built Monte Carlo and system dynamics models are available on the book's companion website. **HVDC Grids For Offshore and Supergrid of the Future** *John Wiley & Sons* Presents the advantages, challenges, and technologies of High Voltage Direct Current (HVDC) Grids This book discusses HVDC grids based on multi-terminal voltage-source converters (VSC), which is suitable for the connection of offshore wind farms and a possible solution for a continent wide overlay grid. **HVDC Grids: For Offshore and Supergrid of the Future** begins by

introducing and analyzing the motivations and energy policy drives for developing offshore grids and the European Supergrid. HVDC transmission technology and offshore equipment are described in the second part of the book. The third part of the book discusses how HVDC grids can be developed and integrated in the existing power system. The fourth part of the book focuses on HVDC grid integration, in studies, for different time domains of electric power systems. The book concludes by discussing developments of advanced control methods and control devices for enabling DC grids. Presents the technology of the future offshore and HVDC grid Explains how offshore and HVDC grids can be integrated in the existing power system Provides the required models to analyse the different time domains of power system studies: from steady-state to electromagnetic transients This book is intended for power system engineers and academics with an interest in HVDC or power systems, and policy makers. The book also provides a solid background for researchers working with VSC-HVDC technologies, power electronic devices, offshore wind farm integration, and DC grid protection. Dirk Van Hertem is an Assistant Professor within ESAT-ELECTA at KU Leuven, Belgium. Dr. Van Hertem has written over 100 scientific papers in international journals and conferences. Oriol Gomis-Bellmunt is an Associate Professor in the Technical University of Catalonia (UPC). He is involved in the CITCEA-UPC research group and the Catalonia Institute for Energy Research (IREC). Jun Liang is a Reader within the School of Engineering at Cardiff University, UK. He's also an Adjunct Professor at Changsha University of Science and Technology and North China Electric Power University. *Systems Biology Cambridge University Press* The first comprehensive single-authored textbook on genome-scale models and the bottom-up approach to systems biology. *Artificial Intelligence in Cardiothoracic Imaging Springer Nature* This book provides an overview of current and potential applications of artificial intelligence (AI) for cardiothoracic imaging. Most AI systems used in medical imaging are data-driven and based on supervised machine learning. Clinicians and AI specialists can contribute to the development of an AI system in different ways, focusing on their respective strengths. Unfortunately, communication between these two sides is far from fluent and, from time to time, they speak completely different languages. Mutual understanding and collaboration are imperative because the medical system is based on physicians' ability to take well-informed decisions and convey their reasoning to colleagues and patients. This book offers unique insights and informative chapters on the use of AI for cardiothoracic imaging from both the technical and clinical perspective. It is also a single comprehensive source that provides a complete overview of the entire process of the development and use of AI in clinical practice for cardiothoracic imaging. The book contains chapters focused on cardiac and thoracic applications as well more general topics on the potentials and pitfalls of AI in medical imaging. Separate chapters will discuss the valorization, regulations surrounding AI, cost-effectiveness, and future perspective for different countries and continents. This book

is an ideal guide for clinicians (radiologists, cardiologists etc.) interested in working with AI, whether in a research setting developing new AI applications or in a clinical setting using AI algorithms in clinical practice. The book also provides clinical insights and overviews for AI specialists who want to develop clinically relevant AI applications.

ECCWS 2017 16th European Conference on Cyber Warfare and Security Advancements in Model-Driven Architecture in Software Engineering *IGI Global* An integral element of software engineering is model engineering. They both endeavor to minimize cost, time, and risks with quality software. As such, model engineering is a highly useful field that demands in-depth research on the most current approaches and techniques. Only by understanding the most up-to-date research can these methods reach their fullest potential. Advancements in Model-Driven Architecture in Software Engineering is an essential publication that prepares readers to exercise modeling and model transformation and covers state-of-the-art research and developments on various approaches for methodologies and platforms of model-driven architecture, applications and software development of model-driven architecture, modeling languages, and modeling tools. Highlighting a broad range of topics including cloud computing, service-oriented architectures, and modeling languages, this book is ideally designed for engineers, programmers, software designers, entrepreneurs, researchers, academicians, and students.

Cloud Services, Networking, and Management *John Wiley & Sons* Cloud Services, Networking and Management provides a comprehensive overview of the cloud infrastructure and services, as well as their underlying management mechanisms, including data center virtualization and networking, cloud security and reliability, big data analytics, scientific and commercial applications. Special features of the book include: State-of-the-art content Self-contained chapters for readers with specific interests Includes commercial applications on Cloud (video services and games)

Geomechanical and Petrophysical Properties of Mudrocks *Geological Society of London* A surge of interest in the geomechanical and petrophysical properties of mudrocks (shales) has taken place in recent years following the development of a shale gas industry in the United States and elsewhere, and with the prospect of similar developments in the UK. Also, these rocks are of particular importance in excavation and construction geotechnics and other rock engineering applications, such as underground natural gas storage, carbon dioxide disposal and radioactive waste storage. They may greatly influence the stability of natural and engineered slopes. Mudrocks, which make up almost three-quarters of all the sedimentary rocks on Earth, therefore impact on many areas of applied geoscience. This volume focuses on the mechanical behaviour and various physical properties of mudrocks. The 15 chapters are grouped into three themes: (i) physical properties such as porosity, permeability, fluid flow through cracks, strength and geotechnical behaviour; (ii) mineralogy and microstructure, which control geomechanical behaviour; and (iii) fracture, both in laboratory studies and in the field.

Introduction to Wireless and Mobile Systems *Cengage Learning*

Focusing on qualitative descriptions and realistic explanations of relationships between wireless systems and performance parameters, **INTRODUCTION TO WIRELESS AND MOBILE SYSTEMS, 4e** explains the general principles of how wireless systems work, how mobility is supported, what the underlying infrastructure is and what interactions are needed among different functional components. Rather than offering a thorough history of the development of wireless technologies or an exhaustive list of work being carried out, the authors help computer science, computer engineering, and electrical engineering students learn this exciting technology through relevant examples, such as understanding how a cell phone starts working as soon as they get out of an airplane. This edition offers the most extensive coverage of Ad Hoc and Sensor Networks available for the course and includes up-to-date coverage of the latest wireless technologies. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version. **STAR Virtual Materials Design** *Frontiers Media SA* **Computer Networks A Systems Approach Modeling and Simulation of Computer Networks and Systems Methodologies and Applications** *Morgan Kaufmann* **Modeling and Simulation of Computer Networks and Systems: Methodologies and Applications** introduces you to a broad array of modeling and simulation issues related to computer networks and systems. It focuses on the theories, tools, applications and uses of modeling and simulation in order to effectively optimize networks. It describes methodologies for modeling and simulation of new generations of wireless and mobiles networks and cloud and grid computing systems. Drawing upon years of practical experience and using numerous examples and illustrative applications recognized experts in both academia and industry, discuss: Important and emerging topics in computer networks and systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Methodologies, strategies and tools, and strategies needed to build computer networks and systems modeling and simulation from the bottom up Different network performance metrics including, mobility, congestion, quality of service, security and more... Modeling and Simulation of Computer Networks and Systems is a must have resource for network architects, engineers and researchers who want to gain insight into optimizing network performance through the use of modeling and simulation. Discusses important and emerging topics in computer networks and Systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Provides the necessary methodologies, strategies and tools needed to build computer networks and systems modeling and simulation from the bottom up Includes comprehensive review and evaluation of simulation tools and methodologies and different network performance metrics including mobility, congestion, quality of service, security and more Intelligent Systems and Networks Selected Articles from ICISN 2021,

Vietnam Springer Nature This book presents Proceedings of the International Conference on Intelligent Systems and Networks (ICISN 2021), held at Hanoi in Vietnam. It includes peer-reviewed high-quality articles on intelligent system and networks. It brings together professionals and researchers in the area and presents a platform for exchange of ideas and to foster future collaboration. The topics covered in this book include—foundations of computer science; computational intelligence language and speech processing; software engineering software development methods; wireless communications signal processing for communications; electronics track IoT and sensor systems embedded systems; etc. **Energy Efficiency in Buildings Both New and Rehabilitated MDPI** Buildings are one of the main causes of the emission of greenhouse gases in the world. Europe alone is responsible for more than 30% of emissions, or about 900 million tons of CO₂ per year. Heating and air conditioning are the main cause of greenhouse gas emissions in buildings. Most buildings currently in use were built with poor energy efficiency criteria or, depending on the country and the date of construction, none at all. Therefore, regardless of whether construction regulations are becoming stricter, the real challenge nowadays is the energy rehabilitation of existing buildings. It is currently a priority to reduce (or, ideally, eliminate) the waste of energy in buildings and, at the same time, supply the necessary energy through renewable sources. The first can be achieved by improving the architectural design, construction methods, and materials used, as well as the efficiency of the facilities and systems; the second can be achieved through the integration of renewable energy (wind, solar, geothermal, etc.) in buildings. In any case, regardless of whether the energy used is renewable or not, the efficiency must always be taken into account. The most profitable and clean energy is that which is not consumed.