Introduction Computer Security Michael Goodrich

An introduction to algorithms for readers with no background in advanced mathematics or computer science, emphasizing examples and real-world problems. Algorithms are what we do in order not to have to do something. Algorithms consist of instructions to carry out tasks—usually dull, repetitive ones. Starting from simple building blocks, computer algorithms enable machines to recognize and produce speech, translate texts, categorize and summarize documents, describe images, and predict the weather. A task that would take hours can be completed in virtually no time by using a few lines of code in a modern scripting program. This book offers an introduction to algorithms through the real-world problems they solve. The algorithms are presented in pseudocode and can readily be implemented in a computer language. The book presents algorithms simply and accessibly, without overwhelming readers or insulting their intelligence. Readers should be comfortable with mathematical fundamentals and have a basic understanding of how computers work; all other necessary concepts are explained in the text. After presenting background in pseudocode conventions, basic terminology, and data structures, chapters cover compression, cryptography, graphs, searching and sorting, hashing, classification, strings, and chance. Each chapter describes real problems and then presents algorithms to solve them. Examples illustrate the wide range of applications, including shortest paths as a solution to paragraph line breaks, strongest paths in elections systems, hashes for song recognition, voting power Monte Carlo methods, and entropy for machine learning. Real-World Algorithms can be used by students in disciplines from economics to applied sciences. Computer science majors can read it before using a more technical text.

As a cybersecurity professional, discover how to implement cryptographic techniques to help your organization mitigate the risks of altered, disclosed, or stolen data Key Features Discover how cryptography is used to secure data in motion as well as at rest Compare symmetric with asymmetric encryption and learn how a hash is used Get to grips with different types of cryptographic solutions along with common applications Book Description In today's world, it is important to have confidence in your data storage and transmission strategy. Cryptography can provide you with this confidentiality, integrity, authentication, and non-repudiation. But are you aware of just what exactly is involved in using cryptographic techniques? Modern Cryptography for Cybersecurity Professionals helps you to gain a better understanding of the cryptographic elements necessary to secure your data. The book begins by helping you to understand why we need to secure data and how encryption can provide protection, whether it be in motion or at rest. You'll then delve into symmetric and asymmetric encryption and discover how a hash is used. As you advance, you'll see how the public key infrastructure (PKI) and certificates build trust between parties, so that we can confidently encrypt and exchange data. Finally, you'll explore the practical applications of cryptographic techniques, including passwords, email, and blockchain technology, along with securely transmitting data using a virtual private network (VPN). By the end of this cryptography book, you'll have gained a solid understanding of cryptographic techniques and terms, learned how symmetric and asymmetric encryption and hashed are used, and recognized the importance of key management and the PKI. What you will learn Understand how network attacks can compromise data Review practical uses of cryptography over time Compare how symmetric and asymmetric encryption work Explore how a hash can ensure data integrity and authentication Understand the laws that govern the need to secure data Discover the practical applications of cryptographic techniques Find out how the PKI enables trust Get to grips with how data can be secured using a VPN Who this book is for This book is for IT managers, security professionals, students, teachers, and anyone looking to learn more about cryptography and understand why it is important in an organization as part of an overall security framework. A basic understanding of encryption and general networking terms and concepts is needed to get the most out of this book.

The two-volume set, LNCS 9878 and 9879 constitutes the refereed proceedings of the 21st European Symposium on Research in Computer Security, ESORICS 2016, held in Heraklion, Greece, in September 2016. The 60 revised full papers presented were carefully reviewed and selected from 285 submissions. The papers cover a wide range of topics in security and privacy, including data protection: systems security, network security, access control, authentication, and security in such emerging areas as cloud computing, cyber-physical systems, and the Internet of Things.

Instructor manual (for instructors only)

This books is an introduction to general principles of computer security and its applications. Subjects a.o.: cyberattacks, worms, password crackers, keystroke loggers, DoS attacks, DNS cache poisoning, port scanning, spoofing and phishing. The reader is assumed to have knowledge of high-level programming languages such as C, C++, Python or Java. Help with exercises are available via http://securitybook.net.

This volume constitutes the proceedings of the 13th International Conference on Combinatorial Optimization and Applications, COCOA 2019, held in Xiamen, China, in December 2019. The 49 full papers presented in this volume were carefully reviewed and selected from 108 submissions. The papers cover the various topics, including cognitive radio networks, wireless sensor networks, cyber-physical systems, distributed and localized algorithm design and analysis, information and coding theory for wireless networks, localization, mobile cloud computing, topology control and coverage, security and privacy, underwater and underground networks, vehicular networks, information processing and data management, programmable service interfaces, energy-efficient algorithms, system and protocol design, operating system and middleware support, and experimental test-beds, models and case studies.

Web Programming with HTML5, CSS, and JavaScript is written for the undergraduate, client-side web programming course. It covers the three client-side technologies (HTML5, CSS, and JavaScript) in depth, with no dependence on server-side technologies.

Michael Goodrich and Roberto Tamassia, authors of the successful, Data Structures and Algorithms in Java, 2/e, have written Algorithm Engineering, a text designed to provide a comprehensive introduction to the design, implementation and analysis of computer algorithms and data structures from a modern perspective. This book offers theoretical analysis techniques as well as algorithmic design patterns and experimental methods for the engineering of algorithms. Market: Computer Scientists; Programmers.

Cybercrime is a complex and ever-changing phenomenon. This book offers a clear and engaging introduction to this fascinating subject by situating it in the wider context of social, political, cultural and economic change. Taking into account recent developments in social networking and mobile communications, this new edition tackles a range of themes spanning criminology, sociology, law, politics and cultural studies, including: - computer hacking - cyber-terrorism - piracy and intellectual property theft - financial fraud and identity theft - hate speech - internet pornography - online stalking - policing the internet - surveillance and censorship Complete with useful recommendations for further reading, incisive discussion questions and an updated glossary of key terms, Cybercrime and Society is an essential resource for all students and academics interested in cybercrime and the future of the Internet.

Safeguarding Our Privacy and Our Values in an Age of Mass Surveillance America’s mass surveillance programs, once secret, can no longer be ignored. While Edward Snowden began the process in 2013 with his leaks of top secret documents, the Obama administration’s own reforms have also helped bring the National Security Agency and its programs of signals intelligence collection out of the shadows. The real question is: What should we do about mass surveillance? Timothy Edgar, a long-time civil liberties activist who worked inside the intelligence community for six years during the Bush and Obama administrations, believes that the NSA’s programs are profound threat to the privacy of everyone in the world. At the same time, he argues that mass

surveillance programs can be made consistent with democratic values, if we make the hard choices needed to bring transparency, accountability, privacy, and human rights protections into complex programs of intelligence collection. Although the NSA and other agencies already comply with rules intended to prevent them from spying on Americans, Edgar argues that the rules—most of which date from the 1970s—are inadequate for this century. Reforms adopted during the Obama administration are a good first step but, in his view, do not go nearly far enough. Edgar argues that our communications today—and the national security threats we face—are both global and digital. In the twenty first century, the only way to protect our privacy as Americans is to do a better job of protecting everyone's privacy. Beyond Surveillance: Privacy, Mass Surveillance, and the Struggle to Reform the NSA explains both why and how we can do this, without sacrificing the vital intelligence capabilities we need to keep ourselves and our allies safe. If we do, we set a positive example for other nations that must confront challenges like terrorism while preserving human rights. The United States already leads the world in mass surveillance. It can lead the world in mass surveillance reform.
Get an In-Depth Understanding of Graph Drawing Techniques, Algorithms, Software, and Applications The Handbook of Graph Drawing and Visualization provides a broad, up-to-date survey of the field of graph drawing. It covers topological and geometric foundations, algorithms, software systems, and visualization applications in business, education, science, and engineering. Each chapter is self-contained and includes extensive references. The first several chapters of the book deal with fundamental topological and geometric concepts and techniques used in graph drawing, such as planarity testing and embedding, crossings and planarization, symmetric drawings, and proximity drawings. The following chapters present a large collection of algorithms for constructing drawings of graphs, including tree, planar straight-line, planar orthogonal and polyline, spine and radial, circular, rectangular, hierarchical, and three-dimensional drawings as well as labeling algorithms, simultaneous embeddings, and force-directed methods. The book then introduces the GraphML language for representing graphs and their drawings and describes three software systems for constructing drawings of graphs: OGDF, GDToolkit, and PIGALE. The final chapters illustrate the use of graph drawing methods in visualization applications for biological networks, computer security, data analytics, education, computer networks, and social networks. Edited by a pioneer in graph drawing and with contributions from leaders in the graph drawing research community, this handbook shows how graph drawing and visualization can be applied in the physical, life, and social sciences. Whether you are a mathematics researcher, IT practitioner, or software developer, the book will help you understand graph drawing methods and graph visualization systems, use graph drawing techniques in your research, and incorporate graph drawing solutions in your products.
Going beyond current books on privacy and security, Unauthorized Access: The Crisis in Online Privacy and Security proposes specific solutions to public policy issues pertaining to online privacy and security. Requiring no technical or legal expertise, the book explains complicated concepts in clear, straightforward language. The authors—two renowned experts on computer security and law—explore the well-established connection between social norms, privacy, security, and technological structure. This approach is the key to understanding information security and informational privacy, providing a practical framework to address ethical and legal issues. The authors also discuss how rapid technological developments have created novel situations that lack relevant norms and present ways to develop these norms for protecting informational privacy and ensuring sufficient information security. Bridging the gap among computer scientists, economists, lawyers, and public policy makers, this book provides technically and legally sound public policy guidance about online privacy and security. It emphasizes the need to make trade-offs among the complex concerns that arise in the context of online privacy and security.
The book is an introduction to the theory of cubic metaplectic forms on the 3-dimensional hyperbolic space and the author's research on cubic metaplectic forms on special linear and symplectic groups of rank 2. The topics include: Kubota and Bass-Milnor-Serre homomorphisms, cubic metaplectic Eisenstein series, cubic theta functions, Whittaker functions. A special method is developed and applied to find Fourier coefficients of the Eisenstein series and cubic theta functions. The book is intended for readers, with beginning graduate-level background, interested in further research in the theory of metaplectic forms and in possible applications.
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). A new Computer Security textbook for a new generation of IT professionals. 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.
"I believe The Craft of System Security is one of the best software security books on the market today. It has not only breadth, but depth, covering topics ranging from cryptography, networking, and operating systems--to the Web, computer-human interaction, and how to improve the security of software systems by improving hardware. Bottom line, this book should be required reading for all who plan to call themselves security practitioners, and an invaluable part of every university's computer science curriculum." --Edward Bonver, CISSP, Senior Software QA Engineer, Product Security, Symantec Corporation "Here's to a fun, exciting read: a unique book chock-full of practical examples of the uses and the misuses of computer security. I expect that it will motivate a good number of college students to want to learn more about the field, at the same time that it will satisfy the more experienced professional." --L. Felipe Perrone, Department of Computer Science, Bucknell University Whether you're a security practitioner, developer, manager, or administrator, this book will give you the deep understanding necessary to meet today's security challenges--and anticipate tomorrow's. Unlike most books, The Craft of System Security doesn't just review the modern security practitioner's toolkit: It explains why each tool exists, and discusses how to use it to solve real problems. After quickly reviewing the history of computer security, the authors move on to discuss the modern landscape, showing how security challenges and responses have evolved, and offering a coherent framework for understanding today's systems and vulnerabilities. Next, they systematically introduce the basic building blocks for securing contemporary systems, apply those building blocks to today's applications, and consider important emerging trends such as hardware-based security. After reading this book, you will be able to Understand the classic Orange Book approach to security, and its limitations Use operating system security tools and structures--with examples from Windows, Linux, BSD, and Solaris Learn how networking, the Web, and wireless technologies affect security Identify software security defects, from buffer overflows to development process flaws Understand cryptographic primitives and their use in secure systems Use best practice techniques for authenticating people and computer systems in

diverse settings Use validation, standards, and testing to enhance confidence in a system's security Discover the security, privacy, and trust issues arising from desktop productivity tools Understand digital rights management, watermarking, information hiding, and policy expression Learn principles of human-computer interaction (HCI) design for improved security Understand the potential of emerging work in hardware-based security and trusted computing

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). A new Computer Security textbook for a new generation of IT professionals. 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.

Introduction to Computer Security is appropriateforuse in computer-security courses that are taught at the undergraduate level and that have as their sole prerequisites an introductory computer science sequence. It is also suitable for anyone interested in a very accessible introduction to computer security. A Computer Security textbook for a new generation of IT professionals Unlike most other computer security textbooks available today, Introduction to Computer Security, 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. Teaching and Learning Experience This program will provide a better teaching and learning experience-for you and your students. It will help: Provide an Accessible Introduction to the General-knowledge Reader: Only basic prerequisite knowledge in computing is required to use this book. Teach General Principles of Computer Security from an Applied Viewpoint: As specific computer security topics are covered, the material on computing fundamentals needed to understand these topics is supplied. Prepare Students for Careers in a Variety of Fields: A practical introduction encourages students to think about security of software applications early. Engage Students with Creative, Hands-on Projects: An excellent collection of programming projects stimulate the student's creativity by challenging them to either break security or protect a system against attacks. Enhance Learning with Instructor and Student Supplements: Resources are available to expand on the topics presented in the text.

In-depth case studies of representative languages from five generations of programming language design (Fortran, Algol-60, Pascal, Ada, LISP, Smalltalk, and Prolog) are used to illustrate larger themes."--BOOK JACKET.

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.

Introducing a NEW addition to our growing library of computer science titles, Algorithm Design and Applications, by Michael T. Goodrich & Roberto Tamassia! Algorithms is a course required for all computer science majors, with a strong focus on theoretical topics. Students enter the course after gaining hands-on experience with computers, and are expected to learn how algorithms can be applied to a variety of contexts. This new book integrates application with theory. Goodrich & Tamassia believe that the best way to teach algorithmic topics is to present them in a context that is motivated from applications to uses in society, computer games, computing industry, science, engineering, and the internet. The text teaches students about designing and using algorithms, illustrating connections between topics being taught and their potential applications, increasing engagement.

This book covers the fundamental principles in Computer Security. Via hands-on activities, the book aims to help readers understand the risks with software application and computer system, how various attacks work, what their fundamental causes are, how the countermeasures work, and how to defend against them in programs and systems.

In this authoritative book, widely respected practitioner and teacher Matt Bishop presents a clear and useful introduction to the art and science of information security. Bishop's insights and realistic examples will help any practitioner or student understand the crucial links between security theory and the day-to-day security challenges of IT environments. Bishop explains the fundamentals of security: the different types of widely used policies, the mechanisms that implement these policies, the principles underlying both policies and mechanisms, and how attackers can subvert these tools--as well as how to defend against attackers. A practicum demonstrates how to apply these ideas and mechanisms to a realistic company. Coverage includes Confidentiality, integrity, and availability Operational issues, cost-benefit and risk analyses, legal and human factors Planning and implementing effective access control Defining security, confidentiality, and integrity policies Using cryptography and public-key systems, and recognizing their limits Understanding and using authentication: from passwords to biometrics Security design principles: least-privilege, fail-safe defaults, open design, economy of mechanism, and more Controlling information flow through systems and networks Assuring security throughout the system lifecycle Malicious logic: Trojan horses, viruses, boot sector and executable infectors, rabbits, bacteria, logic bombs--and defenses against them Vulnerability analysis, penetration studies, auditing, and intrusion detection and prevention Applying security principles to networks, systems, users, and programs Introduction to Computer Security is adapted from Bishop's comprehensive and widely praised book, Computer Security: Art and

Science. This shorter version of the original work omits much mathematical formalism, making it more accessible for professionals and students who have a less formal mathematical background, or for readers with a more practical than theoretical interest.

Human-Robot Interaction: A Survey presents a unified treatment of HRI-related issues, identifies key themes, and discusses challenge problems that are likely to shape the field in the near future. The survey includes research results from a cross section of the universities, government efforts, industry labs, and countries that contribute to HRI, and a cross section of the disciplines that contribute to the field, such as human factors, robotics, cognitive psychology and design

An all-practical guide to the cryptography behind common tools and protocols that will help you make excellent security choices for your systems and applications. In Real-World Cryptography, you will find: Best practices for using cryptography Diagrams and explanations of cryptographic algorithms Implementing digital signatures and zero-knowledge proofs Specialized hardware for attacks and highly adversarial environments Identifying and fixing bad practices Choosing the right cryptographic tool for any problem Real-World Cryptography reveals the cryptographic techniques that drive the security of web APIs, registering and logging in users, and even the blockchain. You'll learn how these techniques power modern security, and how to apply them to your own projects. Alongside modern methods, the book also anticipates the future of cryptography, diving into emerging and cutting-edge advances such as cryptocurrencies, and post-quantum cryptography. All techniques are fully illustrated with diagrams and examples so you can easily see how to put them into practice. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Cryptography is the essential foundation of IT security. To stay ahead of the bad actors attacking your systems, you need to understand the tools, frameworks, and protocols that protect your networks and applications. This book introduces authentication, encryption, signatures, secret-keeping, and other cryptography concepts in plain language and beautiful illustrations. About the book Real-World Cryptography teaches practical techniques for day-to-day work as a developer, sysadmin, or security practitioner. There's no complex math or jargon: Modern cryptography methods are explored through clever graphics and real-world use cases. You'll learn building blocks like hash functions and signatures; cryptographic protocols like HTTPS and secure messaging; and cutting-edge advances like post-quantum cryptography and cryptocurrencies. This book is a joy to read—and it might just save your bacon the next time you're targeted by an adversary after your data. What's inside Implementing digital signatures and zero-knowledge proofs Specialized hardware for attacks and highly adversarial environments Identifying and fixing bad practices Choosing the right cryptographic tool for any problem About the reader For cryptography beginners with no previous experience in the field. About the author David Wong is a cryptography engineer. He is an active contributor to internet standards including Transport Layer Security. Table of Contents PART 1 PRIMITIVES: THE INGREDIENTS OF CRYPTOGRAPHY 1 Introduction 2 Hash functions 3 Message authentication codes 4 Authenticated encryption 5 Key exchanges 6 Asymmetric encryption and hybrid encryption 7 Signatures and zero-knowledge proofs 8 Randomness and secrets PART 2 PROTOCOLS: THE RECIPES OF CRYPTOGRAPHY 9 Secure transport 10 End-to-end encryption 11 User authentication 12 Crypto as in cryptocurrency? 13 Hardware cryptography 14 Post-quantum cryptography 15 Is this it? Next-generation cryptography 16 When and where cryptography fails

A "must-read" (Vincent Rijmen) nuts-and-bolts explanation of cryptography from a leading expert in information security. Despite its reputation as a language only of spies and hackers, cryptography plays a critical role in our everyday lives. Though often invisible, it underpins the security of our mobile phone calls, credit card payments, web searches, internet messaging, and cryptocurrencies—in short, everything we do online. Increasingly, it also runs in the background of our smart refrigerators, thermostats, electronic car keys, and even the cars themselves. As our daily devices get smarter, cyberspace—home to all the networks that connect them—grows. Broadly defined as a set of tools for establishing security in this expanding cyberspace, cryptography enables us to protect and share our information. Understanding the basics of cryptography is the key to recognizing the significance of the security technologies we encounter every day, which will then help us respond to them. What are the implications of connecting to an unprotected Wi-Fi network? Is it really so important to have different passwords for different accounts? Is it safe to submit sensitive personal information to a given app, or to convert money to bitcoin? In clear, concise writing, information security expert Keith Martin answers all these questions and more, revealing the many crucial ways we all depend on cryptographic technology. He demystifies its controversial applications and the nuances behind alarming headlines about data breaches at banks, credit bureaus, and online retailers. We learn, for example, how encryption can hamper criminal investigations and obstruct national security efforts, and how increasingly frequent ransomware attacks put personal information at risk. Yet we also learn why responding to these threats by restricting the use of cryptography can itself be problematic. Essential reading for anyone with a password, Cryptography offers a profound perspective on personal security, online and off.

A comprehensive introduction to Islam.

Introduction to Computing Systems: From bits & gates to C & beyond, now in its second edition, is designed to give students a better understanding of computing early in their college careers in order to give them a stronger foundation for later courses. The book is in two parts: (a) the underlying structure of a computer, and (b) programming in a high level language and programming methodology. To understand the computer, the authors introduce the LC-3 and provide the LC-3 Simulator to give students hands-on access for testing what they learn. To develop their understanding of programming and programming methodology, they use the C programming language. The book takes a "motivated" bottom-up approach, where the students first get exposed to the big picture and then start at the bottom and build their knowledge bottom-up. Within each smaller unit, the same motivated bottom-up approach is followed. Every step of the way, students learn new things, building on what they already know. The authors feel that this approach encourages

deeper understanding and downplays the need for memorizing. Students develop a greater breadth of understanding, since they see how the various parts of the computer fit together.

Introduction to Computer SecurityAddison-Wesley

Computer users have a significant impact on the security of their computer and personal information as a result of the actions they perform (or do not perform). Helping the average user of computers, or more broadly information technology, make sound security decisions, Computer Security Literacy: Staying Safe in a Digital World focuses on practica

This book is designed for a one-semester operating-systems course for advanced undergraduates and beginning graduate students. Prerequisites for the course generally include an introductory course on computer architecture and an advanced programming course. The goal of this book is to bring together and explain current practice in operating systems. This includes much of what is traditionally covered in operating-system textbooks: concurrency, scheduling, linking and loading, storage management (both real and virtual), file systems, and security. However, the book also covers issues that come up every day in operating-systems design and implementation but are not often taught in undergraduate courses. For example, the text includes: Deferred work, which includes deferred and asynchronous procedure calls in Windows, tasklets in Linux, and interrupt threads in Solaris. The intricacies of thread switching, on both uniprocessor and multiprocessor systems. Modern file systems, such as ZFS and WAFL. Distributed file systems, including CIFS and NFS version 4. The book and its accompanying significant programming projects make students come to grips with current operating systems and their major operating-system components and to attain an intimate understanding of how they work.

An updated, innovative approach to data structures and algorithms Written by an author team of experts in their fields, this authoritative guide demystifies even the most difficult mathematical concepts so that you can gain a clear understanding of data structures and algorithms in C++. The unparalleled author team incorporates the object-oriented design paradigm using C++ as the implementation language, while also providing intuition and analysis of fundamental algorithms. Offers a unique multimedia format for learning the fundamentals of data structures and algorithms Allows you to visualize key analytic concepts, learn about the most recent insights in the field, and do data structure design Provides clear approaches for developing programs Features a clear, easy-to-understand writing style that breaks down even the most difficult mathematical concepts Building on the success of the first edition, this new version offers you an innovative approach to fundamental data structures and algorithms.

This fully revised and updated new edition of the definitive text/reference on computer network and information security presents a comprehensive guide to the repertoire of security tools, algorithms and best practices mandated by the technology we depend on. Topics and features: highlights the magnitude of the vulnerabilities, weaknesses and loopholes inherent in computer networks; discusses how to develop effective security solutions, protocols, and best practices for the modern computing environment; examines the role of legislation, regulation, and enforcement in securing computing and mobile systems; describes the burning security issues brought about by the advent of the Internet of Things and the eroding boundaries between enterprise and home networks (NEW); provides both quickly workable and more thought-provoking exercises at the end of each chapter, with one chapter devoted entirely to hands-on exercises; supplies additional support materials for instructors at an associated website.

Practical Lock Picking, 2nd Edition is presented with rich, detailed full-color diagrams and includes easy-to-follow lessons that allow even beginners to acquire the knowledge they need quickly. Everything from straightforward lock picking to quick-entry techniques like shimming, bumping, and bypassing are explained and illustrated. Whether you're being hired to penetrate security or simply trying to harden your own defenses, this book is essential. This edition has been updated to reflect the changing landscape of tools and tactics which have emerged in recent years Detailed full-color photos make learning as easy as picking a lock Companion website is filled with indispensible lock picking videos Extensive appendix details tools and toolkits currently available for all your lock picking needs

Based on the authors' market leading data structures books in Java and C++, this textbook offers a comprehensive, definitive introduction to data structures in Python by authoritative authors. Data Structures and Algorithms in Python is the first authoritative object-oriented book available for the Python data structures course. Designed to provide a comprehensive introduction to data structures and algorithms, including their design, analysis, and implementation, the text will maintain the same general structure as Data Structures and Algorithms in Java and Data Structures and Algorithms in C++.

The design and analysis of efficient data structures has long been recognized as a key component of the Computer Science curriculum. Goodrich, Tomassia and Goldwasser's approach to this classic topic is based on the object-oriented paradigm as the framework of choice for the design of data structures. For each ADT presented in the text, the authors provide an associated Java interface. Concrete data structures realizing the ADTs are provided as Java classes implementing the interfaces. The Java code implementing fundamental data structures in this book is organized in a single Java package, net.datastructures. This package forms a coherent library of data structures and algorithms in Java specifically designed for educational purposes in a way that is complimentary with the Java Collections Framework.

Computer Organization and Design Fundamentals takes the reader from the basic design principles of the modern digital computer to a top-level examination of its architecture. This book can serve either as a textbook to an introductory course on computer hardware or as the basic text for the aspiring geek who wants to learn about digital design. The material is presented in four parts. The first part describes how computers represent and manipulate numbers. The second part presents the tools used at all levels of binary design. The third part introduces the reader to computer system theory with topics such as memory, caches, hard drives, pipelining, and interrupts. The last part applies these theories through an introduction to the Intel 80x86 architecture and assembly language. The material is presented using practical terms and examples with an aim toward providing anyone who works with computer systems the ability to use them more effectively through a better understanding of their design.

Violent Python shows you how to move from a theoretical understanding of offensive computing concepts to a practical implementation. Instead of relying on another attacker's tools, this book will teach you to forge your own weapons using the

Python programming language. This book demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts. It also shows how to write code to intercept and analyze network traffic using Python, craft and spoof wireless frames to attack wireless and Bluetooth devices, and how to data-mine popular social media websites and evade modern anti-virus. Demonstrates how to write Python scripts to automate large-scale network attacks, extract metadata, and investigate forensic artifacts Write code to intercept and analyze network traffic using Python. Craft and spoof wireless frames to attack wireless and Bluetooth devices Data-mine popular social media websites and evade modern anti-virus
This book presents a novel framework to reconceptualize Internet governance and better manage cyber attacks. Specifically, it makes an original contribution by examining the potential of polycentric regulation to increase accountability through bottom-up action. It also provides a synthesis of the current state of cybersecurity research, bringing features of the cloak and dagger world of cyber attacks to light and comparing and contrasting the cyber threat to all relevant stakeholders. Throughout the book, cybersecurity is treated holistically, covering outstanding issues in law, science, economics, and politics. This interdisciplinary approach is an exemplar of how strategies from different disciplines as well as the private and public sectors may cross-pollinate to enhance cybersecurity. Case studies and examples illustrate what is at stake and identify best practices. The book discusses technical issues of Internet governance and cybersecurity while presenting the material in an informal, straightforward manner. The book is designed to inform readers about the interplay of Internet governance and cybersecurity and the potential of polycentric regulation to help foster cyber peace.
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.
The papers in this volume were presented at the 10th Workshop on Algorithms and Data Structures (WADS 2005). The workshop took place August 15 - 17, 2007, at Dalhousie University, Halifax, Canada. The workshop alternates with the Scandinavian Workshop on Algorithm Theory (SWAT), continuing the t- dition of SWAT and WADS starting with SWAT 1988 and WADS 1989. From 142 submissions, the Program Committee selected 54 papers for presentation at the workshop. In addition, invited lectures were given by the following dist- guished researchers: Je? Erickson (University of Illinois at Urbana-Champaign) and Mike Langston (University of Tennessee). On behalf of the Program Committee, we would like to express our sincere appreciation to the many persons whose e?ort contributed to making WADS 2007 a success. These include the invited speakers, members of the Steering and ProgramCommittees, the authorswho submitted papers, andthe manyreferees who assisted the Program Committee. We are indebted to Gerardo Reynaga for installing and modifying the submission software, maintaining the submission server and interacting with authors as well as for helping with the preparation of the program.