Ns2 Source Code For Wireless Sensor Networks

MATLAB
Soft Computing in Wireless Sensor Networks
Electronics, Communications and Networks IV
WIRELESS SENSOR NETWORKS
Ubiquitous Intelligence and Computing
Wireless Ad hoc and Sensor Networks
Modeling and Tools for Network Simulation
Wireless Sensor Multimedia Networks
Mobile Ad Hoc Networks
Mobile Ad-hoc and Sensor Networks
Web-Based Multimedia Advancements in Data Communications and Networking Technologies
Wired/Wireless Internet Communications
Introduction to Network Simulator NS2
Proceedings of International Conference on Smart Computing and Cyber Security
Wireless Sensor Networks and Applications
Wired/Wireless Internet Communications
Network Control and Engineering for QOS, Security and Mobility, III
Hierarchical Topology Control for Wireless Networks
Computer Network Simulation Using NS2
Contemporary Computing
Distributed Denial of Service Attacks
Energy-Efficient Wireless Sensor Networks
Context-Aware Systems and Applications
Innovations in Smart Cities Applications Volume 7
Problem Solving for Wireless Sensor Networks
Mobility based routing overhead management in reconfigurable wireless ad hoc networks
Handbook on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks
Introduction to Network Simulator NS2
Computer Science and Convergence
Networking 2006
Wireless Systems and Mobility in Next Generation Internet
Performance Analysis of Computer Networks
Routing Protocols and Architectural Solutions for Optimal Wireless Networks and Security
Bulletin of Electrical Engineering and Informatics
Congestion Control for 6LoWPAN Wireless Sensor Networks: Toward the Internet of Things

NS Simulator for Beginners
Advances in Networks and Communications
Wireless Sensor Networks
Routing Strategies in Ad-hoc Wireless Networks

RIVERA JUNE

MATLAB BoD – Books on Demand
A crucial reference tool for the increasing number of scientists who depend upon sensor networks in a widening variety of ways. Coverage includes network design and modeling, network management, data management, security and applications. The topic covered in each chapter receives expository as well as scholarly treatment, covering its history, reviewing state-of-the-art thinking relative to the topic, and discussing currently unsolved problems of special interest.
Soft Computing in Wireless Sensor Networks Springer Science & Business Media
The Internet of Things (IoT) is the next big challenge for the research community. The IPv6 over low power wireless personal area network (6LoWPAN) protocol stack is considered a key part of the IoT. In 6LoWPAN networks, heavy network traffic causes congestion which significantly degrades network performance and impacts on quality of service aspects. This book presents a concrete, solid and logically ordered work on congestion control for 6LoWPAN networks as a step toward successful implementation of the IoT and supporting the IoT application requirements. The book addresses the congestion control issue in 6LoWPAN networks and presents a comprehensive literature review on congestion control for WSNs and 6LoWPAN networks. An extensive congestion analysis and assessment for 6LoWPAN networks is explored through analytical modelling, simulations and real experiments. A number of congestion control mechanisms and algorithms are proposed to mitigate and solve the congestion problem in 6LoWPAN networks by using and utilizing the non-cooperative game theory, multi-attribute decision making and network utility maximization framework. The proposed algorithms are aware of node priorities and application priorities to support the IoT application requirements and improve network performance in terms of throughput, end-to-end delay, energy consumption, number of lost packets and weighted fairness index.
Electronics, Communications and Networks IV Springer Science & Business Media
With modern communication networks continuing to grow in traffic, size, complexity, and variety, control systems are critical to ensure quality and effectively manage network traffic. Providing a thorough and authoritative introduction, Wireless Ad hoc and Sensor Networks: Protocols, Performance, and Control examines the theory, architectures, and technologies needed to implement quality of service (QoS) in a wide variety of communication networks. Based on years of research and practical

experience, this book examines the technical concepts underlying the design, implementation, research, and invention of both wired and wireless networks. The author builds a strong understanding of general concepts and common principles while also exploring issues that are specific to wired, cellular, wireless ad hoc, and sensor networks. Beginning with an overview of networks and QoS control, he systematically explores timely areas such as Lyapunov analysis, congestion control of high-speed networks, admission control based on hybrid system theory, distributed power control of various network types, link state routing using QoS parameters, and predictive congestion control. The book also provides a framework for implementing QoS control using mote hardware. Providing a deeply detailed yet conveniently practical guide to QoS implementation, Wireless Ad hoc and Sensor Networks: Protocols, Performance, and Control is the perfect introduction for anyone new to the field as well as an ideal reference guide for seasoned network practitioners.

WIRELESS SENSOR NETWORKS Springer Science & Business Media

Wireless sensor networks (WSNs) utilize fast, cheap, and effective applications to imitate the human intelligence capability of sensing on a wider distributed scale. But acquiring data from the deployment area of a WSN is not always easy and multiple issues arise, including the limited resources of sensor devices run with one-time batteries. Additi

Ubiquitous Intelligence and Computing Springer Science & Business Media

The advances in low-power electronic devices integrated with wireless communication capabilities are one of recent areas of research in the field of Wireless Sensor Networks (WSNs). One of the major challenges in WSNs is uniform and least energy dissipation while increasing the lifetime of the network. This is the first book that introduces the energy efficient wireless sensor network techniques and protocols. The text covers the theoretical as well as the practical requirements to conduct and trigger new experiments and project ideas. The advanced techniques will help in industrial problem solving for energy-hungry wireless sensor network applications.

Wireless Ad hoc and Sensor Networks CRC Press

This excellent book represents the second part of three-volumes regarding MATLAB- based applications in almost every branch of science. The present textbook contains a collection of 13 exceptional articles. In particular, the book consists of three sections, the first one is devoted to electronic engineering and computer science, the second is devoted to MATLAB/SIMULINK as a tool for engineering applications, the third one is about Telecommunication and communication systems and the last one discusses MATLAB toolboxes.

Modeling and Tools for Network Simulation Springer Science & Business Media

This book constitutes the second part of the refereed proceedings of the Third International Conference, IC3 2010, held in Noida, India, in August 2010. The 23 revised full papers presented were carefully reviewed and selected from numerous

submissions.
Wireless Sensor Multimedia Networks CRC Press
Computer Network Simulations Using NS2 provides a solid foundation of computer networking knowledge and skills, covering everything from simple operating system commands to the analysis of complex network performance metrics. The book begins with a discussion of the evolution of data communication techniques and the fundamental issues associated with performance evaluation. After presenting a preliminary overview of simulation and other performance evaluation techniques, the authors: Describe a number of computer network protocols and TCP/IP and OSI models, highlighting the networking devices used Explain a socket and its use in network programming, fostering the development of network applications using C and socket API Introduce the NS2 network simulator, exhibiting its internal architecture, constituent software packages, and installation in different operating systems Delve into simulation using NS2, elaborating on the use of Tcl and OTcl scripts as well as AWK scripting and plotting with Gnuplot Show how to simulate wired and wireless network protocols step by step, layer by layer Explore the idea of simulating very large networks, identifying the challenges associated with measuring and graphing the various network parameters Include nearly 90 example programs, scripts, and outputs, along with several exercises requiring application of the theory and programming Computer Network Simulations Using NS2 emphasizes the implementation and simulation of real-world computer network protocols, affording readers with valuable opportunities for hands-on practice while instilling a deeper understanding of how computer network protocols work.
Mobile Ad Hoc Networks CRC Press
This book constitutes the refereed proceedings of the 4th International Conference on Ubiquitous Intelligence and Computing, UIC 2007, held in Hong Kong, China in July 2007, co-located with ATC 2007, the 4th International Conference on Autonomic and Trusted Computing. The 119 revised full papers presented together with 1 keynote paper and 1 invited paper were carefully reviewed and selected from 463 submissions. The papers are organized in topical sections on smart objects and embedded systems, smart spaces/environments/services, ad-hoc and intelligent networks, sensor networks, pervasive communication and mobile systems, context-aware applications and systems, service oriented middleware and applications, intelligent computing: models and services, as well as security, safety and privacy.
Mobile Ad-hoc and Sensor Networks Institute of Advanced Engineering and Science
Wireless sensor networks (WSNs) are a special class of ad hoc network in which network nodes composed of tiny sensors pass data such as temperature, pressure, and humidity through the network to a central location. Wireless sensor multimedia networks (WSMNs) are a special category of WSNs in

which the sensor nodes are small cameras and microphones

Web-Based Multimedia Advancements in Data Communications and Networking Technologies Springer Science & Business Media

A crucial step during the design and engineering of communication systems is the estimation of their performance and behavior; especially for mathematically complex or highly dynamic systems network simulation is particularly useful. This book focuses on tools, modeling principles and state-of-the art models for discrete-event based network simulations, the standard method applied today in academia and industry for performance evaluation of new network designs and architectures. The focus of the tools part is on two distinct simulations engines: OmNet++ and ns-3, while it also deals with issues like parallelization, software integration and hardware simulations. The parts dealing with modeling and models for network simulations are split into a wireless section and a section dealing with higher layers. The wireless section covers all essential modeling principles for dealing with physical layer, link layer and wireless channel behavior. In addition, detailed models for prominent wireless systems like IEEE 802.11 and IEEE 802.16 are presented. In the part on higher layers, classical modeling approaches for the network layer, the transport layer and the application layer are presented in addition to modeling approaches for peer-to-peer networks and topologies of networks. The modeling parts are accompanied with catalogues of model implementations for a large set of different simulation engines. The book is aimed at master students and PhD students of computer science and electrical engineering as well as at researchers and practitioners from academia and industry that are dealing with network simulation at any layer of the protocol stack.

Wired/Wireless Internet Communications CRC Press

"This book highlights comprehensive research that will enable readers to understand, manage, use, and maintain business data communication networks more effectively"--Provided by publisher.

Introduction to Network Simulator NS2 Cuvillier Verlag

Distributed Denial of Service (DDoS) attacks have become more destructive, wide-spread and harder to control over time. This book allows students to understand how these attacks are constructed, the security flaws they leverage, why they are effective, how they can be detected, and how they can be mitigated. Students use software defined networking (SDN) technology to created and execute controlled DDoS experiments. They learn how to deploy networks, analyze network performance, and create resilient systems. This book is used for graduate level computer engineering instruction at Clemson University. It augments the traditional graduate computing curricula by integrating: Internet deployment, network security, ethics, contemporary social issues, and engineering principles into a laboratory based course of instruction. Unique features of this book include: A history of DDoS attacks that includes attacker motivations

Discussion of cyber-war, censorship, and Internet black-outs SDN based DDoS laboratory assignments Up-to-date review of current DDoS attack techniques and tools Review of the current laws that globally relate to DDoS Abuse of DNS, NTP, BGP and other parts of the global Internet infrastructure to attack networks Mathematics of Internet traffic measurement Game theory for DDoS resilience Construction of content distribution systems that absorb DDoS attacks This book assumes familiarity with computing, Internet design, appropriate background in mathematics, and some programming skills. It provides analysis and reference material for networking engineers and researchers. By increasing student knowledge in security, and networking; it adds breadth and depth to advanced computing curricula.

Proceedings of International Conference on Smart Computing and Cyber Security Springer

This book constitutes the thoroughly refereed postproceedings of the first international workshop organized by the European Network of Excellence on Next Generation Internet, EURO-NGI 2004, held in Dagstuhl Castle, Germany in June 2004. The 16 revised full research papers presented were carefully selected during two rounds of reviewing and improvement. The papers are organized in topical sections on network and capacity planning, medium access and admission control, QoS in wireless networks, and network inter-connection and resource access. The book provides a most relevant presentation of current issues of the next generation Internet in the area of wireless communication for mobile users.

Wireless Sensor Networks and Applications Springer Nature

Guiding readers through the basics of these rapidly emerging networks to more advanced concepts and future expectations, this book examines the most pressing research issues in Mobile Ad hoc Networks (MANETs). Leading researchers, industry professionals, and academics provide an authoritative perspective of the state of the art in MANETs. The book includes surveys of recent publications that investigate key areas of interest such as limited resources and the mobility of mobile nodes. It considers routing, multicast, energy, security, channel assignment, and ensuring quality of service.

Wired/Wireless Internet Communications Springer Science & Business Media

Here are the refereed proceedings of the 5th International IFIP-TC6 Networking Conference, NETWORKING 2006. The 88 revised full papers and 31 poster papers are organized in topical sections on caching and content management, mobile ad-hoc networks, mobility/handoff, monitoring/measurements, multicast, multimedia, optical networks, peer-to-peer, resource management and QoS, routing, topology and location awareness, traffic engineering, transport protocols, wireless networks, and wireless sensor networks.

Network Control and Engineering for QOS, Security and Mobility, III Springer

Computer Science and Convergence is proceedings of the 3rd FTRA International Conference on Computer Science and its Applications (CSA-11) and

The 2011 FTRA World Convergence Conference (FTRA WCC 2011). The topics of CSA and WCC cover the current hot topics satisfying the world-wide ever-changing needs. CSA-11 will be the most comprehensive conference focused on the various aspects of advances in computer science and its applications and will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of CSA. In addition, the conference will publish high quality papers which are closely related to the various theories and practical applications in CSA. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject. The main scope of CSA-11 is as follows: - Mobile and ubiquitous computing - Dependable, reliable and autonomic computing - Security and trust management - Multimedia systems and services - Networking and communications - Database and data mining - Game and software engineering - Grid, cloud and scalable computing - Embedded system and software - Artificial intelligence - Distributed and parallel algorithms - Web and internet computing - IT policy and business management WCC-11 is a major conference for scientists, engineers, and practitioners throughout the world to present the latest research, results, ideas, developments and applications in all areas of convergence technologies. The main scope of WCC-11 is as follows: - Cryptography and Security for Converged environments - Wireless sensor network for Converged environments - Multimedia for Converged environments - Advanced Vehicular Communications Technology for Converged environments - Human centric computing, P2P, Grid and Cloud computing for Converged environments - U-Healthcare for Converged environments - Strategic Security Management for Industrial Technology - Advances in Artificial Intelligence and Surveillance Systems

Hierarchical Topology Control for Wireless Networks Springer

Ad-hoc wireless networks present a unique design problem for routing. Wireless networks suffer from low bandwidth due to high rates of interference and inherent limitations of the medium. Mobility also increases the bandwidth used for control packets. To conserve on precious bandwidth, routing protocols should generate as few updates as possible. In this dissertation, we propose distance vector solutions to ad-hoc routing because unlike existing routing solutions our solutions do not use sequence numbers and thus are not prone to inefficient or wrong behavior in the presence of node failures. First, we introduce ROAM, the first protocol to correctly tackle the "searching to infinity" problem found in on-demand routing protocols. ROAM can be used in networks with low rates of topology changes because it required reliable updates. Next, we describe two protocols DST (on-demand) and BEST (table-driven) for networks with high rates of topology change. Simulation experiments carried out in two different simulation packages show that these protocols perform an

order of magnitude better than representative on-demand and table-driven routing solutions for ad-hoc networks. Finally, we introduce MDST, an on-demand protocol that extends the source tracing algorithm used in DST to create and maintain multiple paths in an ad-hoc wireless network. Multipath routing can be used in ad hoc networks to achieve greater resilience to route failures and better end-to-end delays. Multipath routing is also essential when using QoS metrics like delay in order to avoid route oscillation. We show that multiple paths that are node disjoint and loop free can be maintained with less overhead than DST. Further, these multiple paths decrease the delay of packet delivery and increase the throughput of the network.

Computer Network Simulation Using NS2
CRC Press
Networking capabilities have been significantly enhanced in recent years. With emerging advancements in technology, wireless communication has increased exponentially. Routing Protocols and Architectural Solutions for Optimal Wireless Networks and Security is a comprehensive resource on the latest technological advancements in designing secure wireless networks and secure transmission of data, voice and video over wireless networks and other innovations. Featuring comprehensive coverage across a range of relevant topics such as network planning, radio resource allocation, and broadband wireless networks, this publication is an ideal reference source for network designers, industries, researchers, educators, and governments who are involved in designing and implementing security and wireless networks and applications.

Contemporary Computing
CRC Press
This book constitutes the thoroughly refereed proceedings of the Second International Conference on Context-Aware Systems and Applications, ICCASA 2013, held in Phu Quoc Island, Vietnam in November 2013. The 36 revised full papers presented were carefully selected and reviewed from over 100 submissions and cover a wide spectrum of issues in the area of context-aware systems (CAS) and context-based recommendation systems.

• Are You There God? It's Me, Margaret. By Judy Blume