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Cryptanalysis *History of Cryptography and Cryptanalysis* **Secret Key Cryptography** *Cryptographic ABC's* Elementary cryptanalysis *The Block Cipher Companion* **Feistel Ciphers Cryptananlsis, a Study of Ciphers and Their Solution Ciphers and Their Products History of Cryptography and Cryptanalysis Codes, Ciphers and Secret Writing** Stream Ciphers **Real-World Cryptography Cryptanalysis. A Study of Ciphers and Their Solutions** *Cryptography* **Secret Code Book: Substitution Ciphers** *Cryptanalysis Cryptography* Applied Cryptanalysis **Elementary Cryptanalysis. A Study of Ciphers and Their Solution, Etc The Code Book: The Secrets Behind Codebreaking** Fun with Codes and Ciphers Workbook *Secret and Urgent* Serious Cryptography The Design, Analysis and Categorization of Block Ciphers and Their Components **Codes and Ciphers Codes and Ciphers - A History of Cryptography Street Cryptography** Can You Crack the Code? Cryptanalysis of Number Theoretic Ciphers *Gravity Falls: Journal 3 Special Edition Break the Code* **Mathematical Ciphers** Cipher Systems **Understanding Cryptography Introduction to Modern Cryptography Ciphers of Transcendence Codes and Ciphers** *Codes, Ciphers and Spies* **Codes, Ciphers & Other Cryptic & Clandestine Communication**

Break the Code Nov 04 2021 Simply and clearly written book, filled with cartoons and easy-to-follow instructions, tells youngsters 8 and up how to break 6 different types of coded messages. Examples and solutions.
Secret Key Cryptography May 03 2024 Explore the fascinating and rich world of Secret Key cryptography! This book provides practical methods for encrypting messages, an interesting and entertaining historical perspective, and an incredible collection of ciphers and codes—including 30 unbreakable methods. In Secret Key Cryptography: Ciphers, from simple to unbreakable you will: Measure the strength of your ciphers and learn how to guarantee their security Construct and incorporate data-compression codes Generate true random numbers in bulk Construct huge primes and safe primes Add an undetectable backdoor to a cipher Defeat hypothetical ultracomputers that could be developed decades from now Construct 30 unbreakable ciphers Secret Key Cryptography gives you a toolbox of cryptographic techniques and Secret Key methods. The book's simple, non-technical language is easy to understand and accessible for any reader, even without the advanced mathematics normally required for cryptography. You'll learn how to create and solve ciphers, as well as how to measure their strength. As you go, you'll explore both historic ciphers and groundbreaking new approaches—including a never-before-seen way to implement the uncrackable One-Time Pad algorithm. Whoever you are, this book is for you! History buffs will love seeing the evolution of sophisticated cryptographic methods, hobbyists will get a gentle introduction to cryptography, and engineers and computer scientists will learn the principles of constructing secure ciphers. Even professional cryptographers will find a range of new methods and concepts never published before. About the technology From the Roman empire's Caesar cipher to the WWII Enigma machine, secret messages have influenced the course of history. Today, Secret Key cryptography is the backbone of all modern computing infrastructure. Properly designed, these algorithms are efficient and practical. Some are actually unbreakable, even using supercomputers or quantum technology! About the book Secret Key Cryptography teaches you how to create Secret Key ciphers, ranging from simple pen-and-paper methods to advanced techniques used in modern computer-based cryptography. It reveals both historic examples and current innovations. You'll learn how to efficiently encrypt large files with fast stream ciphers, discover alternatives to AES encryption, and avoid strong-looking but weak ciphers. Simple language and fun-to-solve mini-ciphers make learning serious concepts easy and engaging. What's inside Construct 30 unbreakable ciphers Measure the strength of your ciphers and guarantee their security Add an undetectable backdoor to a cipher Defeat hypothetical ultracomputers of the future About the reader For professional engineers, computer scientists, and cryptography hobbyists. No advanced math knowledge is required. About the author Frank Rubin has been doing cryptography for over 50 years. He holds an MS in Mathematics, and a PhD in Computer Science. Table of Contents 1 Introduction 2 What is cryptography? 3 Preliminary concepts 4 Cryptographer's toolbox 5 Substitution ciphers 6 Countermeasures 7 Transposition 8 Jefferson Wheel Cypher 9 Fractionation 10 Variable-length fractionation 11 Block ciphers 12 Principles for secure encryption 13 Stream ciphers 14 One-time pad 15 Matrix methods 16 Three pass protocol 17 Codes 18 Quantum computers
Understanding Cryptography Aug 02 2021 Cryptography is now ubiquitous – moving beyond the traditional environments, such as government communications and banking systems, we see cryptographic techniques realized in Web browsers, e-mail programs, cell phones, manufacturing systems, embedded software, smart buildings, cars, and even medical implants. Today's designers need a comprehensive understanding of applied cryptography. After an introduction to cryptography and data security, the authors explain the main techniques in modern cryptography, with chapters addressing stream ciphers, the Data Encryption Standard (DES) and 3DES, the Advanced Encryption Standard (AES), block ciphers, the RSA cryptosystem, public-key cryptosystems based on the discrete logarithm problem, elliptic-curve cryptography (ECC), digital signatures, hash functions, Message Authentication Codes (MACs), and methods for key establishment, including certificates and public-key infrastructure (PKI). Throughout the book, the authors focus on communicating the essentials and keeping the mathematics to a minimum, and they move quickly from explaining the foundations to describing practical implementations, including recent topics such as lightweight ciphers for RFIDs and mobile devices, and current key-length recommendations. The authors have considerable experience teaching applied cryptography to engineering and computer science students and to professionals, and they make extensive use of examples, problems, and chapter reviews, while the book's website offers slides, projects and links to further resources. This is a suitable textbook for graduate and advanced undergraduate courses and also for self-study by engineers.
Cryptography Jan 19 2023 While cracking a code might seem like something few of us would encounter in our daily lives, it is actually far more prevalent than we may realize. Anyone who has had personal information taken because of a hacked email account can understand the need for cryptography and the importance of encryption essentially the need to code information to keep it safe. This detailed volume examines the logic and science behind various ciphers, their real world uses, how codes can be broken, and the use of technology in this oft-overlooked field.
The Design, Analysis and Categorization of Block Ciphers and Their Components Jun 11 2022
Codes and Ciphers - A History of Cryptography Apr 09 2022 This vintage book contains Alexander D'Agapeyeff's famous 1939 work, Codes and Ciphers - A History of Cryptography. Cryptography is the employment of codes and ciphers to protect secrets, and it has a long and interesting history. This fantastic volume offers a detailed history of cryptography from ancient times to modernity, written by the Russian-born English cryptographer, Alexander D'Agapeyeff. The contents include: - The beginnings of Cryptography - From the Middle Ages Onwards - Signals, Signs, and Secret Languages - Commercial Codes - Military Codes and Ciphers - Types of Codes and Ciphers - Methods of Deciphering Many antiquarian texts such as this, especially those dating back to the 1900s and before, are increasingly hard to come by and expensive, and it is with this in mind that we are republishing this book now in an affordable, modern, high quality edition. It comes complete with a specially commissioned new biography of the author.

Codes and Ciphers May 11 2022 Publisher Description
Codes, Ciphers and Spies Mar 28 2021 When the United States declared war on Germany in April 1917, it was woefully unprepared to wage a modern war. Whereas their European counterparts already had three years of experience in using code and cipher systems in the war, American cryptologists had to help in the building of a military intelligence unit from scratch. This book relates the personal experiences of one such character, providing a uniquely American perspective on the Great War. It is a story of spies, coded letters, plots to blow up ships and munitions plants, secret inks, arms smuggling, treason, and desperate battlefield messages. Yet it all begins with a college English professor and Chaucer scholar named John Mathews Manly. In 1927, John Manly wrote a series of articles on his service in the Code and Cipher Section (MI-8) of the U.S. Army's Military Intelligence Division (MID) during World War I. Published here for the first time, enhanced with references and annotations for additional context, these articles form the basis of an exciting exploration of American military intelligence and counter-espionage in 1917-1918. Illustrating the thoughts of prisoners of war, draftees, German spies, and ordinary Americans with secrets to hide, the messages deciphered by Manly provide a fascinating insight into the state of mind of a nation at war.
Secret and Urgent Aug 14 2022
Mathematical Ciphers Oct 04 2021 "A cipher is a scheme for creating coded messages for the secure exchange of information. Throughout history, many different coding schemes have been devised. One of the oldest and simplest mathematical systems was used by Julius Caesar. This is where Mathematical Ciphers begins. Building on that simple system, Young moves on to more complicated schemes, ultimately ending with the RSA cipher, which is used to provide security for the Internet. This book is structured differently from most mathematics texts. It does not begin with a mathematical topic, but rather with a cipher. The mathematics is developed as it is needed; the applications motivate the mathematics. As is typical in mathematics textbooks, most chapters end with exercises. Many of these problems are similar to solved examples and are designed to assist the reader in mastering the basic material. A few of the exercises are one-of-a-kind, intended to challenge the interested reader. Implementing encryption schemes is considerably easier with the use of the computer. For all the ciphers introduced in this book, JavaScript programs are available from the Web. In addition to developing various encryption schemes, this book also introduces the reader to number theory. Here, the study of integers and their properties is placed in the exciting and modern context of cryptology. Mathematical Ciphers can be used as a textbook for an introductory course in mathematics for all majors. The only prerequisite is high school mathematics."--Jacket.
Codes and Ciphers Apr 29 2021 Everything from smoke signals to military encryption devices Codes and Ciphers reveals the development and role of secret communications throughout history and offers practical advice on how to make codes (whether by pencil and paper or by computer) and how to break them! Inside you will find information on: Code-breaking devices Hieroglyphics, Native American smoke signals, flags, and semaphore Braille, Morse code, and computer language Mono- and polyalphabetic letter substitution Computer algorithms
Cryptographic ABC's Apr 02 2024
Cryptananlsis, a Study of Ciphers and Their Solution Nov 28 2023
Serious Cryptography Jul 13 2022 This practical guide to modern encryption breaks down the fundamental mathematical concepts at the heart of cryptography without shying away from meaty discussions of how they work. You'll learn about authenticated encryption, secure randomness, hash functions, block ciphers, and public-key techniques such as RSA and elliptic curve cryptography. You'll also learn: - Key concepts in cryptography, such as computational security, attacker models, and forward secrecy - The strengths and limitations of the TLS protocol behind HTTPS secure websites - Quantum computation and post-quantum cryptography - About various vulnerabilities by examining numerous code examples and use cases - How to choose the best algorithm or protocol and ask vendors the right questions Each chapter includes a discussion of common implementation mistakes using real-world examples and details what could go wrong and how to avoid these pitfalls. Whether you're a seasoned practitioner or a beginner looking to dive into the field, Serious Cryptography will provide a complete survey of modern encryption and its applications.
Can You Crack the Code? Feb 05 2022 Codes can carry big secrets! Throughout history, lots of good guys and lots of bad guys have used codes to keep their messages under wraps. This fun and flippable nonfiction features stories of hidden treasures, war-time maneuverings, and contemporary hacking as well as explaining the mechanics behind the codes in accessible and kid friendly forms. Sidebars call out activities that invite the reader to try their own hand at cracking and crafting their own secret messages. This is the launch of an exciting new series that invites readers into a STEM topic through compelling historical anecdotes, scientific backup, and DIY projects.
Fun with Codes and Ciphers Workbook Sep 14 2022 Decode 68 secret messages—backward ciphers, false word divisions, null ciphers and much more with this fascinating, fun-filled book. Solutions.
Elementary cryptanalysis Mar 01 2024
Applied Cryptanalysis Dec 18 2022 The book is designed to be accessible to motivated IT professionals who want to learn more about the specific attacks covered. In particular, every effort has been made to keep the chapters independent, so if someone is interested in has function cryptanalysis or RSA timing attacks, they do not necessarily need to study all of the previous material in the text. This would be particularly valuable to working professionals who might want to use the book as a way to quickly gain some depth on one specific topic.
Real-World Cryptography Jun 23 2023 "A staggeringly comprehensive review of the state of modern cryptography. Essential for anyone getting up to speed in information security." - Thomas Doylend, Green Rocket Security 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

Gravity Falls: Journal 3 Special Edition Dec 06 2021 Untie the string and unwrap the brown paper to reveal . . . Journal 3 Limited Edition! This 288-page book contains all of the content of the regular edition, plus all-new top-secret black light pages on real parchment; a cover with leather texture and shiny metallic pieces; a magnifying glass; a tassel bookmark; and removable photos and notes. This $150 limited edition will also include a signed note from the creator of Gravity Falls and co-writer of Journal 3, Alex Hirsch himself.

Cryptanalysis of Number Theoretic Ciphers Jan 07 2022 At the heart of modern cryptographic algorithms lies computational number theory. Whether you're encrypting or decrypting ciphers, a solid background in number theory is essential for success. Written by a number theorist and practicing cryptographer, Cryptanalysis of Number Theoretic Ciphers takes you from basic number theory to the inner workings of ciphers and protocols. First, the book provides the mathematical background needed in cryptography as well as definitions and simple examples from cryptography. It includes summaries of elementary number theory and group theory, as well as common methods of finding or constructing large random primes, factoring large integers, and computing discrete logarithms. Next, it describes a selection of cryptographic algorithms, most of which use number theory. Finally, the book presents methods of attack on the cryptographic algorithms and assesses their effectiveness. For each attack method the author lists the systems it applies to and tells how they may be broken with it. Computational number theorists are some of the most successful cryptanalysts against public key systems. Cryptanalysis of Number Theoretic Ciphers builds a solid foundation in number theory and shows you how to apply it not only when breaking ciphers, but also when designing ones that are difficult to break.

Elementary Cryptanalysis. A Study of Ciphers and Their Solution, Etc Nov 16 2022

The Block Cipher Companion Jan 31 2024 Block ciphers encrypt blocks of plaintext, messages, into blocks of ciphertext under the action of a secret key, and the process of encryption is reversed by decryption which uses the same user-supplied key. Block ciphers are fundamental to modern cryptography, in fact they are the most widely used cryptographic primitive – useful in their own right, and in the construction of other cryptographic mechanisms. In this book the authors provide a technically detailed, yet readable, account of the state of the art of block cipher analysis, design, and deployment. The authors first describe the most prominent block ciphers and give insights into their design. They then consider the role of the cryptanalyst, the adversary, and provide an overview of some of the most important cryptanalytic methods. The book will be of value to graduate and senior undergraduate students of cryptography and to professionals engaged in cryptographic design. An important feature of the presentation is the authors' exhaustive bibliography of the field, each chapter closing with comprehensive supporting notes.

Cryptanalysis. A Study of Ciphers and Their Solutions May 23 2023

Feistel Ciphers Dec 30 2023 This book provides a survey on different kinds of Feistel ciphers, with their definitions and mathematical/computational properties. Feistel ciphers are widely used in cryptography in order to obtain pseudorandom permutations and secret-key block ciphers. In Part 1, we describe Feistel ciphers and their variants. We also give a brief story of these ciphers and basic security results. In Part 2, we describe generic attacks on Feistel ciphers. In Part 3, we give results on DES and specific Feistel ciphers. Part 4 is devoted to improved security results. We also give results on indifferentiability and indistinguishability.

Cryptography Apr 21 2023 This text introduces cryptography, from its earliest roots to cryptosystems used today for secure online communication. Beginning with classical ciphers and their cryptanalysis, this book proceeds to focus on modern public key cryptosystems such as Diffie-Hellman, ElGamal, RSA, and elliptic curve cryptography with an analysis of vulnerabilities of these systems and underlying mathematical issues such as factorization algorithms. Specialized topics such as zero knowledge proofs, cryptographic voting, coding theory, and new research are covered in the final section of this book. Aimed at undergraduate students, this book contains a large selection of problems, ranging from straightforward to difficult, and can be used as a textbook for classes as well as self-study. Requiring only a solid grounding in basic mathematics, this book will also appeal to advanced high school students and amateur mathematicians interested in this fascinating and topical subject.

Ciphers of Transcendence May 30 2021 The title Ciphers of Transcendence reflects the philosophical interests of Patrick Masterson, Emeritus Professor of Philosophy of Religion, University College Dublin. Transcendence is a millefeuille term conveying layered and diverse nuances, from the first openness of human awareness towards the outside world, to the ultimate affirmation of and commitment to a loving and infinite Transcendent. Patrick Masterson has devoted his philosophical career to reflection upon the unfathomable nature of the latter, seeking to decipher instances and images of transcendence within the realm of limited human experience. Through teaching and writing he has shared with students and readers his deeply personal reflections on questions of primal importance. Patrick Masterson’s colleagues and students – all devoted friends – here offer, in return, their diverse perspectives. The essays deal in one way or another with transcendence, examined in dialogue with a roll call of thinkers across the ages, from ancient authors to medieval masters, modern giants to recent luminaries. The volume is enhanced by the inclusion of an essay by leading contemporary thinker Alasdair MacIntyre, and a poem from Seamus Heaney that evokes across the silence of solitude the tender presence of transcendence.

Cryptanalysis Feb 17 2023

Street Cryptography Mar 09 2022 So, you have a conspiracy going and need to pass messages along without worrying that someone will intercept them. Congratulations, you've stumbled across the right book. Whether your personal solution is a Vigenere, a Vic, or a One Time Pad, you'll find an easy guide on creating your own encryption scheme right here. No need for a computer, except for the device you're reading this on. This can all be done in your favorite notebook, with a PENCIL!

Cryptanalysis Jul 05 2024 Thorough, systematic introduction to serious cryptography, especially strong in modern forms of cipher solution used by experts. Simple and advanced methods. 166 specimens to solve — with solutions.

Introduction to Modern Cryptography Jul 01 2021 Now the most used texbook for introductory cryptography courses in both mathematics and computer science, the Third Edition builds upon previous editions by offering several new sections, topics, and exercises. The authors present the core principles of modern cryptography, with emphasis on formal definitions, rigorous proofs of security.

Secret Code Book: Substitution Ciphers Mar 21 2023 The Secret Code Book is a short introduction to substitution ciphers. The chapters ease young readers into the concept of rotation ciphers and work their way up to the Vigen re cipher. Along the way, readers will also learn about geometric approaches to secret codes such as the Pigpen cipher. As a bonus, there is a brief description of frequency analysis and how it is used to crack secret codes. frper gpbqr obbx In addition, this book actively challenges readers with practice missions where answers are listed in the back. Also, there is a cut-out rotation template that is provided to make your very own cipher disk! After reading this book, you will have all the basic tools needed to create secret messages.

Codes, Ciphers and Secret Writing Aug 26 2023 Explains various methods used in cryptography and presents examples to help readers in breaking secret codes

Stream Ciphers Jul 25 2023 In cryptography, ciphers is the technical term for encryption and decryption algorithms. They are an important sub-family that features high speed and easy implementation and are an essential part of wireless internet and mobile phones. Unlike block ciphers, stream ciphers work on single bits or single words and need to maintain an internal state to change the cipher at each step. Typically stream

ciphers can reach higher speeds than block ciphers but they can be more vulnerable to attack. Here, mathematics comes into play. Number theory, algebra and statistics are the key to a better understanding of stream ciphers and essential for an informed decision on their safety. Since the theory is less developed, stream ciphers are often skipped in books on cryptography. This book fills this gap. It covers the mathematics of stream ciphers and its history, and also discusses many modern examples and their robustness against attacks. Part I covers linear feedback shift registers, non-linear combinations of LFSRs, algebraic attacks and irregular clocked shift registers. Part II studies some special ciphers including the security of mobile phones, RC4 and related ciphers, the eStream project and the blum-blum-shub generator and related ciphers. Stream Ciphers requires basic knowledge of algebra and linear algebra, combinatorics and probability theory and programming. Appendices in Part III help the reader with the more complicated subjects and provides the mathematical background needed. It covers, for example, complexity, number theory, finite fields, statistics, combinatorics. Stream Ciphers concludes with exercises and solutions and is directed towards advanced undergraduate and graduate students in mathematics and computer science.

Ciphers and Their Products Oct 28 2023

History of Cryptography and Cryptanalysis Sep 26 2023 This accessible textbook presents a fascinating review of cryptography and cryptanalysis across history. The text relates the earliest use of the monoalphabetic cipher in the ancient world, the development of the "unbreakable" Vigenère cipher, and an account of how cryptology entered the arsenal of military intelligence during the American Revolutionary War. Moving on to the American Civil War, the book explains how the Union solved the Vigenère ciphers used by the Confederates, before investigating the development of cipher machines throughout World War I and II. This is then followed by an exploration of cryptology in the computer age, from public-key cryptography and web security, to criminal cyber-attacks and cyber-warfare. Looking to the future, the role of cryptography in the Internet of Things is also discussed, along with the potential impact of quantum computing. Topics and features: Presents a history of cryptology from ancient Rome to the present day, with a focus on cryptology in the 20th and 21st centuries Reviews the different types of cryptographic algorithms used to create secret messages, and the various methods for breaking such secret messages Provides engaging examples throughout the book illustrating the use of cryptographic algorithms in different historical periods Describes the notable contributions to cryptology of Herbert Yardley, William and Elizebeth Smith Friedman, Lester Hill, Agnes Meyer Driscoll, and Claude Shannon Concludes with a review of tantalizing unsolved mysteries in cryptology, such as the Voynich Manuscript, the Beale Ciphers, and the Kryptos sculpture This engaging work is ideal as both a primary text for courses on the history of cryptology, and as a supplementary text for advanced undergraduate courses on computer security. No prior background in mathematics is assumed, beyond what would be encountered in an introductory course on discrete mathematics. John F. Dooley is the William and Marilyn Ingersoll Professor Emeritus of Computer Science at Knox College in Galesburg, Illinois. Before returning to teaching in 2001, he spent more than 15 years in the software industry as a developer, designer, and manager working for companies such as Bell Telephone Laboratories, McDonnell Douglas, IBM, and Motorola. His other publications include the popular Springer title Codes, Ciphers and Spies: Tales of Military Intelligence in World War I.

History of Cryptography and Cryptanalysis Jun 04 2024 This accessible textbook presents a fascinating review of cryptography and cryptanalysis across history. The text relates the earliest use of the monoalphabetic cipher in the ancient world, the development of the “unbreakable” Vigenère cipher, and an account of how cryptology entered the arsenal of military intelligence during the American Revolutionary War. Moving on to the American Civil War, the book explains how the Union solved the Vigenère ciphers used by the Confederates, before investigating the development of cipher machines throughout World War I and II. This is then followed by an exploration of cryptology in the computer age, from public-key cryptography and web security, to criminal cyber-attacks and cyber-warfare. Looking to the future, the role of cryptography in the Internet of Things is also discussed, along with the potential impact of quantum computing. Topics and features: presents a history of cryptology from ancient Rome to the present day, with a focus on cryptology in the 20th and 21st centuries; reviews the different types of cryptographic algorithms used to create secret messages, and the various methods for breaking such secret messages; provides engaging examples throughout the book illustrating the use of cryptographic algorithms in different historical periods; describes the notable contributions to cryptology of Herbert Yardley, William and Elizebeth Smith Friedman, Lester Hill, Agnes Meyer Driscoll, and Claude Shannon; concludes with a review of tantalizing unsolved mysteries in cryptology, such as the Voynich Manuscript, the Beale Ciphers, and the Kryptos sculpture. This engaging work is ideal as both a primary text for courses on the history of cryptology, and as a supplementary text for advanced undergraduate courses on computer security. No prior background in mathematics is assumed, beyond what would be encountered in an introductory course on discrete mathematics.

The Code Book: The Secrets Behind Codebreaking Oct 16 2022 "As gripping as a good thriller." --The Washington Post Unpack the science of secrecy and discover the methods behind cryptography--the encoding and decoding of information--in this clear and easy-to-understand young adult adaptation of the national bestseller that's perfect for this age of WikiLeaks, the Sony hack, and other events that reveal the extent to which our technology is never quite as secure as we want to believe. Coders and codebreakers alike will be fascinated by history's most mesmerizing stories of intrigue and cunning--from Julius Caesar and his Caeser cipher to the Allies' use of the Enigma machine to decode German messages during World War II. Accessible, compelling, and timely, The Code Book is sure to make readers see the past--and the future--in a whole new way. "Singh's power of explaining complex ideas is as dazzling as ever." --The Guardian

Cipher Systems Sep 02 2021 Deputy Marshal McClain is found in his home, kneeling over his dead wife's body, holding the bloody knife that had killed her. Accused of her murder, he escapes from jail and stumbles across evidence pointing to her killers. So begins a long manhunt that takes him from Arizona to the Texas Gulf Coast and a town on the shores of Laguna Madre. There tangling with the Skeltons, a family of bootleggers, brings to McClain more startling information that sees him heading back to Arizona. Tormented by guilt, he at last meets his wife's killer, and deals with him in a way he would never have expected.

Codes, Ciphers & Other Cryptic & Clandestine Communication Feb 25 2021 Traces the history of coding and the use of secret codes, and teaches readers how to send their own secret messages