Body Area Networks Safety Security And Sustainability

Local area networks, safety requirements Local Area Networks Wireless Networks and Security Body Area Networks Deploying License-free Wireless Wide-area Networks Recent Trends in Computer Networks and Distributed Systems Security Handbook of Computer Networks and Cyber Security Computer Security Computer Safety, Reliability, and Security Network and System Security Computer Network Security Computer Safety, Reliability, and Security Wireless Public Safety Networks Volume 1 Wireless Public Safety Networks 2 Security and Safety Interplay of Intelligent Software Systems Computer Safety, Reliability, and Security Public Safety Networks from LTE to 5G 13th EAI International Conference on Body Area Networks Efficient and Provably Secure Schemes for Vehicular Ad-Hoc Networks Body Area Communications Implementing 802.1X Security Solutions for Wired and Wireless Networks Computer Security Basics Wireless Mesh Networking Real-time Industrial Networks: Fieldbus Network Design Security and Privacy Issues in IoT Devices and Sensor Networks Security in Wireless Mesh Networks Computational Network Science The Industrial Communication Technology Handbook Green Computing in Network Security Security, Privacy, Trust, and Resource Management in Mobile and Wireless Communications Security and Resilience in Intelligent Data-Centric Systems and Communication Networks Safety of Computer Control Systems 1985 (Safecomp '85) Safety Engineering Industrial Network Security Security Strategies in Web Applications and Social Networking Public Safety Broadband and Communication Networks Security for Wireless Ad Hoc Networks Interoperability in the Next Administration Guidelines for Safe Automation of Chemical Processes Mobile, Wireless and Sensor Networks

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Wireless Networks and Security Oct 25 2022 “Wireless Networks and Security” provides a broad coverage of wireless security issues including cryptographic coprocessors, encryption, authentication, key management, attacks and countermeasures, secure routing, secure medium access control, intrusion detection, epidemics, security performance analysis, security issues in applications. The contributions identify various vulnerabilities in the physical layer, MAC layer, network layer, transport layer, and application layer, and focus on ways of strengthening security mechanisms and services throughout the layers. This carefully edited monograph is targeting for researchers, post-graduate students in universities, academics, and industry practitioners or professionals.

Computer Network Security Feb 17 2022 A comprehensive survey of computer network security concepts, methods, and practices. This authoritative volume provides an optimal description of the principles and applications of computer network security in particular, and cyberspace security in general. The book is thematically divided into three segments: Part I describes the operation and security conditions surrounding computer networks; Part II builds from there and exposes readers to the prevailing security situation based on a constant security threat; and Part III - the core - presents readers with most of the best practices and solutions currently in use. It is intended as both a teaching tool and reference. This broad-ranging text/reference comprehensively surveys computer network security concepts, methods, and practices and covers network security tools, policies, and administrative goals in an integrated manner. It is an essential security resource for undergraduate or graduate study, practitioners in networks, and professionals who develop and maintain secure computer network systems.

Security for Wireless Ad Hoc Networks Nov 21 2019 This book addresses the problems and brings solutions to the security issues of ad-hoc networks. Topics included are threat attacks and vulnerabilities, basic cryptography mechanisms, authentication, secure routing, firewalls, security policy management, and future developments. An Instructor Support FTP site is available from the Wiley editorial board.

Interoperability in the Next Administration Oct 21 2019

Security, Privacy, Trust, and Resource Management in Mobile and Wireless Communications Jun 28 2020 "This book examines the current scope of theoretical and practical applications on the security of mobile and wireless communications, covering fundamental concepts of current issues, challenges, and solutions in wireless and mobile networks"--Provided by publisher.

Computer Safety, Reliability, and Security Sep 12 2021 This book constitutes the refereed proceedings of five workshops co-located with SAFECOMP 2017, the 36th International Conference on Computer Safety, Reliability, and Security, held in Trento, Italy, in September 2017. The 38 revised full papers presented together with 5 introductory papers to each workshop, and three invited papers, were carefully reviewed and selected from 49 submissions. This year's workshops are: ASSURE 2017 – Assurance Cases for Software-Intensive Systems; DECSoS 2017 – ERCIM/EWICS/ARTEMIS Dependable Embedded and Cyber-Physical Systems and Systems-of-Systems; SASSUR 2017 – Next Generation of System Assurance Approaches for Safety-Critical Systems; TIPS 2017 – Timing Performance in Safety Engineering; TELERISE 2017 Technical and legal Aspects of Data Privacy and Security.

13th EAI International Conference on Body Area Networks Jul 10 2021 The papers in this proceeding discuss current and future trends in wearable communications and personal health management through the use of wireless body area networks (WBAN). The authors posit new technologies that can provide trustworthy communications mechanisms from the user to medical health databases. The authors discuss not only on-body devices, but also technologies providing information in-body. Also discussed are dependable communications combined with accurate localization and behavior analysis, which will benefit WBAN technology and make the healthcare processes more effective. The papers were presented at the 13th EAI International Conference on Body Area Networks (BODYNETS 2018), Oulu, Finland, 02-03 October 2018.

Recent Trends in Computer Networks and Distributed Systems Security Jul 22 2022 This book constitutes the refereed proceedings of the Second International Conference on Security in Computer Networks and Distributed Systems, SNDS 2014, held in Trivandrum, India, in March 2014. The 32 revised full papers presented together with 9 short papers and 8 workshop papers were carefully reviewed and selected from 129 submissions. The papers are organized in topical sections on security and privacy in networked systems; multimedia security; cryptosystems, algorithms, primitives; system and network security; short papers. The workshop papers were presented at the following workshops: Second International Workshop on Security in Self-Organising Networks (Self Net 2014); Workshop on Multidisciplinary Perspectives in Cryptology and Information Security (CIS 2014); Second International Workshop on Trust and Privacy in Cyberspace (Cyber Trust 2014).

Green Computing in Network Security Jul 30 2020 This book focuses on green computing-based network security techniques and addresses the challenges involved in practical implementation. It also explores the idea of energy-efficient computing for network and data security and covers the security threats involved in social networks, data centers, IoT, and biomedical applications. Green Computing in Network Security: Energy Efficient Solutions for Business and Home includes analysis of green-security mechanisms and explores the role of green computing for secured modern internet applications. It discusses green computing-based distributed learning approaches for security and emphasizes the development of green computing-based security systems for IoT devices. Written with researchers, academic libraries, and professionals in mind so they can get up to speed on network security, the challenges, and implementation processes.

Guidelines for Safe Automation of Chemical Processes Sep 19 2019 This book provides designers and operators of chemical process facilities with a

general philosophy and approach to safe automation, including independent layers of safety. An expanded edition, this book includes a revision of original concepts as well as chapters that address new topics such as use of wireless automation and Safety Instrumented Systems. This book also provides an extensive bibliography to related publications and topic-specific information.

Wireless Mesh Networking Feb 05 2021 A promising new technology, wireless mesh networks are playing an increasingly important role in the future generations of wireless mobile networks. Characterized by dynamic self-organization, self-configuration, and self-healing to enable quick deployment, easy maintenance, low cost, high scalability, and reliable services, this technology is becoming a vital mode complementary to the infrastructure-based wireless networks. Wireless Mesh Networking: Architectures, Protocols and Standards is the first book to provide engineers, students, faculties, researchers, and designers with a comprehensive technical guide covering introductory concepts. It addresses advanced and open issues in wireless mesh networks and explores various key challenges and diverse scenarios as well as emerging standards such as those for capacity, scalability, extensibility, reliability, and cognition. It focuses on concepts, effective protocols, system integration, performance analysis techniques, simulation, experiments, and future research directions. This volume contains illustrative figures and allows for complete cross-referencing on routing, security, spectrum management, MAC, cross-layer optimization, load-balancing, multimedia communication, MIMO, and smart antenna, etc. It also details information on the particular techniques for efficiently improving the performance of a wireless mesh network. Presenting a solid introduction, Wireless Mesh Networking: Architectures, Protocols and Standards elucidates problems and challenges in designing wireless mesh networks.

Mobile, Wireless and Sensor Networks Aug 19 2019 Wireless networking covers a variety of topics involving many challenges. The main concern of clustering approaches for mobile wireless sensor networks (WSNs) is to prolong the battery life of the individual sensors and the network lifetime. For a successful clustering approach, the need of a powerful mechanism to safely elect a cluster head remains a challenging task in many research works that take into account the mobility of the network. In Mobile, Wireless and Sensor Networks: A Clustering Algorithm for Energy Efficiency and Safety, the authors use an approach based on computing of the weight of each node in the network as the proposed technique to deal with this problem. They present a virtual laboratory platform (VLP) of baptized mercury, allowing students and researchers to make practical work (PW) on different aspects of mobile wireless sensor networks. The authors' choice of WSNs is motivated mainly by the use of real experiments needed in most college courses on WSNs. These usual experiments, however, require an expensive investment and many nodes in the classroom. The platform presented here aims at showing the feasibility, the flexibility, and the reduced cost using the authors' approach. The authors demonstrate the performance of the proposed algorithms that contribute to the familiarization of the learners in the field of WSNs. The book will be a valuable resource for students in networking studies as well as for faculty and researchers in this area.

Security in Wireless Mesh Networks Nov 02 2020 Wireless mesh networks (WMN) encompass a new area of technology set to play an important role in the next generation wireless mobile networks. WMN is characterized by dynamic self-organization, self-configuration, and self-healing to enable flexible integration, quick deployment, easy maintenance, low costs, high scalability, and reliable services.

Wireless Public Safety Networks Volume 1 Dec 15 2021 Wireless Public Safety Networks, Volume One: Overview and Challenges presents the latest advances in the wireless Public Safety Networks (PSNs) field, the networks established by authorities to either prepare the population for an eminent catastrophe, or as support during crisis and normalization phases. Maintaining communication capabilities in a disaster scenario is crucial for avoiding loss of lives and damages to property. Wireless Public Safety Networks examines past communication failures that have directly contributed to the loss of lives. This book will give readers a broad view of the PSNs field, analyzing the benefits PSNs may bring to society, the main challenges related to the establishment and maintenance of these networks, the latest advancements in the field, and future perspectives. Discusses the ever changing requirements and impact of PSNs in mission critical scenarios Analyzes the evolving methods required to meet the growing demand of capable public safety networks Covers lessons learned and advances made to wireless communications to help prevent loss of lives and poor practice disaster management

Security and Privacy Issues in IoT Devices and Sensor Networks Dec 03 2020 Security and Privacy Issues in IoT Devices and Sensor Networks investigates security breach issues in IoT and sensor networks, exploring various solutions. The book follows a two-fold approach, first focusing on the fundamentals and theory surrounding sensor networks and IoT security. It then explores practical solutions that can be implemented to develop security for these elements, providing case studies to enhance understanding. Machine learning techniques are covered, as well as other security paradigms, such as cloud security and cryptocurrency technologies. The book highlights how these techniques can be applied to identify attacks and vulnerabilities, preserve privacy, and enhance data security. This in-depth reference is ideal for industry professionals dealing with WSN and IoT systems who want to enhance the security of these systems. Additionally, researchers, material developers and technology specialists dealing with the multifarious aspects of data privacy and security enhancement will benefit from the book's comprehensive information. Provides insights into the latest research trends and theory in the field of sensor networks and IoT security Presents machine learning-based solutions for data security enhancement Discusses the challenges to implement various security techniques Informs on how analytics can be used in security and privacy

The Industrial Communication Technology Handbook Aug 31 2020 The Industrial Communication Technology Handbook focuses on current and newly emerging communication technologies and systems that are evolving in response to the needs of industry and the demands of industry-led consortia and organizations. Organized into two parts, the text first summarizes the basics of data communications and IP networks, then presents a comprehensive overview of the field of industrial communications. This book extensively covers the areas of fieldbus technology, industrial Ethernet and real-time extensions, wireless and mobile technologies in industrial applications, the linking of the factory floor with the Internet and wireless fieldbuses, network security and safety, automotive applications, automation and energy system applications, and more. The Handbook presents material in the form of tutorials, surveys, and technology overviews, combining fundamentals and advanced issues with articles grouped into sections for a cohesive and comprehensive presentation. The text contains 42 contributed articles by experts from industry and industrial research establishments at the forefront of development, and some of the most renowned academic institutions worldwide. It analyzes content from an industrial perspective, illustrating actual implementations and successful technology deployments.

Implementing 802.1X Security Solutions for Wired and Wireless Networks Apr 07 2021 Implementing 802.1x Security Solutions for Wired and Wireless Networks Now you can approach 802.1x implementation with confidence You know it's essential, and you've heard that it can be tricky — implementing the 802.1x standard. Here is a road map that will steer you safely around the pitfalls, smooth out the rough patches, and guide you to a successful implementation of 802.1x in both wired and wireless networks. Complete with step-by-step instructions, recommendations to help you choose the best solutions, and troubleshooting tips, it lets you benefit from the experience of others who have met the challenge. Get an overview of port-based authentication and network architecture concepts Examine EAPOL, RADIUS, and EAP-Methods protocols Understand 802.1x protocol packet structure and operation Explore and evaluate complete 802.1x-based security solutions for various needs Learn what parts are necessary to construct a complete network access-control system Configure your system and assure that all aspects of it work together Follow step-by-step instructions and screen shots to successfully set up 802.1x-based security solutions and make them work

Security and Safety Interplay of Intelligent Software Systems Oct 13 2021 This book constitutes the thoroughly refereed post-conference proceedings of the International Workshop on Interplay of Security, Safety and System/Software Architecture, CSITS 2018, and the International Workshop on Cyber Security for Intelligent Transportation Systems, ISSA 2018, held in Barcelona, Spain, in September 2018, in conjunction with the 23rd European Symposium on Research in Computer Security, ESORICS 2018. The ISSA 2018 workshop received 10 submissions from which 3 full papers and 1 short paper were accepted. They cover topics such as software security engineering, domain-specific security and privacy architectures, and automative security. In addition, an invited paper on safety and security co-engineering intertwining is included. The CSITS 2018 workshop received 9 submissions from which 5 full papers and 1 short paper were accepted. The selected papers deal with car security and aviation security.

Network and System Security Mar 18 2022 Network and System Security provides focused coverage of network and system security technologies. It explores practical solutions to a wide range of network and systems security issues. Chapters are authored by leading experts in the field and address the immediate and long-term challenges in the authors' respective areas of expertise. Coverage includes building a secure organization, cryptography, system intrusion, UNIX and Linux security, Internet security, intranet security, LAN security; wireless network security, cellular network security, RFID security, and more. Chapters contributed by leaders in the field covering foundational and practical aspects of system and network security, providing a new level of technical expertise not found elsewhere Comprehensive and updated coverage of the subject area allows the reader to put current

technologies to work Presents methods of analysis and problem solving techniques, enhancing the reader's grasp of the material and ability to implement practical solutions

Safety of Computer Control Systems 1985 (Safecomp '85) Apr 26 2020 Safety of Computer Control Systems 1985 (Safecomp '85): Achieving Safe Real Time Computer Systems presents the proceedings of the Fourth IFAC Workshop, held in Como, Italy, on October 1–3, 1985. This book discusses a wide range of topics ranging from direct process control through robotics to operator assistance. Organized into 28 chapters, this compilation of papers begins with an overview of the implementation of atomic actions by means of concurrent programming constructs. This text then examines the safety-related applications that usually demand the provision of redundant resources within the system. Other chapters consider the safe performance of an industrial robot system that relies on several factors. This book discusses as well the increasing demand for Computer Assisted Decision Making (CADM) both in engineering and service industries. The final chapter deals with the ways of reducing the effects of an error introduced during the design of a program. This book is a valuable resource for software engineers.

Local Area Networks Nov 26 2022

Computational Network Science Oct 01 2020 The emerging field of network science represents a new style of research that can unify such traditionally-diverse fields as sociology, economics, physics, biology, and computer science. It is a powerful tool in analyzing both natural and man-made systems, using the relationships between players within these networks and between the networks themselves to gain insight into the nature of each field. Until now, studies in network science have been focused on particular relationships that require varied and sometimes-incompatible datasets, which has kept it from being a truly universal discipline. Computational Network Science seeks to unify the methods used to analyze these diverse fields. This book provides an introduction to the field of Network Science and provides the groundwork for a computational, algorithm-based approach to network and system analysis in a new and important way. This new approach would remove the need for tedious human-based analysis of different datasets and help researchers spend more time on the qualitative aspects of network science research. Demystifies media hype regarding Network Science and serves as a fast-paced introduction to state-of-the-art concepts and systems related to network science Comprehensive coverage of Network Science algorithms, methodologies, and common problems Includes references to formative and updated developments in the field Coverage spans mathematical sociology, economics, political science, and biological networks

Industrial Network Security Feb 23 2020 As the sophistication of cyber-attacks increases, understanding how to defend critical infrastructure systems—energy production, water, gas, and other vital systems—becomes more important, and heavily mandated. Industrial Network Security, Second Edition arms you with the knowledge you need to understand the vulnerabilities of these distributed supervisory and control systems. The book examines the unique protocols and applications that are the foundation of industrial control systems, and provides clear guidelines for their protection. This how-to guide gives you thorough understanding of the unique challenges facing critical infrastructures, new guidelines and security measures for critical infrastructure protection, knowledge of new and evolving security tools, and pointers on SCADA protocols and security implementation. All-new real-world examples of attacks against control systems, and more diagrams of systems Expanded coverage of protocols such as 61850, Ethernet/IP, CIP, ISA-99, and the evolution to IEC62443 Expanded coverage of Smart Grid security New coverage of signature-based detection, exploit-based vs. vulnerability-based detection, and signature reverse engineering

Computer Safety, Reliability, and Security Apr 19 2022 This book constitutes the refereed proceedings of the 25th International Conference on Computer Safety, Reliability, and Security, SAFECOMP 2006. The 32 revised full papers were carefully reviewed and selected from 101 submissions. Topical sections include systems of systems, security and survivability analysis, nuclear safety and application of standards, formal approaches, networks dependability, coping with change and mobility, safety analysis and assessment, 6th FP integrated project DECOS, and modelling.

Public Safety Networks from LTE to 5G Aug 11 2021 This timely book provides an overview of technologies for Public Safety Networks (PSNs). Including real-life examples of network application and services, it introduces readers to the many public safety network technologies and covers the historical developments as well as emerging trends in PSNs such as today's 4G and tomorrow's 5G cellular network related solutions. Public Safety Networks from LTE to 5G explores the gradual changes and transformation in the PSNs from the traditional approaches in communications, and examines the new technologies that have permeated this realm, as well as their advantages. It gives readers a look at the challenges public safety networks face by developing solutions for data rates such as introducing broadband data services into safer communication. Topics covered include: TETRA and TETRAPOL; Digital Mobile Radio (DMR), Next-Generation Digital Narrowband (NXDN), Digital Private Mobile Radio (dPMR); and Professional Digital Trunking (PDT). The book also presents information on FirstNet, ESN, and Safenet; Satellite Communications in EMS (Emergency Management) and Public Protection and Disaster Relief (PPDR); Wi-Fi in Ambulances; Technology in Patrol Communications; and more.

Efficient and Provably Secure Schemes for Vehicular Ad-Hoc Networks Jun 09 2021 This book focuses on the design of secure and efficient signature and signcryption schemes for vehicular ad-hoc networks (VANETs). We use methods such as public key cryptography (PKI), identity-based cryptography (IDC), and certificateless cryptography (CLC) to design bilinear pairing and elliptic curve cryptography-based signature and signcryption schemes and prove their security in the random oracle model. The signature schemes ensure the authenticity of source and integrity of a safety message. While signcryption schemes ensure authentication and confidentiality of the safety message in a single logical step. To provide readers to study the schemes that securely and efficiently process a message and multiple messages in vehicle to vehicle and vehicle to infrastructure communications is the main benefit of this book. In addition, it can benefit researchers, engineers, and graduate students in the fields of security and privacy of VANETs, Internet of vehicles securty, wireless body area networks security, etc.

Computer Security May 20 2022 Today, society is faced with numerous internet schemes, fraudulent scams, and means of identity theft that threaten our safety and our peace of mind. Computer Security: Protecting Digital Resources provides a broad approach to computer-related crime, electronic commerce, corporate networking, and Internet security, topics that have become increasingly important as more and more threats are made on our internet environment. This book is oriented toward the average computer user, business professional, government worker, and those within the education community, with the expectation that readers can learn to use the network with some degree of safety and security. The author places emphasis on the numerous vulnerabilities and threats that are inherent in the Internet environment. Efforts are made to present techniques and suggestions to avoid identity theft and fraud. Readers will gain a clear insight into the many security issues facing the e-commerce, networking, web, and internet environments, as well as what can be done to keep personal and business information secure.

Local area networks, safety requirements Dec 27 2022

Body Area Networks Sep 24 2022 Explores issues involved in designing safe, secure and sustainable BANs from a cyber-physical systems perspective, for researchers and graduate students.

Computer Security Basics Mar 06 2021 This is the must-have book for a must-know field. Today, general security knowledge is mandatory, and, if you who need to understand the fundamentals, Computer Security Basics 2nd Edition is the book to consult. The new edition builds on the well-established principles developed in the original edition and thoroughly updates that core knowledge. For anyone involved with computer security, including security administrators, system administrators, developers, and IT managers, Computer Security Basics 2nd Edition offers a clear overview of the security concepts you need to know, including access controls, malicious software, security policy, cryptography, biometrics, as well as government regulations and standards. This handbook describes complicated concepts such as trusted systems, encryption, and mandatory access control in simple terms. It tells you what you need to know to understand the basics of computer security, and it will help you persuade your employees to practice safe computing. Topics include: Computer security concepts Security breaches, such as viruses and other malicious programs Access controls Security policy Web attacks Communications and network security Encryption Physical security and biometrics Wireless network security Computer security and requirements of the Orange Book OSI Model and TEMPEST

Public Safety Broadband and Communication Networks Dec 23 2019 Since 11 September 2001, when communication failures contributed to the tragedies of the day, Congress has passed several laws intended to create a nationwide emergency communications capability. The United States has continued to strive for a solution that assures seamless communications among first responders and emergency personnel at the scene of a major disaster. To address this problem, Congress included provisions in the Middle Class Tax Relief and Job Creation Act of 2012, for planning, building, and managing a new, nationwide, broadband network for public safety communications, and assigned additional spectrum to accommodate the new network. This book explores public safety broadband and communication networks with a focus on new policies for spectrum management and

wireless innovation that would facilitate the transition to IP-enabled networks. Acceleration of innovation in next-generation wireless technologies would likely benefit not only public safety communications but also all consumers of wireless service and the American economy.

Security Strategies in Web Applications and Social Networking Jan 24 2020 PART OF THE NEW JONES & BARTLETT LEARNING INFORMATION SYSTEMS SECURITY & ASSURANCE SERIES! Security Strategies in Web Applications and Social Networking provides a unique, in-depth look at how to secure mobile users as customer-facing information migrates from mainframe computers and application servers to Web-enabled applications. Written by an industry expert, this book provides a comprehensive explanation of the evolutionary changes that have occurred in computing, communications, and social networking and discusses how to secure systems against all the risks, threats, and vulnerabilities associated with Web-enabled applications accessible via the Internet. Using examples and exercises, this book incorporates hands-on activities to prepare readers to successfully secure Web-enabled applications.

Deploying License-free Wireless Wide-area Networks Aug 23 2022 Best practices for planning and deployment of broadband WWANs Learn insider tips from an experienced wireless industry leader Understand the principles that underlie the operation of all wireless systems Learn how to provide profitable and reliable wireless Internet access Select the most effective equipment and antenna systems for your area Avoid common pitfalls encountered by new wireless network operators Minimize the effects of noise and interference on your network Enjoy the satisfaction of providing wireless Internet access to your community Practice the business principles used by successful wireless ISPs (WISPs) Use 802.11a, 802.11b, and 802.11g equipment more successfully in your own home, office, or outdoor environment Choose the right network architecture for your wireless network Conduct physical site surveys and radio-frequency (RF) site surveys License-free broadband wireless wide-area networks (WWANs) provide fast deployment of low-cost, high-speed "last-mile" wireless Internet access. License-free wireless technology delivers these benefits without requiring the use of products or services provided by local telephone or cable companies. WWANs enable Internet service providers (ISPs) and corporate IT managers to deploy their own cost-efficient broadband networks that deliver high-speed access for buildings and areas where traditional wired connectivity is either completely unavailable or is cost-prohibitive. Deploying License-Free Wireless Wide-Area Networks is the first book that provides complete, real-world "start-to-finish" design, installation, operation, and support information for wireless ISPs and other organizations deploying outdoor wireless WANs-including coverage of 802.11a, 802.11b, 802.11g, and proprietary-protocol networks. This vendor-neutral book covers all brands of broadband wireless equipment and explains the principles upon which all wireless equipment is based. Inside, you'll find step-by-step instructions and crystal-clear explanations that walk you through initial planning stages and onto full wireless network operation. End-of-chapter review questions reinforce important concepts. Whether you're an IT director, ISP engineer, network architect, or field technician, Deploying License-Free Wireless Wide-Area Networks is your essential reference. With practical, in-depth coverage of the real-world challenges of outdoor, license-free wireless WAN deployment, this book provides a comprehensive, vendor-neutral guide to successful wireless network design and

Security and Resilience in Intelligent Data-Centric Systems and Communication Networks May 28 2020 Security and Resilience in Intelligent Data-Centric Systems and Communication Networks presents current, state-of-the-art work on novel research in theoretical and practical resilience and security aspects of intelligent data-centric critical systems and networks. The book analyzes concepts and technologies that are successfully used in the implementation of intelligent data-centric critical systems and communication networks, also touching on future developments. In addition, readers will find in-demand information for domain experts and developers who want to understand and realize the aspects (opportunities and challenges) of using emerging technologies for designing and developing more secure and resilient intelligent data-centric critical systems and communication networks. Topics covered include airports, seaports, rail transport systems, plants for the provision of water and energy, and business transactional systems. The book is well suited for researchers and PhD interested in the use of security and resilient computing technologies. Includes tools and techniques to prevent and avoid both accidental and malicious behaviors Explains the state-of-the-art technological solutions for main issues hindering the development of monitoring and reaction solutions Describes new methods and technologies, advanced prototypes, systems, tools and techniques of future direction

Body Area Communications May 08 2021 Providing an introduction to the fundamentals of body area communications, this book covers the key topics of channel modeling, modulation and demodulation, and performance evaluation A systematic introduction to body area networks (BAN), this book focuses on three major parts: channel modeling, modulation/demodulation communications performance, and electromagnetic compatibility considerations. The content is logically structured to lead readers from an introductory level through to in-depth and more advanced topics. Provides a concise introduction to this emerging topic based on classroom-tested materials Details the latest IEEE 802.15.6 standard activities Moves from very basic physics, to useful mathematic models, and then to practical considerations Covers not only EM physics and communications, but also biological applications Topics approached include: link budget, bit error rate performance, RAKE and diversity reception; SAR analysis for human safety evaluation; and modeling of electromagnetic interference to implanted cardiac pacemakers Provides Matlab and Fortran programs for download from the Companion Website

Handbook of Computer Networks and Cyber Security Jun 21 2022 This handbook introduces the basic principles and fundamentals of cyber security towards establishing an understanding of how to protect computers from hackers and adversaries. The highly informative subject matter of this handbook, includes various concepts, models, and terminologies along with examples and illustrations to demonstrate substantial technical details of the field. It motivates the readers to exercise better protection and defense mechanisms to deal with attackers and mitigate the situation. This handbook also outlines some of the exciting areas of future research where the existing approaches can be implemented. Exponential increase in the use of computers as a means of storing and retrieving security-intensive information, requires placement of adequate security measures to safeguard the entire computing and communication scenario. With the advent of Internet and its underlying technologies, information security aspects are becoming a prime concern towards protecting the networks and the cyber ecosystem from variety of threats, which is illustrated in this handbook. This handbook primarily targets professionals in security, privacy and trust to use and improve the reliability of businesses in a distributed manner, as well as computer scientists and software developers, who are seeking to carry out research and develop software in information and cyber security. Researchers and advanced-level students in computer science will also benefit from this reference.

Safety Engineering Mar 26 2020 The new Safety Engineering provides an overview of the fundamentals with expanded coverage of practical information for protecting workers and complying with federal regulations. This new edition features eight new chapters—including Thermal Stress, Security and Vulnerability Assessment, Computer and Data Security, Contemporary Problems Affecting Workers, and Preventing Workplace Violence—and it examines the safety industry's new homeland security responsibilities and needs. Written for a wide variety of readers, including safety directors, supervisors, government officials, and students, this handy yet comprehensive reference book looks at the paperwork side of safety: from identifying regulatory requirements and conducting accident investigations to preparing an emergency response plan and complying with recordkeeping requirements. It also examines specific OSHA standards and their requirements from the Title 29 Code of Federal Regulations.

Wireless Public Safety Networks 2 Nov 14 2021 Wireless Public Safety Networks, Volume Two: A Systematic Approach presents the latest advances in the wireless Public Safety Networks (PSNs) field, the networks established by authorities to either prepare the population for an eminent catastrophe, or those used for support during crisis and normalization phases. Maintaining communication capabilities in a disaster scenario is crucial for avoiding loss of lives and damages to property. This book examines past communication failures that have directly contributed to the loss of lives, giving readers in-depth discussions of the public networks that impact emergency management, covering social media, crowdsourcing techniques, wearable wireless sensors, moving-cells scenarios, mobility management protocols, 5G networks, broadband networks, data dissemination, and the resources of the frequency spectrum. Provides a focus on specific enabling technologies which can help the most on the deployment and usage of PSNs in real world scenarios Proposes a general framework that has the capability to fulfill the public safety requirements and dynamically adapt to different public safety situations Investigates the problem of data dissemination over PSNs, presenting a review of the state-of-the-art of different information and communication technologies

Real-time Industrial Networks: Fieldbus Network Design Jan 04 2021 This is a book with a unique pedagogical approach to teach how to design Fieldbus networks. It has been designed and used as a textbook to teach senior and graduate level engineering students how to design Fieldbus networks even for the most complicated hazardous environments. The book is enriched with many realistic design examples using the most recent intrinsically safe design practices like High Power Trunk and Split-entity barriers. Both students and practicing engineers can benefit from its approach

and learn design principles through design examples. Highlights of the book: * Incorporates latest engineering recommendations for designing Foundation Fieldbus networks, * Includes design guidelines and recommendations used by experienced design teams of major corporations for designing Foundation Fieldbus networks, * 37 realistic design examples with detailed solutions which leads the reader step-by-step through the design process, * Incorporates numerous design examples utilizing contemporary intrinsically safe design methods like; FISCO, FNICO, High Power Trunk, HPT, Entity and Split-entity methods, * Design examples applying alternative IS design methodologies which enables the reader to compare complexities of different IS design methods, * Utilizes and points out freely available engineering resources and Computer-Aided-Engineering tools for designing Fieldbus networks, * Utilizes unique and systematic design procedures developed by the author to design Fieldbus networks, handling many levels of complexities encountered during the design process systematically, * Provides up-to-date design specifications for Foundation Fieldbus networks as it is being practiced in the most demanding applications today.

Computer Safety, Reliability, and Security Jan 16 2022 This book constitutes the refereed proceedings of the 33nd International Conference on Computer Safety, Reliability, and Security, SAFECOMP 2014, held in Florence, Italy, in September 2014. The 20 revised full papers presented together with 3 practical experience reports were carefully reviewed and selected from 85 submissions. The papers are organized in topical sections on fault injection techniques, verification and validation techniques, automotive systems, coverage models and mitigation techniques, assurance cases and arguments, system analysis, security and trust, notations/languages for safety related aspects, safety and security.