

## System Specification Based Network Modeling For

*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

*Formal Description Techniques and Protocol Specification, Testing and Verification* addresses formal description techniques (FDTs) applicable to distributed systems and communication protocols. It aims to present the state of the art in theory, application, tools and industrialization of FDTs. Among the important features presented are: FDT-based system and protocol engineering; FDT-application to distributed systems; Protocol engineering; Practical experience and case studies. *Formal Description Techniques and Protocol Specification, Testing and Verification* comprises the proceedings of the Joint International Conference on Formal Description Techniques for Distributed Systems and Communication Protocols and Protocol Specification, Testing and Verification, sponsored by the International Federation for Information Processing, held in November 1998, Paris, France. *Formal Description Techniques and Protocol Specification, Testing and Verification* is suitable as a secondary text for a graduate-level course on Distributed Systems or Communications, and as a reference for researchers and practitioners in industry.

*This book constitutes the refereed proceedings of the 15th International Conference on Practical Applications of Scalable Multi-Agent Systems, PAAMS 2017, held in Porto, Portugal, in June 2017. The 11 revised full papers, 11 short papers, and 17 Demo papers were carefully reviewed and selected from 63 submissions. The papers report on the application and validation of agent-based models, methods, and technologies in a number of key application areas, including day life and real world, energy and networks, human and trust, markets and bids, models and tools, negotiation and conversation, scalability and resources.*

*This book addresses the challenging topic of modeling adaptive networks, which often manifest inherently complex behavior. Networks by themselves can usually be modeled using a neat, declarative, and conceptually transparent Network-Oriented Modeling approach. In contrast, adaptive networks are networks that change their structure; for example, connections in Mental Networks usually change due to learning, while connections in Social Networks change due to various social dynamics. For adaptive networks, separate procedural specifications are often added for the adaptation process. Accordingly, modelers have to deal with a less transparent, hybrid specification, part of which is often more at a programming level than at a modeling level. This book presents an overall Network-Oriented Modeling approach that makes designing adaptive network models much easier, because the adaptation process, too, is modeled in a neat, declarative, and conceptually transparent Network-Oriented Modeling manner, like the network itself. Thanks to this approach, no procedural, algorithmic, or programming skills are needed to design complex adaptive network models. A dedicated software environment is available to run these adaptive network models from their high-level specifications. Moreover, because adaptive networks are described in a network format as well, the approach can simply be applied iteratively, so that higher-order adaptive networks in which network adaptation itself is adaptive (second-order adaptation), too can be modeled just as easily. For example, this can be applied to model metaplasticity in cognitive neuroscience, or second-order adaptation in biological and social contexts. The book illustrates the usefulness of this approach via numerous examples of complex (higher-order) adaptive network models for a wide variety of biological, mental, and social processes. The book is suitable for multidisciplinary Master's and Ph.D. students without assuming much prior knowledge, although also some elementary mathematical analysis is involved. Given the detailed information provided, it can be used as an introduction to Network-Oriented Modeling for adaptive networks. The material is ideally suited for teaching undergraduate and graduate students with multidisciplinary backgrounds or interests. Lecturers will find additional material such as slides, assignments, and software.*

*Information Systems And Technologies For Network Society: Proceedings Of The Ipsj International Symposium*

*Advances in Intelligent Networking and Collaborative Systems*

*Specification and Analysis of Local Area Network Architecture Based on the ISO Reference Model*

*Information Security and Cryptology – ICISC 2006*

*Scientific and Technical Aerospace Reports*

*Science of Artificial Neural Networks*

Real-Time Simulation Technologies: Principles, Methodologies, and Applications is an edited compilation of work that explores fundamental concepts and basic techniques of real-time simulation for complex and diverse systems across a broad spectrum. Useful for both new entrants and experienced experts in the field, this book integrates coverage of detailed theory, acclaimed methodological approaches, entrenched technologies, and high-value applications of real-time simulation—all from the unique perspectives of renowned international contributors. Because it offers an accurate and otherwise unattainable assessment of how a system will behave over a particular time frame, real-time simulation is increasingly critical to the optimization of dynamic processes and adaptive systems in a variety of enterprises. These range in scope from the maintenance of the national power grid, to space exploration, to the development of virtual reality programs and cyber-physical systems. This book outlines how, for these and other undertakings, engineers must assimilate real-time data with computational tools for rapid decision making under uncertainty. Clarifying the central concepts behind real-time simulation tools and techniques, this one-of-a-kind resource: Discusses the state of the art, important challenges, and high-impact developments in simulation technologies Provides a basis for the study of real-time simulation as a fundamental and foundational technology Helps readers develop and refine principles that are applicable across a wide variety of application domains As science moves toward more advanced technologies, unconventional design approaches, and unproven regions of the design space, simulation tools are increasingly critical to successful design and operation of technical systems in a growing number of application domains. This must-have resource presents detailed coverage of real-time simulation for system design, parallel and distributed simulations, industry tools, and a large set of applications.

Requirements engineering is the process by which the requirements for software systems are gathered, analyzed, documented, and managed throughout their complete lifecycle. Traditionally it has been concerned with technical goals for, functions of, and constraints on software systems. Aurum and Wohlin, however, argue that it is no longer appropriate for software systems professionals to focus only on functional and non-functional aspects of the intended system and to somehow assume that organizational context and needs are outside their remit. Instead, they call for a broader perspective in order to gain a better understanding of the interdependencies between enterprise stakeholders, processes, and software systems, which would in turn give rise to more appropriate techniques and higher-quality systems. Following an introductory chapter that provides an exploration of key issues in requirements engineering, the book is organized in three parts. Part 1 presents surveys of state-of-the-art requirements engineering process research along with critical assessments of existing models, frameworks and techniques. Part 2 addresses key areas in requirements engineering, such as market-driven requirements engineering, goal modeling, requirements ambiguity, and others. Part 3 concludes the book with articles that present empirical evidence and experiences from practices in industrial projects. Its broader perspective gives this book its distinct appeal and makes it of interest to both researchers and practitioners, not only in software engineering but also in other disciplines such as business process engineering and management science.

Optimum-Path Forest: Theory, Algorithms, and Applications was first published in 2008 in its supervised and unsupervised versions with applications in medicine and image classification. Since then, it has expanded to a variety of other applications such as remote sensing, electrical and petroleum engineering, and biology. In recent years, multi-label and semi-supervised versions were also developed to handle video classification problems. The book presents the principles, algorithms and applications of Optimum-Path Forest, giving the theory and state-of-the-art as well as insights into future directions. Presents the first book on Optimum-path Forest Shows how it can be used with Deep Learning Gives a wide range of applications Includes the methods, underlying theory and applications of Optimum-Path Forest (OPF)

Im ersten Teil dieser Arbeit wird ein Algorithmus vorgestellt, der spannungsabhängige Einspeisung von Wirk- und Blindleistung in den Lastfluss-Algorithmus integriert. Es wird eine Beschleunigung von bis zu einer Größenordnung gegenüber dem derzeit gängigen Verfahren, und eine verbesserte Robustheit erreicht.

Im zweiten Teil wird ein Phasor-Framework zur dynamischen Simulation von Stromnetzen vorgestellt. Die wesentliche Neuheit ist die Möglichkeit der Integration von Zustandsdiagrammen direkt in die Komponentenmodelle. Damit wird eine wesentlich schnellere Modellentwicklung ermöglicht als mit verfügbaren Tools. Im dritten Teil werden Modelle entwickelt und in das Framework integriert. Der Schwerpunkt liegt auf einem Photovoltaik-Modell welches das dynamische  $P(V)$ ,  $Q(V)$  und  $P(f)$  Verhalten nach VDE 4105 im Bereich Sekunden bis Minuten abbildet.

Im vierten Teil wird das entwickelte Phasor-Framework verwendet, um das Wiedereinschaltverhalten von Photovoltaikanlagen in einem dieselbetriebenen Inselnetz in der Niederspannung zu untersuchen. Die Untersuchung zeigt, dass ein periodisches Ab- und Abschalten von Photovoltaikanlagen vorkommen kann.

Formal Description Techniques and Protocol Specification, Testing and Verification

Transmission Systems Design Handbook for Wireless Networks

Self-Organizing Systems

Network-Oriented Modeling for Adaptive Networks: Designing Higher-Order Adaptive Biological, Mental and Social Network Models

Tools and Algorithms for the Construction and Analysis of Systems

Fluxomics and Metabolic Analysis in Systems Microbiology

The second edition of this comprehensive handbook of computer and information security provides the most complete view of computer security and privacy available. It offers in-depth coverage of security theory, technology, and practice as they relate to established technologies as well as recent advances. It explores practical solutions to many security issues. Individual chapters are authored by leading experts in the field and address the immediate and long-term challenges in the authors' respective areas of expertise. The book is organized into 10 parts comprised of 70 contributed chapters by leading experts in the areas of networking and systems security, information management, cyber warfare and security, encryption technology, privacy, data storage, physical security, and a host of advanced security topics. New to this edition are chapters on intrusion detection, securing the

cloud, securing web apps, ethical hacking, cyber forensics, physical security, disaster recovery, cyber attack deterrence, and more. Chapters by leaders in the field on theory and practice of computer and information security technology, allowing the reader to develop a new level of technical expertise Comprehensive and up-to-date coverage of security issues allows the reader to remain current and fully informed from multiple viewpoints Presents methods of analysis and problem-solving techniques, enhancing the reader's grasp of the material and ability to implement practical solutions Lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the NASA Scientific and Technical Information Database.

Database Management Systems: Understanding and Applying Database Technology focuses on the processes, methodologies, techniques, and approaches involved in database management systems (DBMSs). The book first takes a look at ANSI database standards and DBMS applications and components. Discussion focus on application components and DBMS components, implementing the dynamic relationship application, problems and benefits of dynamic relationship DBMSs, nature of a dynamic relationship application, ANSI/NDL, and DBMS standards. The manuscript then ponders on logical database, interrogation, and physical database. Topics include choosing the right interrogation language, procedure-oriented language, system control capabilities, DBMSs and language orientation, logical database components, and data definition language. The publication examines system control, including system control components, audit trails, reorganization, concurrent operations, multiple database processing, security and privacy, system control static and dynamic differences, and installation and maintenance. The text is a valuable source of information for computer engineers and researchers interested in exploring the applications of database technology.

This book constitutes the refereed proceedings of the 4th International Conference on Tools and Algorithms for the Construction and Analysis of Systems, TACAS'98, held in conjunction with ETAPS in Lisbon, Portugal, in March/April 1998. The 28 revised full papers presented together with an invited talk were selected from a total of 78 submissions. The volume is devoted to conceptual foundations, development, and applications of tools and algorithms for the specification, verification, analysis, and construction of software and hardware systems. The papers are organized in sections on model checking, design and architecture, various applications, fielded applications, verification of real-time systems, mixed analysis techniques, and case studies and experience.

Machine Learning for Cyber Physical Systems

Model-Based Software Performance Analysis

Computer and Information Security Handbook

Database Management Systems

Simulation and Model-Based Methodologies: An Integrative View

Packet Guide to Core Network Protocols

Modeling and Simulation of Computer Networks and Systems Methodologies and Applications Morgan Kaufmann

As network uses increase rapidly and high quality-of-service (QoS) is required, efficient network managing methods become important. Many previous studies and commercial tools of network management systems such as tcpdump, Ethereal, and other applications have weaknesses: limited size of files, command line execution, and large memory and huge computational power requirement. Researchers struggle to find fast and effective analyzing methods to save maintenance budgets and recover from systematic problems caused by the rapid increment of network traffic or intrusions. The main objective of this study is to propose an approach to deal with a large amount of network behaviors being quickly and efficiently analyzed. We study an ontology/data engineering methodology based network analysis system. We design a behavior, which represents network traffic activity and network packet information such as IP addresses, protocols, and packet length, based on the System Entity Structure (SES) methodology. A significant characteristic of SES, a hierarchical tree structure, enables systems to access network packet information quickly and efficiently. Also, presenting an automated system design is the secondary purpose of this study. Our approach shows adaptive awareness of pragmatic frames (contexts) and makes a network traffic analysis system with high throughput and a fast response time that is ready to respond to user applications. We build models and run simulations to evaluate specific purposes, i.e., analyzing network protocols use, evaluating network throughput, and examining intrusion detection algorithms, based on Discrete Event System Specification (DEVS) formalism. To study speed up, we apply a web-based distributed simulation methodology. DEVS/Service Oriented Architecture (DEVS/SOA) facilitates deploying workloads into multi-servers and consequently increasing overall system performance. In addition to the scalability limitations, both tcpdump and Ethereal have a security issue. As well as basic network traffic information, captured files by these tools contain secure information: user identification numbers and passwords. Therefore, captured files should not allow to be leaked out. However, network analyses need to be performed outside target networks in some cases. The distributed simulation--allocating distributing models inside networks and assigning analyzing models outside networks--also allows analysis of network behaviors out of networks while keeping important information secured.

The Joint Advanced Strike Technology (JAST) resulted from the decisions of the Secretary of Defense' Bottom Up Review (BUR). Each service has a demonstrated need for advanced technology aircraft to meet future contingencies, but it was determined that costs for development and production of these several different aircraft could not be met due to budgetary constraints. The BUR found that there were not enough resources available to support all these programs in future years. The decision was made to continue with the Air Force F-22 fighter aircraft, and the F/A-18E/F aircraft for the Navy, but to cancel the A/F-X and the MRF. The decision on ASTOL was to continue that research, but to secure specific commitment of resources by at least two of the three Services before building a flying prototype. The BUR also confirmed the continuing needs that were to be met by the A/F-X and MRF programs. This led to the establishment of the Joint

Advanced Strike Technology Program in July 1993.

For more than 20 years, Network World has been the premier provider of information, intelligence and insight for network and IT executives responsible for the digital nervous systems of large organizations. Readers are responsible for designing, implementing and managing the voice, data and video systems their companies use to support everything from business critical applications to employee collaboration and electronic commerce.

Detecting Attacks on DHCP Protocol

Real-Time Simulation Technologies: Principles, Methodologies, and Applications

14th Nordic Conference on Secure IT Systems, NordSec 2009, Oslo, Norway, 14-16 October 2009, Proceedings

Computer Information Systems and Industrial Management

Security and Privacy in Smart Sensor Networks

First International Workshop, IWSOS 2006 and Third International Workshop on New Trends in Network Architectures and Services, EuroNGI 2006, Passau, Germany, September 18-20, 2006, Proceedings

*This book constitutes the refereed proceedings of the 14th International Conference on Secure IT Systems, NordSec 2009, held in Oslo, Norway, October 14-16, 2009.*

*The 20 revised full papers and 8 short papers presented were carefully reviewed and selected from 52 submissions. Under the theme Identity and Privacy in the Internet Age, this year's conference explored policies, strategies and technologies for protecting identities and the growing flow of personal information passing through the Internet and mobile networks under an increasingly serious threat picture. Among the contemporary security issues discussed were Security Services Modeling, Petri Nets, Attack Graphs, Electronic Voting Schemes, Anonymous Payment Schemes, Mobile ID-Protocols, SIM Cards, Network Embedded Systems, Trust, Wireless Sensor Networks, Privacy, Privacy Disclosure Regulations, Financial Cryptography, PIN Verification, Temporal Access Control, Random Number Generators, and some more.*

*This book constitutes the refereed proceedings of the 9th International Conference on Information Security and Cryptology, ICISC 2006, held in Busan, Korea in November/December 2006. The 26 revised full papers cover such topics as hash functions, block and stream ciphers, network security and access control, mobile communications security, forensics, copyright protection, biometrics, public key cryptosystems, and digital signatures.*

*Security and privacy protection within computer networks can be a challenge. By examining the current problems and challenges this domain is facing, more efficient strategies can be established to safeguard personal information against invasive pressures. Security and Privacy in Smart Sensor Networks is a critical scholarly resource that examines recent developments and emerging trends in smart sensor security and privacy by providing new models, practical solutions, and technological advances related to security. Featuring coverage on a broad range of topics such as cloud security, encryption, and intrusion detection systems, this book is geared towards academicians, engineers, IT specialists, researchers, and students seeking current research on authentication and intrusion detection.*

*In areas such as military, security, aerospace, and disaster management, the need for performance optimization and interoperability among heterogeneous systems is increasingly important. Model-driven engineering, a paradigm in which the model becomes the actual software, offers a promising approach toward systems of systems (SoS) engineering. However, model-driven engineering has largely been unachieved in complex dynamical systems and netcentric SoS, partly because modeling and simulation (M&S) frameworks are stove-piped and not designed for SoS composability. Addressing this gap, Netcentric System of Systems Engineering with DEVS Unified Process presents a methodology for realizing the model-driven engineering vision and netcentric SoS using DEVS Unified Process (DUNIP). The authors draw on their experience with Discrete Event Systems Specification (DEVS) formalism, System Entity Structure (SES) theory, and applying model-driven engineering in the context of a netcentric SoS. They describe formal model-driven engineering methods for netcentric M&S using standards-based approaches to develop and test complex dynamic models with DUNIP. The book is organized into five sections: Section I introduces undergraduate students and novices to the world of DEVS. It covers systems and SoS M&S as well as DEVS formalism, software, modeling language, and DUNIP. It also assesses DUNIP with the requirements of the Department of Defense's (DoD) Open Unified Technical Framework (OpenUTF) for netcentric Test and Evaluation (T&E). Section II delves into M&S-based systems engineering for graduate students, advanced practitioners, and industry professionals. It provides methodologies to apply M&S principles to SoS design and reviews the development of executable architectures based on a framework such as the Department of Defense Architecture Framework (DoDAF). It also describes an approach for building netcentric knowledge-based contingency-driven systems. Section III guides graduate students, advanced DEVS users, and industry professionals who are interested in building DEVS virtual machines and netcentric SoS. It discusses modeling standardization, the deployment of models and simulators in a netcentric environment, event-driven architectures, and more. Section IV explores real-world case studies that realize many of the concepts defined in the previous chapters. Section V outlines the next steps and looks at how the modeling of netcentric complex adaptive systems can be attempted using DEVS concepts. It touches on the boundaries of DEVS formalism and the future work needed to utilize advanced concepts like weak and strong emergence, self-organization, scale-free systems, run-time modularity, and event interoperability. This groundbreaking work details how DUNIP offers a well-structured, platform-independent methodology for the modeling and simulation of netcentric system of systems.*

*Specification-based Network Intrusion Detection Model*

*Theory and Applications*

*Netcentric System of Systems Engineering with DEVS Unified Process*

*Rapid-prototyping of Hardware and Software in a Unified Framework*

*9th International Conference, Busan, Korea, November 30 - December 1, 2006, Proceedings*

*Modeling and Optimization of Parallel and Distributed Embedded Systems*

Collecting the work of the foremost scientists in the field, **Discrete-Event Modeling and Simulation: Theory and Applications** presents the state of the art in modeling discrete-event systems using the discrete-event system specification (DEVS) approach. It introduces the latest advances, recent extensions of formal techniques, and real-world examples of various applications. The book covers many topics that pertain to several layers of the modeling and simulation architecture. It discusses DEVS model development support and the interaction of DEVS with other methodologies. It describes different forms of simulation supported by DEVS, the use of real-time DEVS simulation, the relationship between DEVS and graph transformation, the influence of DEVS variants on simulation performance, and interoperability and composability with emphasis on DEVS standardization. The text also examines extensions to DEVS, new formalisms, and abstractions of DEVS models as well as the theory and analysis behind real-world system identification and control. To support the generation and search of optimal models of a system, a framework is developed based on the system entity structure and its transformation to DEVS simulation models. In addition, the book explores numerous interesting examples that illustrate the use of DEVS to build successful applications, including optical network-on-chip, construction/building design, process control, workflow systems, and environmental models. A one-stop resource on advances in DEVS theory, applications, and methodology, this volume offers a sampling of the best research in the area, a broad picture of the DEVS landscape, and trend-setting applications enabled by the DEVS approach. It provides the basis for future research discoveries and encourages the development of new applications.

This practical new resource gives you a comprehensive understanding of the design and deployment of transmission networks for wireless applications. From principles and design, to equipment procurement, project management, testing, and operation, it's a practical, hands-on engineering guide with numerous real-life examples of turn-key operations in the wireless networking industry. This book, written for both technical and non-technical professionals, helps you deal with the costs and difficulties involved in setting up the local access with technologies that are still in the evolutionary stage. Issues involved in the deployment of various transmission technologies, and their impact on the overall wireless network topology are discussed. Strategy and approach to transmission network planning, design and deployment are explored. The book offers practical guidelines and advice derived from the author's own experience on projects worldwide. You gain a solid grounding in third generation wireless networks with increased capacity requirements, while learning all about packet data architecture, and how it will impact future transmission network design and deployment.

This book introduces the state-of-the-art in research in parallel and distributed embedded systems, which have been enabled by developments in silicon technology, micro-electro-mechanical systems (MEMS), wireless communications, computer networking, and digital electronics. These systems have diverse applications in domains including military and defense, medical, automotive, and unmanned autonomous vehicles. The emphasis of the book is on the modeling and optimization of emerging parallel and distributed embedded systems in relation to the three key design metrics of performance, power and dependability. Key features: Includes an embedded wireless sensor networks case study to help illustrate the modeling and optimization of distributed embedded systems. Provides an analysis of multi-core/many-core based embedded systems to explain the modeling and optimization of parallel embedded systems. Features an application metrics estimation model; Markov modeling for fault tolerance and analysis; and queueing theoretic modeling for performance evaluation. Discusses optimization approaches for distributed wireless sensor networks; high-performance and energy-efficient techniques at the architecture, middleware and software levels for parallel multicore-based embedded systems; and dynamic optimization methodologies. Highlights research challenges and future research directions. The book is primarily aimed at researchers in embedded systems; however, it will also serve as an invaluable reference to senior undergraduate and graduate students with an interest in embedded systems research.

This volume contains technical papers and panel position papers selected from the proceedings of the International Symposium on Information Systems and Technologies for Network Society, held together with the IPSJ (information processing society of Japan) National Convention, in September 1997. Papers were submitted from all over the world, especially from Japan, Korea and China. Since these countries are believed to form one of the major computer manufacturing centers in the world, a panel on "Computer Science Education for the 21st Century" was set up. A special session on the Japanese project on Software Engineering invited representative researchers from the project, which is supported by the Ministry of Education, Japan.

Selected papers from the International Conference ML4CPS 2016

Computer Information Systems - Analysis and Technologies

10th International Conference, CISIM 2011, Held in Kolkata, India, December 14-16, 2011. Proceedings

Emerging Research and Opportunities

Optimum-Path Forest

Rail planning manual

NATO Advanced Institute Ottawa, Ontario/ Canada, July 26 - August 6, 1982

Poor performance is one of the main quality-related shortcomings that cause software projects to fail. Thus, the need to address performance concerns early during the software development process is fully acknowledged, and there is a growing interest in the research and software industry communities towards techniques, methods and tools that permit to manage system performance concerns as an integral part of software engineering. Model-based software performance analysis introduces performance concerns in the scope of software modeling, thus allowing the developer to carry on performance analysis throughout the software lifecycle. With this book, Cortellessa, Di Marco and Inverardi provide the cross-knowledge that allows developers to tackle software performance issues from the very early phases of software development. They explain the basic concepts of performance analysis and describe the most representative methodologies used to annotate and transform software models into performance models. To this end, they go all the way from performance primers through software and performance modeling notations to the latest transformation-based methodologies. As a result, their book is a self-contained reference text on software performance engineering, from which different target groups will benefit: professional software engineers and graduate students in software engineering will learn both basic concepts of performance modeling and new methodologies; while performance specialists will find out how to investigate software performance model building.

This book constitutes the refereed proceedings of the First International Workshop on Self-Organizing Systems, IWSOS 2006. The book offers 16 revised full papers and 6 revised short papers together with 2 invited talks and 3 poster papers. The papers are organized in topical sections on dynamics of structured and unstructured overlays, self-organization in peer-to-peer networks, self-organization in wireless environments, self-organization in distributed and grid computing, self-managing and autonomic computing, and more.

This book constitutes the refereed proceedings of the 10th International Conference on Computer Information Systems, CISIM 2011, held in Kolkata, India, in December 2011. The 30 revised full papers presented together with 6 keynote tasks and plenary lectures were carefully reviewed and selected from 67 submissions. The papers are organized in topical sections on networking and its applications; agent-based systems; biometric applications; pattern recognition and image processing; industrial applications; algorithmic applications and data management; information and network security.

12th IFIP TC 8 International Conference, CISIM 2013, Krakow, Poland, September 25-27, 2013, Proceedings

An Introductory Guide to EC Competition Law and Practice

15th International Conference, PAAMS 2017, Porto, Portugal, June 21-23, 2017, Proceedings

Report of the Defense Science Board Task Force on Joint Advanced Strike Technology (JAST) Program

Methodologies and Applications

Theory, Algorithms, and Applications

Teachers use e-learning systems to develop course notes and web-based activities to communicate with learners on one side and monitor and classify their progress on the other. Learners use it for learning, communication, and collaboration. Adaptive e-learning systems often employ learner models, and the behavior of an adaptive system varies depending on the data from the learner model and the learner's profile. Without knowing anything about the learner who uses the system, a system would behave in exactly the same way for all learners. Bayesian Networks for Managing Learner Models in Adaptive Hypermedia Systems: Emerging Research and Opportunities is a collection of research on the use of Bayesian networks and methods as a probabilistic formalism for the management of the learner model in adaptive hypermedia. It specifically discusses comparative studies, transformation rules, and case diagrams that support all phases of the learner model and the use of Bayesian networks and multi-entity Bayesian networks to manage dynamic aspects of this model. While highlighting topics such as developing the learner model, learning management systems, and modeling techniques, this book is ideally designed for instructional designers, course administrators, educators, researchers, and professionals.

The aim of this book is to provide the latest research findings, innovative research results, methods and development techniques from both theoretical and practical perspectives related to intelligent social networks and collaborative systems, intelligent networking systems, mobile collaborative systems, secure intelligent cloud systems, etc., and to reveal synergies among various paradigms in the multi-disciplinary field of intelligent collaborative systems. It presents the Proceedings of the 9th International Conference on Intelligent Networking and Collaborative Systems (INCoS-2017), held on August 24–26, 2017 in Toronto, Canada. With the rapid evolution of the Internet, we are currently experiencing a shift from the traditional sharing of information and applications as the main purpose of the Web to an emergent paradigm that puts people at the very centre of networks and exploits the value of people's connections, relations and collaborations. Social networks are also playing a major role in the dynamics and structure of intelligent Web-based networking and collaborative systems. Virtual campuses, virtual communities and organizations effectively leverage intelligent networking and collaborative systems by tapping into a broad range of formal and informal electronic relations, such as business-to-business, peer-to-peer and many types of online collaborative learning interactions, including the emerging e-learning systems. This has resulted in entangled systems that need to be managed efficiently and autonomously. In addition, the latest and powerful technologies based on Grid and wireless infrastructure as well as Cloud computing are now greatly enhancing collaborative and networking applications, but are also facing new issues and challenges. The principal objective of the research and development community is to stimulate research that leads to the creation of responsive environments for networking and, in the longer-term, the development of adaptive, secure, mobile, and intuitive intelligent systems for collaborative work and learning.

Take an in-depth tour of core Internet protocols and learn how they work together to move data packets from one network to another. With this concise book, you'll delve into the aspects of each protocol, including operation basics and security risks, and learn the function of network hardware such as switches and routers. Ideal for beginning network



engineers, each chapter in this book includes a set of review questions, as well as practical, hands-on lab exercises. Understand basic network architecture, and how protocols and functions fit together. Learn the structure and operation of the Eth.

This book constitutes the proceedings of the 12th IFIP TC 8 International Conference, CISIM 2013, held in Cracow, Poland, in September 2013. The 44 papers presented in this volume were carefully reviewed and selected from over 60 submissions. They are organized in topical sections on biometric and biomedical applications; pattern recognition and image processing; various aspects of computer security, networking, algorithms, and industrial applications. The book also contains full papers of a keynote speech and the invited talk.

Understanding and Applying Database Technology

Bayesian Networks for Managing Learner Models in Adaptive Hypermedia Systems: Emerging Research and Opportunities

4th International Conference, TACAS'98, Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS'98, Lisbon, Portugal, March 28 - April 4, 1998, Proceedings

5th International Workshop, SAM 2006, Kaiserslautern, Germany, May 31 - June 2, 2006, Revised Selected Papers

Discrete-Event Modeling and Simulation

FORTE XI/PSTV XVIII'98 IFIP TC6 WG6.1 Joint International Conference on Formal Description Techniques for Distributed Systems and Communication Protocols (FORTE XI) and Protocol Specification, Testing and Verification (PSTV XVIII) 3-6 November 1998, Paris, France

This book constitutes the refereed proceedings of the 5th International Workshop on System Analysis and Modelling, SAM 2006, held in Kaiserslautern, Germany in May/June 2006. The 14 revised full papers cover language profiles, evolution of development languages, model-driven development, and language implementation.

The work presents new approaches to Machine Learning for Cyber Physical Systems, experiences and visions. It contains some selected papers from the international Conference ML4CPS - Machine Learning for Cyber Physical Systems, which was held in Karlsruhe, September 29th, 2016. Cyber Physical Systems are characterized by their ability to adapt and to learn: They analyze their environment and, based on observations, they learn patterns, correlations and predictive models. Typical applications are condition monitoring, predictive maintenance, image processing and diagnosis. Machine Learning is the key technology for these developments.

Modeling and Simulation of Computer Networks and Systems

Identity and Privacy in the Internet Age

The 9th International Conference on Intelligent Networking and Collaborative Systems (INCoS-2017)

Development of a MATLAB/Simulink Framework for Phasor-Based Power System Simulation and Component Modeling Based on State Machines

System Analysis and Modeling: Language Profiles

Ontology