Computer Security Threats And Countermeasures

Everything you need to know about modern network attacks and defense, in one book Clearly explains core network security concepts, challenges, technologies, and skills Thoroughly updated for the latest attacks and countermeasures The perfect beginner ’ s guide for anyone interested in a network security career ¿ Security is the IT industry ’ s hottest topic–and that ’ s where the hottest opportunities are, too. Organizations desperately need professionals who can help them safeguard against the most sophisticated attacks ever created–attacks from well-funded global criminal syndicates, and even governments. ¿ Today, security begins with defending the organizational network. Network Defense and Countermeasures, Second Edition is today ’ s most complete, easy-to-understand introduction to modern network attacks and their effective defense. From malware and DDoS attacks to firewalls and encryption, Chuck Easttom blends theoretical foundations with up-to-the-minute best-practice techniques. Starting with the absolute basics, he discusses crucial topics many security books overlook, including the emergence of network-based espionage and terrorism. ¿ If you have a basic understanding of networks, that ’ s all the background you ’ ll need to succeed with this book: no math or advanced computer science is required. You ’ ll find projects, questions, exercises, case studies, links to expert resources, and a complete glossary–all designed to deepen your understanding and prepare you to defend real-world networks. ¿ Learn how to Understand essential network security concepts, challenges, and careers Learn how modern attacks work Discover how firewalls, intrusion detection systems (IDS), and virtual private networks (VPNs) combine to protect modern networks Select the right security technologies for any network environment Use encryption to protect information Harden Windows and Linux systems and keep them patched Securely configure web browsers to resist attacks Defend against malware Define practical, enforceable security policies Use the “ 6 Ps ” to assess technical and human aspects of system security Detect and fix system vulnerability Apply proven security standards and models, including Orange Book, Common Criteria, and Bell-LaPadula Ensure physical security and prepare for disaster recovery Know your enemy: learn basic hacking, and see how to counter it Understand standard forensic techniques and prepare for investigations of digital crime ¿ Presents information on how to analyze risks to your networks and the steps needed to select and deploy the appropriate countermeasures to reduce your exposure to physical and network threats. Also imparts the skills and knowledge needed to identify and counter some fundamental security risks and requirements, including Internet security threats and measures (audit trails IP sniffing/spoofing etc.) and how to implement security policies and procedures. In addition, this book covers security and network design with respect to particular vulnerabilities and

threats. It also covers risk assessment and mitigation and auditing and testing of security systems as well as application standards and technologies required to build secure VPNs, configure client software and server operating systems, IPsec-enabled routers, firewalls and SSL clients. This comprehensive book will provide essential knowledge and skills needed to select, design and deploy a public key infrastructure (PKI) to secure existing and future applications. * Chapters contributed by leaders in the field cover theory and practice of computer security technology, allowing the reader to develop a new level of technical expertise * Comprehensive and up-to-date coverage of security issues facilitates learning and 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

Organizations are increasingly relying on electronic information to conduct business, which has caused the amount of personal information to grow exponentially. Threats, Countermeasures, and Advances in Applied Information Security addresses the fact that managing information security program while effectively managing risks has never been so critical. This book contains 24 chapters on the most relevant and important issues and advances in applied information security management. The chapters are authored by leading researchers and practitioners in the field of information security from across the globe. The chapters represent emerging threats and countermeasures for effective management of information security at organizations.

This monograph on Security in Computing Systems: Challenges, Approaches and Solutions aims at introducing, surveying and assessing the fundamentals of se- rity with respect to computing. Here, “ computing ” refers to all activities which individuals or groups directly or indirectly perform by means of computing s- tems, i. e. , by means of computers and networks of them built on telecommuni- tion. We all are such individuals, whether enthusiastic or just bowed to the inevitable. So, as part of the ‘ ‘ information society ’ ’ , we are challenged to maintain our values, to pursue our goals and to enforce our interests, by consciously desi- ing a ‘ ‘ global information infrastructure ’ ’ on a large scale as well as by approp- ately configuring our personal computers on a small scale. As a result, we hope to achieve secure computing: Roughly speaking, computer-assisted activities of in- viduals and computer-mediated cooperation between individuals should happen as required by each party involved, and nothing else which might be harmful to any party should occur. The notion of security circumscribes many aspects, ranging from human qua- ties to technical enforcement. First of all, in considering the explicit security requirements of users, administrators and other persons concerned, we hope that usually all persons will follow the stated rules, but we also have to face the pos- bility that some persons might deviate from the wanted behavior, whether ac- dently or maliciously.

Safeguarding Your Technology
Computers at Risk
Symposium on Computer Security, Rome, Italy - November 22-23, 1990, Proceedings; CS 90
Security in Computing Systems
Global Network Security
Analyzing Computer Security

Computer Security: Principles and Practice, 2e, is ideal for courses in Computer/Network Security. In recent years, the need for education in computer security and related topics has grown dramatically - and is essential for anyone studying Computer Science or Computer Engineering. This is the only text available to provide integrated, comprehensive, up-to-date coverage of the broad range of topics in this subject. In addition to an extensive pedagogical program, the book provides unparalleled support for both research and modeling projects, giving students a broader perspective. The Text and Academic Authors Association named Computer Security: Principles and Practice, 1e, the winner of the Textbook Excellence Award for the best Computer Science textbook of 2008. Visit Stallings' Companion Website at http://williamstallings.com/CompSec/CompSec1e.html for student and instructor resources and his Computer Science Student Resource site http://williamstallings.com/StudentSupport.html

This new CTR report addresses the multifaceted threats facing organizations conducting business over the Internet and suggests countermeasures to them. The increased use of automated attack tools, the growing threat from viruses and the threat from competitors are detailed. The effective use of countermeasures such as firewalls, instrusion detection systems (IDS), virtual private networks (VPNs) and strong authentication are also discussed.

Cyber attacks are rapidly becoming one of the most prevalent issues in the world. As cyber crime continues to escalate, it is imperative to explore new approaches and technologies that help ensure the security of the online community. The Handbook of Research on Threat Detection and Countermeasures in Network Security presents the latest methodologies and trends in detecting and preventing network threats. Investigating the potential of current and emerging security technologies, this publication is an all-inclusive reference source for academicians, researchers, students, professionals, practitioners, network analysts, and technology specialists interested in the simulation and application of computer network protection.

Our world is increasingly driven by sophisticated networks of advanced computing technology, and the basic operation of everyday society is becoming increasingly vulnerable to those networks’ shortcomings. The implementation and upkeep of a strong network defense is a substantial challenge, beset not only by economic disincentives, but also by an inherent logistical bias that grants advantage to attackers. Network Security Attacks and Countermeasures discusses the security and optimization of computer networks for use in a variety of disciplines and fields. Touching on such matters as mobile and VPN security, IP spoofing, and intrusion detection, this edited collection emboldens the efforts of researchers, academics, and network administrators working in both the public and private sectors. This edited compilation includes chapters covering topics such as attacks and countermeasures, mobile wireless networking, intrusion detection systems, next-generation firewalls, and more.

Threats and Countermeasures for Network Security

Introduction to Computer Security

Internet of Things, Threats, Landscape, and Countermeasures

Optimization of a Computer Security Index Versus Cost

Enemy at the Water Cooler

Phishing and Counter-Measures discusses how and why phishing is a threat, and presents effective countermeasures. Showing you how phishing attacks have been mounting over the years, how to detect and prevent current as well as future attacks, this text focuses on corporations who supply the resources used by attackers. The authors subsequently deliberate on what action the government can take to respond to this situation and compare adequate versus inadequate countermeasures.

A thorough update of the classic computer security text.

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

Cyber Security Demystified for non-techie, organizations, students, teachers, kids, law enforcement, women and for the common man. Learn how Not to be phished, exploited, defrauded, 50+ practical tips, Counter ATP, Email Scams, Vishing Calls, WhatsApp Scams, Zero-day Threat, Cloud Security, Social engineering attacks, Ransomware risk, Frauds, Dating Scams, PDoS, data security, Tor and lot more. Table of Contents Introduction Pg.8 Don't fall in love with pdf attachments: PDF attacks - the dedication of the criminals Pg. 10 Image can hack your WhatsApp account - risk, threats and countermeasures Pg. 12 Hookups on public Wi-Fi could be deadly pg. 13 Don't leave your cookies for others Pg. 15 You don't share underwear... Then why do you share your OTP (one-time password)? Pg. 17 IoT: what is it? How vulnerable is it and how to protect your IoT devices? Pg. 20 What's on cloud? How it can be breached? Pg. 23 HTTPS security be compromised Pg. 26 Ftp File Transfer Security Risk. What is FTP? Threat, Risk, Vulnerability & Countermeasures Pg. 28 Online Job, Friendship Club Fraud and Dating Scams Pg. 30 Bot is not so hot! - Threats, protection and defense for you and your family, friends and organization. Pg. 33 Antivirus & free Antivirus: The Fake Zone of Security. Pg. 36 Endpoint protection - End Zero Day Pg. 38 Know how Firewall catch fire (Security holes) Pg. 40 Stinking passwords Pg. 42 Call frauds and card cloning - Don’t lose your hard-earned money Pg. 44 Trash can crash your bottom-line Pg. 49 Nude, Sex-texting Pg. 51 Web site vulnerability Pg. 54 Plain text attacks Pg. 58 Pop up Malicious ads Pg. 60 WhatsApp spam Pg. 62 Overlooked social media scams Pg. 65 Bitcoin Scams Pg. 68 Malicious apps Pg. 70 Secure your secured browser Pg. 72 Don't track me Pg. 75 2FA - double protection for you Pg. 77 Don't allow skimmers to skim away hard-earned money from ATM Pg. 79 Anti-zero-day Pg. 80 What's NFC? What's RFID? How hackable is it? What are the protection measures? Pg. 83 One click threats Pg. 85 Block ATP attacks: tips to deal and counter it Pg. 87 Email scams (credit limit lowered, jobs offer, private venture scams) & protection tips Pg. 89 Ransomware: Is the biggest threat to your data. Tips to protect your critical or sensitive data and information Pg. 96 P2P threats: All are invited... But think twice before you join. Pg. 99 Risk Management Policy: How it's a countermeasure for cyber threats and security risks? Pg. 100 Safety tips for Tor users: Checklist for privacy revealed Pg. 102 Link attacks Pg. 104 Human (Mind) re-engineering: Is the Number 1 threat. Protect yourself and create awareness culture. Pg. 106 Assess your vulnerability and patch it quickly Pg. 109 Super-fast exploration targets - office, adobe reader, flash players, Internet Explorer Pg. 110 RAT... Smell Awful! Must know threats and tips to avoid RAT (Remote Access Trojan) Pg. 112 Google drive attacks and threats Pg. 114 Admin Rights is not the Birth Rights for everyone: Control and Strategies for administrative rights Pg. 115 Why should you keep your employees happy? Pg. 116 Browser Bot: What is it? How it hijacks your data, privacy and launch hacking attacks. Pg. 117 Hacker can compromise your system with QR Code Pg. 118 What is Metadata? How hackers steal data? How privacy is at stake? Pg. 119 Dating apps and security risk Pg. 121 Don’t get pawned by Vishing Calls and Smishing Frauds Pg. 122 DDS (Default Deadly Settings) Pg. 125 GPS and Privacy at Stake Pg. 127 Creepy apps on Google Play Store and tips to protect yourself Pg. 128 PDoS (Permanent Denial of Service Pg. 130 Cyber Bullying Pg. 132

Computer Security Basics
Exploitation and Countermeasures for Modern Web Applications
Principles and Practices
Computer Security Threats
Threats and Countermeasures
Modern Principles, Practices, and Algorithms for Cloud Security

Provides the authoritative and up-to-date information required for securing IoT architecture and applications The vast amount of data generated by the Internet of Things (IoT) has made information security vital for not only personal privacy, but also for the sustainability of the IoT itself. Security and Privacy in the Internet of Things brings together high-quality research on IoT information security models, architectures, techniques, and application domains. This concise yet comprehensive volume explores state-of-the-art mitigations in IoT security while addressing important privacy challenges across different IoT layers. Divided into three parts, the book provides timely coverage of IoT architecture, security technologies and mechanisms, and applications. The authors outline emerging trends in IoT security and privacy with a focus on areas such as smart homes and cities, e-health, critical infrastructure, and industrial applications. Topics include authentication and access control, the use of blockchains for IoT transactions, attack detection and prevention, energy-efficient management of IoT objects, and secure integration of IoT and Cloud computing. Presenting the current body of knowledge in a single volume, Security and Privacy in the Internet of Things: Discusses a broad range of IoT architectures and applications Covers both the logical and physical security of IoT devices Examines IoT security and privacy standards, protocols, and approaches Addresses the secure integration of IoT and social networks Describes privacy preserving techniques, intrusion detection systems, and threat and vulnerability analyses Security and Privacy in the Internet of Things: Architectures, Techniques, and Applications is essential reading for researchers, industry practitioners, and students involved in IoT development and deployment.

The book covers a decade of work with some of the largest commercial and government agencies around the world in addressing cyber security related to malicious insiders (trusted employees, contractors, and partners). It explores organized crime, terrorist threats, and hackers. It addresses the steps organizations must take to address insider threats at a people, process, and technology level. Today’s headlines are littered with news of identity thieves, organized cyber criminals, corporate espionage, nation-state threats, and terrorists. They represent the next wave of security threats but still possess nowhere near the devastating potential of the most insidious threat: the insider. This is not the bored 16-year-old hacker. We are talking about insiders like you and me, trusted employees with access to information - consultants, contractors, partners, visitors, vendors, and *cleaning crews. Anyone in an organization's building or networks that possesses some level of trust. * Full coverage of this hot topic for virtually every global 5000 organization, government agency, and individual interested in security. * Brian Contos is the Chief Security Officer for one of the most well known, profitable and respected security software companies in the U.S.—ArcSight.*

Analyzing Computer SecurityA Threat/vulnerability/countermeasure ApproachPrentice Hall Professional

"In this book, the authors adopt a refreshingly new approach to explaining the intricacies of the security and privacy challenge that is particularly well suited to today's cybersecurity challenges. Their use of the threat–vulnerability–countermeasure paradigm combined with extensive real-world examples throughout results in a very effective learning methodology." —Charles C. Palmer, IBM Research The Modern Introduction to Computer Security: Understand Threats, Identify Their Causes, and Implement Effective Countermeasures Analyzing Computer Security is a fresh, modern, and relevant introduction to computer security. Organized around today's key attacks, vulnerabilities, and countermeasures, it helps you think critically and creatively about computer security—so you can prevent serious problems and mitigate the effects of those that still occur. In this new book, renowned security and software engineering experts Charles P. Pfleeger and Shari Lawrence Pfleeger—authors of the classic Security in Computing—teach security the way modern security professionals approach it: by identifying the people or things that may cause harm, uncovering weaknesses that can be exploited, and choosing and applying the right protections. With this approach, not only will you study cases of attacks that have occurred, but you will also learn to apply this methodology to new situations. The book covers "hot button" issues, such as authentication failures, network interception, and denial of service. You also gain new insight into broader themes, including risk analysis, usability, trust, privacy, ethics, and forensics. One step at a time, the book systematically helps you develop the problem-solving skills needed to protect any information infrastructure. Coverage includes Understanding threats, vulnerabilities, and countermeasures Knowing when security is useful, and when it's useless "security theater" Implementing effective identification and authentication systems Using modern cryptography and overcoming weaknesses in cryptographic systems Protecting against malicious code: viruses, Trojans, worms, rootkits, keyloggers, and more Understanding, preventing, and mitigating DOS and DDOS attacks Architecting more secure wired and wireless networks Building more secure application software and operating systems through more solid designs and layered protection Protecting identities and enforcing privacy Addressing computer threats in critical areas such as cloud computing, e-voting, cyberwarfare, and social media

AI in Cybersecurity

Threats, Countermeasures, and Advances in Applied Information Security

Computer and Information Security Handbook
Safe Computing in the Information Age
Caution! Wireless Networking
Network Defense and Countermeasures

All you need to know about defending networks, in one book · Clearly explains concepts, terminology, challenges, tools, and skills · Covers key security standards and models for business and government · The perfect introduction for all network/computer security professionals and students Welcome to today's most useful and practical introduction to defending modern networks. Drawing on decades of experience, Chuck Easttom brings together updated coverage of all the concepts, terminology, techniques, and solutions you'll need to be effective. Easttom thoroughly introduces the core technologies of modern network security, including firewalls, intrusion-detection systems, and VPNs. Next, he shows how encryption can be used to safeguard data as it moves across networks. You'll learn how to harden operating systems, defend against malware and network attacks, establish robust security policies, and assess network security using industry-leading standards and models. You'll also find thorough coverage of key issues such as physical security, forensics, and cyberterrorism. Throughout, Easttom blends theory and application, helping you understand both what to do and why. In every chapter, quizzes, exercises, projects, and web resources deepen your understanding and help you use what you've learned—in the classroom and in your career. Learn How To · Evaluate key network risks and dangers · Choose the right network security approach for your organization · Anticipate and counter widespread network attacks, including those based on "social engineering" · Successfully deploy and apply firewalls and intrusion detection systems · Secure network communication with virtual private networks · Protect data with cryptographic public/private key systems, digital signatures, and certificates · Defend against malware, including ransomware, Trojan horses, and spyware · Harden operating systems and keep their security up to date · Define and implement security policies that reduce risk · Explore leading security standards and models, including ISO and NIST standards · Prepare for an investigation if your network has been attacked · Understand

the growing risks of espionage and cyberterrorism

This book on computer security threats explores the computer security threats and includes a broad set of solutions to defend the computer systems from these threats. The book is triggered by the understanding that digitalization and growing dependence on the Internet poses an increased risk of computer security threats in the modern world. The chapters discuss different research frontiers in computer security with algorithms and implementation details for use in the real world. Researchers and practitioners in areas such as statistics, pattern recognition, machine learning, artificial intelligence, deep learning, data mining, data analytics and visualization are contributing to the field of computer security. The intended audience of this book will mainly consist of researchers, research students, practitioners, data analysts, and business professionals who seek information on computer security threats and its defensive measures.

Technological advances, although beneficial and progressive, can lead to vulnerabilities in system networks and security. While researchers attempt to find solutions, negative uses of technology continue to create new security threats to users. New Threats and Countermeasures in Digital Crime and Cyber Terrorism brings together research-based chapters and case studies on security techniques and current methods being used to identify and overcome technological vulnerabilities with an emphasis on security issues in mobile computing and online activities. This book is an essential reference source for researchers, university academics, computing professionals, and upper-level students interested in the techniques, laws, and training initiatives currently being implemented and adapted for secure computing.

In today's modern age of information, new technologies are quickly emerging and being deployed into the field of information technology. Cloud computing is a tool that has proven to be a versatile piece of software within IT. Unfortunately, the high usage of Cloud has raised many concerns related to privacy, security, and data protection that have prevented cloud computing solutions from becoming the prevalent alternative for mission critical systems. Up-to-date research and current techniques are needed to help solve these vulnerabilities in cloud computing. Modern Principles, Practices, and

Algorithms for Cloud Security is a pivotal reference source that provides vital research on the application of privacy and security in cloud computing. While highlighting topics such as chaos theory, soft computing, and cloud forensics, this publication explores present techniques and methodologies, as well as current trends in cloud protection. This book is ideally designed for IT specialists, scientists, software developers, security analysts, computer engineers, academicians, researchers, and students seeking current research on the defense of cloud services.

Effective Model-Based Systems Engineering

Challenges, Approaches and Solutions

Challenges, Attacks, and Countermeasures

Rome, Italy, November 22-23, 1990 : Proceedings

Security of Internet of Things Nodes

Network Security Attacks and Countermeasures

In this book, the authors of the 20-year best-selling classic Security in Computing take a fresh, contemporary, and powerfully relevant new approach to introducing computer security. Organised around attacks and mitigations, the Pfleegers' new Analyzing Computer Security will attract students' attention by building on the high-profile security failures they may have already encountered in the popular media. Each section starts with an attack description. Next, the authors explain the vulnerabilities that have allowed this attack to occur. With this foundation in place, they systematically present today's most effective countermeasures for blocking or weakening the attack. One step at a time, students progress from attack/problem/harm to solution/protection/mitigation, building the powerful real-world problem solving skills they need to succeed as information security professionals. Analyzing Computer Security addresses crucial contemporary computer security themes throughout, including effective security management and risk analysis; economics and quantitative study; privacy, ethics, and laws; and the use of overlapping controls. The authors also present significant new material on computer forensics, insiders, human factors, and trust.

While many resources for network and IT security are available, detailed knowledge regarding modern web application security has been lacking—until now. This practical guide provides both offensive and defensive security concepts that software engineers can easily learn and apply. Andrew Hoffman, a senior security engineer at Salesforce, introduces three pillars of web application security: recon, offense, and defense. You’ll learn methods for effectively researching and analyzing modern web applications—including those you don’t have direct access to. You’ll also learn how to break into web applications using the latest hacking techniques. Finally, you’ll learn how to develop mitigations for use in your own web applications to protect against hackers. Explore common vulnerabilities plaguing today's web applications Learn essential hacking techniques attackers use to exploit applications Map and document web applications for which you don’t have direct access Develop and deploy customized exploits that can bypass common defenses Develop and deploy mitigations to protect your *applications against hackers Integrate secure coding best practices into your development lifecycle Get practical tips to help you improve the overall security of your web applications*

Introduction to Computer Security is a new Computer Security textbook for a new generation of IT professionals. It is ideal for computer-security courses that are taught at the undergraduate level and that have as their sole prerequisites an introductory computer science sequence (e.g., CS 1/CS 2). Unlike most other computer security textbooks available today, Introduction to Computer Security, 1e does NOT focus on the mathematical and computational foundations of security, and it does not assume an extensive background in computer science. Instead it looks at the systems, technology, management, and policy side of security, and offers students fundamental security concepts and a working knowledge of threats and countermeasures with "just-enough" background in computer science. The result is a presentation of the material that is accessible to students of all levels.

Computers at Risk presents a comprehensive agenda for developing nationwide policies and practices for computer security. Specific recommendations are provided for industry and for government agencies engaged in computer security activities. The volume also outlines problems and opportunities in computer security research, recommends ways to improve the research infrastructure, and suggests topics for investigators. The book explores the diversity of the field, the need to engineer countermeasures based on speculation of what experts think computer attackers may do next, why the technology community has failed to respond to the need for enhanced security systems, how innovators could be encouraged to bring more options to the marketplace, and balancing the importance of security against the right of privacy.

Handbook of Research on Threat Detection and Countermeasures in Network Security

Securing VoIP Networks

Phishing and Countermeasures

New Threats and Countermeasures in Digital Crime and Cyber Terrorism

True Stories of Insider Threats and Enterprise Security Management Countermeasures

Cyber Security and Threats: Concepts, Methodologies, Tools, and Applications

Internet of Things (IoT) is an ecosystem comprised of heterogeneous connected devices that communicate to deliver capabilities making our living, cities, transport, energy, and other areas more intelligent. This book delves into the different cyber-security domains and their challenges due to the massive amount and the heterogeneity of devices. This book introduces readers to the inherent concepts of IoT. It offers case studies showing how IoT counteracts the cyber-security concerns for domains. It provides suggestions on how to mitigate cyber threats by compiling a catalogue of threats that currently comprise the contemporary threat landscape. It then examines different security measures that can be applied to system installations or operational environment and discusses how these measures may alter the threat exploitability level and/or the level of the technical impact. Professionals, graduate students, researchers, academicians, and institutions that are interested in acquiring knowledge in the areas of IoT and cyber-security, will find this book of interest.

In Securing VoIP Networks, two leading experts systematically review the security risks and vulnerabilities associated with

VoIP networks and offer proven, detailed recommendations for securing them. Drawing on case studies from their own fieldwork, the authors address VoIP security from the perspective of real-world network implementers, managers, and security specialists. The authors identify key threats to VoIP networks, including eavesdropping, unauthorized access, denial of service, masquerading, and fraud; and review vulnerabilities in protocol design, network architecture, software, and system configuration that place networks at risk. They discuss the advantages and tradeoffs associated with protection mechanisms built into SIP, SRTP, and other VoIP protocols; and review key management solutions such as MIKEY and ZRTP. Next, they present a complete security framework for enterprise VoIP networks, and provide detailed architectural guidance for both service providers and enterprise users. 1 Introduction 2 VoIP Architectures and Protocols 3 Threats and Attacks 4 VoIP Vulnerabilites 5 Signaling Protection Mechanisms 6 Media Protection Mechanisms 7 Key Management Mechanisms 8 VoIP and Network Security Controls 9 A Security Framework for Enterprise VoIP Networks 10 Provider Architectures and Security 11 Enterprise Architectures and Security

This book presents a collection of state-of-the-art AI approaches to cybersecurity and cyberthreat intelligence, offering strategic defense mechanisms for malware, addressing cybercrime, and assessing vulnerabilities to yield proactive rather than reactive countermeasures. The current variety and scope of cybersecurity threats far exceed the capabilities of even the most skilled security professionals. In addition, analyzing yesterday’s security incidents no longer enables experts to predict and prevent tomorrow’s attacks, which necessitates approaches that go far beyond identifying known threats. Nevertheless, there are promising avenues: complex behavior matching can isolate threats based on the actions taken, while machine learning can help detect anomalies, prevent malware infections, discover signs of illicit activities, and protect assets from hackers. In turn, knowledge representation enables automated reasoning over network data, helping achieve cybersituational awareness. Bringing together contributions by high-caliber experts, this book suggests new research directions in this critical and rapidly growing field.

At last, a book dedicated to alleviating the fears that users may have about the security of their wireless home network. This no-nonsense guide is for wireless home networkers who want to protect their data from hackers, crackers, viruses, and worms. Written in non-technical language that's perfect for both novices and intermediate users, this book offers a brief introduction to wireless networking and identifies the most common internal and external pitfalls-and ways to avoid and correct them. * The ideal reference for computer users with a wireless network who need facts separated from fiction to learn what is necessary to protect their networks * Real-world examples help demystify viruses, worms, cryptography, and identity theft, while expert advice, cool techniques, and step-by-step instructions give readers the know-how they need to secure a WLAN and protect their privacy * Covers the latest computer security threats and countermeasures, addressing problems that older titles do not cover, particularly in the areas of virus protection

Symposium on Computer Security: Threats and Countermeasures

Practical Guidelines for Electronic Education Information Security

Cybersecurity Awarness: A Real-World Perspective on Cybercrime & Cyberattacks

Understanding the Increasing Problem of Electronic Identity Theft

Architectures, Techniques, and Applications

Principles and Practice

Cyber security has become a topic of concern over the past decade. As many individual and organizational activities continue to evolve digitally, it is important to examine the psychological and behavioral aspects of cyber security. Psychological and Behavioral Examinations in Cyber Security is a critical scholarly resource that examines the relationship between human behavior and interaction and cyber security. Featuring coverage on a broad range of topics, such as behavioral analysis, cyberpsychology, and online privacy, this book is geared towards IT specialists, administrators, business managers, researchers, and students interested in online decision making in cybersecurity.

Cyber security has become a topic of concern over the past decade as private industry, public administration, commerce, and communication have gained a greater online presence. As many individual and organizational activities continue to evolve in the digital sphere, new vulnerabilities arise. Cyber Security and Threats: Concepts, Methodologies, Tools, and Applications contains a compendium of the latest academic material on new methodologies and applications in the areas of digital security and threats. Including innovative studies on cloud security, online threat protection, and cryptography, this multi-volume book is an ideal source for IT specialists, administrators, researchers, and students interested in uncovering new ways to thwart cyber breaches and protect sensitive digital information.

In the modern world, natural disasters are becoming more commonplace, unmanned systems are becoming the norm, and terrorism and espionage are increasingly taking place online. All of these threats have made it necessary for governments and organizations to steel themselves against these threats in innovative ways. Developing Next-Generation Countermeasures for Homeland Security Threat Prevention provides relevant theoretical frameworks and empirical research outlining potential threats while exploring their appropriate countermeasures. This relevant publication takes a broad perspective, from network security, surveillance, reconnaissance, and physical security, all topics are considered with equal weight. Ideal for policy makers, IT professionals, engineers, NGO operators, and graduate students, this book provides an in-depth look into the threats facing modern society and the methods to avoid them.

The book Security of Internet of Things Nodes: Challenges, Attacks, and Countermeasures® covers a wide range of research topics on the security of the Internet of Things nodes along with the latest research development in the domain of Internet of Things. It also covers various algorithms, techniques, and schemes in the field of computer science with state-of-the-art tools and technologies. This book mainly focuses on the security challenges of the Internet of Things devices and the countermeasures to overcome security vulnerabilities. Also, it highlights trust management issues on the Internet of Things nodes to build secured Internet of Things systems. The book also *covers the necessity of a system model for the Internet of Things devices to ensure security at the hardware level.*

Preventing a Data Disaster

A Threat/vulnerability/countermeasure Approach

Security and Privacy in the Internet of Things

Concepts, Methodologies, Tools, and Applications

Security in Computing

Psychological and Behavioral Examinations in Cyber Security

This textbook presents a proven, mature Model-Based Systems Engineering (MBSE) methodology that has delivered success in a wide range of system and enterprise programs. The authors introduce MBSE as the state of the practice in the vital Systems Engineering discipline that manages complexity and integrates technologies and design approaches to achieve effective, affordable, and balanced system solutions to the needs of a customer organization and its personnel. The book begins with a summary of the background and nature of MBSE. It summarizes the theory behind Object-Oriented Design applied to complex system architectures. It then walks through the phases of the MBSE methodology, using system examples to illustrate key points. Subsequent chapters broaden the application of MBSE in Service-Oriented Architectures (SOA), real-time systems, cybersecurity, networked enterprises, system simulations, and prototyping. The vital subject of system and architecture governance completes the discussion. The book features exercises at the end of each chapter intended to help readers/students focus on key points, as well as extensive appendices that furnish additional detail in particular areas. The self-contained text is ideal for students in a range of courses in systems architecture and MBSE as well as for practitioners seeking a highly practical presentation of MBSE principles and techniques.

In this paper, we propose a computer security index for measuring the security of computer systems and a strategy for purchasing computer security countermeasures in a cost effective manner. Required inputs for the model include definition of threats and countermeasures, relative importance of threats, costs of countermeasures, and the effectiveness of each countermeasure against each of the threats listed. If a standardized list of threats and countermeasures can be developed, the computer security index could also be used to compare the security of different computer systems. (Author).

"This book addresses the fact that managing information security program while effectively managing risks has never been so critical, discussing issues such as emerging threats and countermeasures for effective management of information security in organizations"--Provided by publisher.

Computer Security

Web Application Security
Developing Next-Generation Countermeasures for Homeland Security Threat Prevention
A Threat / Vulnerability / Countermeasure Approach
Threats and Countermeasures : Symposium : Papers