

The Psychology Of Information Security

This book is written for the first security hire in an organization, either an individual moving into this role from within the organization or hired into the role. More and more, organizations are realizing that information security requires a dedicated team with leadership distinct from information technology, and often the people who are placed into those positions have no idea where to start or how to prioritize. There are many issues competing for their attention, standards that say do this or do that, laws, regulations, customer demands, and no guidance on what is actually effective. This book offers guidance on approaches that work for how you prioritize and build a comprehensive information security program that protects your organization. While most books targeted at information security professionals explore specific subjects with deep expertise, this book explores the depth and breadth of the field. Instead of exploring a technology such as cloud security or a technique such as risk analysis, this book places those into the larger context of how to meet an organization's needs, how to prioritize, and what success looks like. Guides to the maturation of practice are offered, along with pointers for each topic on where to go for an in-depth exploration of each topic. Unlike more typical books on information security that advocate a single perspective, this book explores competing perspectives with an eye to providing the pros and cons of the different approaches and the implications of choices on implementation and on maturity, as often a choice on an approach needs to change as an organization grows and matures.

This new volume, Information Security Management Systems: A Novel Framework and Software as a Tool for Compliance with Information Security Standard, looks at information security management system standards, risk management associated with information security, and information security awareness within an organization. The authors aim to improve the overall ability of organizations to participate, forecast, and actively assess their information security circumstances. It is important to note that securing and keeping information from parties who do not have authorization to access such information is an extremely important issue. To address this issue, it is essential for an organization to implement an ISMS standard such as ISO 27001 to address the issue comprehensively. The authors of this new volume have constructed a novel security framework (ISF) and subsequently used this framework to develop software called Integrated Solution Modeling (ISM), a semi-automated system that will greatly help organizations comply with ISO 27001 faster and cheaper than other existing methods. In addition, ISM does not only help organizations to assess their information security compliance with ISO 27001, but it can also be used as a monitoring tool, helping organizations monitor the security statuses of their information resources as well as monitor potential threats. ISM is developed to provide solutions to solve obstacles, difficulties, and expected challenges associated with literacy and governance of ISO 27001. It also functions to assess the RISC level of organizations towards compliance with ISO 27001. The information provide here will act as blueprints for managing information security within business organizations. It will allow users to compare and benchmark their own processes and practices against these results shown and come up with new, critical insights to aid them in information security standard (ISO 27001) adoption.

Utilizing an incremental development method called knowledge scaffolding--a proven educational technique for learning subject matter thoroughly by reinforced learning through an elaborative rehearsal process--this new resource includes coverage on threats to confidentiality, integrity, and availability, as well as countermeasures to preserve these.

Providing a unified introduction to the underlying ideas of the Psychology of Security, Emergency and Risk (PSER), this book highlights the usefulness of a basic psychological knowledge for all those working in this field and summarizes the main dynamic processes associated with the helping relationship: from the neurological pathway of the emotions to the entirely virtual functions of the real Ego, all of these estimable by the oneiric test contained in the appendix. The authors include, in each of the dedicated chapters, the current theories and worked examples to reinforce every argument: from communications rules to the knowledge of terrorism's cultural background, in its psychological, biological and environmental component. The last important goal at the end of each chapter is to offer the reader, by confronting their own experiences with analysed realities, the possibility to discover the sense of one's personal identity.

Expert guidance on the art and science of driving secure behaviors Transformational Security Awareness empowers security leaders with the information and resources they need to assemble and deliver effective world-class security awareness programs that drive secure behaviors and culture change. When all other processes, controls, and technologies fail, humans are your last line of defense. But, how can you prepare them? Frustrated with ineffective training paradigms, most security leaders know that there must be a better way. A way that engages users, shapes behaviors, and fosters an organizational culture that encourages and reinforces security-related values. The good news is that there is hope. That's what Transformational Security Awareness is all about. Author Perry Carpenter weaves together insights and best practices from experts in communication, persuasion, psychology, behavioral economics, organizational culture management, employee engagement, and storytelling to create a multidisciplinary masterpiece that transcends traditional security education and sets you on the path to make a lasting impact in your organization. Find out what you need to know about marketing, communication, behavior science, and culture management Overcome the knowledge-intention-behavior gap Optimize your program to work with the realities of human nature Use simulations, games, surveys, and leverage new trends like escape rooms to teach security awareness Put effective training together into a well-crafted campaign with ambassadors Understand the keys to sustained success and ongoing culture change Measure your success and establish continuous improvements Do you care more about what your employees know or what they do? It's time to transform the way we think about security awareness. If your organization is stuck in a security awareness rut, using the same ineffective strategies, materials, and information that might check a compliance box but still leaves your organization wide open to phishing, social engineering, and security-related employee mistakes and oversights, then you NEED this book.

Research suggests that between 60-75% of all information security incidents are the result of a lack of knowledge and/or understanding amongst an organization's own staff. And yet the great majority of money spent protecting systems is focused on creating technical defences against external threats. Angus McIlwraith's book explains how corporate culture affects perceptions of risk and information security, and how this in turn affects employee behaviour. He then provides a pragmatic approach for educating and training employees in information security and explains how different metrics can be used to assess awareness and behaviour. Information security awareness will always be an ongoing struggle against complacency, problems associated with new systems and technology, and the challenge of other more glamorous and often short term priorities. Information Security and Employee Behaviour will help you develop the capability

and culture that will enable your organization to avoid or reduce the impact of unwanted security breaches.

High-level overview of the information security field. Covers key concepts like confidentiality, integrity, and availability, then dives into practical applications of these ideas in the areas of operational, physical, network, application, and operating system security. In this high-level survey of the information security field, best-selling author Jason Andress covers the basics of a wide variety of topics, from authentication and authorization to maintaining confidentiality and performing penetration testing. Using real-world security breaches as examples, Foundations of Information Security explores common applications of these concepts, such as operations security, network design, hardening and patching operating systems, securing mobile devices, as well as tools for assessing the security of hosts and applications. You'll also learn the basics of topics like:

- Multifactor authentication and how biometrics and hardware tokens can be used to harden the authentication process
- The principles behind modern cryptography, including symmetric and asymmetric algorithms, hashes, and certificates
- The laws and regulations that protect systems and data
- Anti-malware tools, firewalls, and intrusion detection systems
- Vulnerabilities such as buffer overflows and race conditions

A valuable resource for beginning security professionals, network systems administrators, or anyone new to the field, Foundations of Information Security is a great place to start your journey into the dynamic and rewarding field of information security.

Designed for managers struggling to understand the risks in organizations dependent on secure networks, this book applies economics not to generate breakthroughs in theoretical economics, but rather breakthroughs in understanding the problems of security.

Security practitioners must be able to build a cost-effective security program while at the same time meet the requirements of government regulations. This book lays out these regulations in simple terms and explains how to use the control frameworks to build an effective information security program and governance structure. It discusses how organizations can best ensure that the information is protected and examines all positions from the board of directors to the end user, delineating the role each plays in protecting the security of the organization.

Emerging Cyber Threats and Cognitive Vulnerabilities identifies the critical role human behavior plays in cybersecurity and provides insights into how human decision-making can help address rising volumes of cyberthreats. The book examines the role of psychology in cybersecurity by addressing each actor involved in the process: hackers, targets, cybersecurity practitioners and the wider social context in which these groups operate. It applies psychological factors such as motivations, group processes and decision-making heuristics that may lead individuals to underestimate risk. The goal of this understanding is to more quickly identify threat and create early education and prevention strategies.

This book covers a variety of topics and addresses different challenges in response to changes in the ways in to study various areas of decision-making, behavior, artificial intelligence, and human interaction in relation to cybersecurity. Explains psychological factors inherent in machine learning and artificial intelligence Discusses the social psychology of online radicalism and terrorist recruitment Examines the motivation and decision-making of hackers and "hacktivists" Investigates the use of personality psychology to extract secure information from individuals

Whether you're searching for new or additional opportunities, information security can be vast and overwhelming. In this practical guide, author Christina Morillo introduces technical knowledge from a diverse range of experts in the infosec field. Through 97 concise and useful tips, you'll learn how to expand your skills and solve common issues by working through everyday security problems. You'll also receive valuable guidance from professionals on how to navigate your career within this industry. How do you get buy-in from the C-suite for your security program? How do you establish an incident and disaster response plan? This practical book takes you through actionable advice on a wide variety of infosec topics, including thought-provoking questions that drive the direction of the field. Continuously Learn to Protect Tomorrow's Technology--Alyssa Columbus Fight in Cyber Like the Military Fights in the Physical--Andrew Harris Keep People at the Center of Your Work--Camille Stewart Infosec Professionals Need to Know Operational Resilience--Ann Johnson Taking Control of Your Own Journey--Antoine Middleton Security, Privacy, and Messy Data Webs: Taking Back Control in Third-Party Environments--Ben Brook Every Information Security Problem Boils Down to One Thing--Ben Smith Focus on the WHAT and the Why First, Not the Tool--Christina Morillo

The AFRICACRYPT 2008 conference was held during June 11–14, 2008 in Casablanca, Morocco. Upon the initiative of the organizers from the Ecole nationale supérieure de Technologie de Casablanca, this event was the first international research conference in Africa dedicated to cryptography. The conference was honored by the presence of the invited speakers Bruce Schneier, Jacques Stern, and Alexander W. Dent who gave talks entitled “The Psychology of Security” “Modern Cryptography: A Historical Perspective” and “A Brief History of Provably-Secure Public-Key Encryption”, respectively. These proceedings include papers by Bruce Schneier and by Alexander Dent. The conference received 82 submissions on November 24, 2007. They went through a careful doubly anonymous review process. This was run by the iChair software written by Thomas Baignères and Matthieu Finiasz. Every paper received at least three review reports. After this period, 25 papers were accepted on February 12, 2008. Authors then had the opportunity to update their papers until March 13, 2008. The present proceedings include all the revised papers. At the end of the review process, the paper entitled “An Authentication Protocol with Encrypted Biometric Data” written by Julien Bringer and Hervé Chabanne was elected to receive the Africacrypt 2008 Best Paper Award. I had the privilege to chair the Program Committee. I would like to thank all committee members for their tough work on the submissions, as well as all external reviewers for their support. I also thank my assistant Thomas Baignères for maintaining the server and helping me to run the software. I thank the invited speakers, the authors of the best paper, the authors of all submissions. They all contributed to the success of the conference.

In the wake of fresh allegations that personal data of Facebook users have been illegally used to influence the outcome of the US general election and the Brexit vote, the debate over manipulation of social Big Data continues to gain more momentum. Cyber Influence and Cognitive Threats addresses various emerging challenges in response to

cybersecurity, examining cognitive applications in decision-making, behaviour and basic human interaction. The book examines the role of psychology in cybersecurity by addressing each factor involved in the process: hackers, targets, cybersecurity practitioners, and the wider social context in which these groups operate. Cyber Influence and Cognitive Threats covers a variety of topics including information systems, psychology, sociology, human resources, leadership, strategy, innovation, law, finance and others. Explains psychological factors inherent in machine learning and artificial intelligence Explores attitudes towards data and privacy through the phenomena of digital hoarding and protection motivation theory Discusses the role of social and communal factors in cybersecurity behaviour and attitudes Investigates the factors that determine the spread and impact of information and disinformation

Information Security Policies, Procedures, and Standards: A Practitioner's Reference gives you a blueprint on how to develop effective information security policies and procedures. It uses standards such as NIST 800-53, ISO 27001, and COBIT, and regulations such as HIPAA and PCI DSS as the foundation for the content. Highlighting key terminology, policy development concepts and methods, and suggested document structures, it includes examples, checklists, sample policies and procedures, guidelines, and a synopsis of the applicable standards. The author explains how and why procedures are developed and implemented rather than simply provide information and examples. This is an important distinction because no two organizations are exactly alike; therefore, no two sets of policies and procedures are going to be exactly alike. This approach provides the foundation and understanding you need to write effective policies, procedures, and standards clearly and concisely. Developing policies and procedures may seem to be an overwhelming task. However, by relying on the material presented in this book, adopting the policy development techniques, and examining the examples, the task will not seem so daunting. You can use the discussion material to help sell the concepts, which may be the most difficult aspect of the process. Once you have completed a policy or two, you will have the courage to take on even more tasks. Additionally, the skills you acquire will assist you in other areas of your professional and private life, such as expressing an idea clearly and concisely or creating a project plan.

This companion provides the most comprehensive and up-to-date comparative overview of the cyber-security strategies and doctrines of the major states and actors in Europe, North America, South America, Africa, and Asia. The volume offers an introduction to each nation's cyber-security strategy and policy, along with a list of resources in English that may be consulted for those wishing to go into greater depth. Each chapter is written by a leading academic or policy specialist, and contains the following sections: overview of national cyber-security strategy; concepts and definitions; exploration of cyber-security issues as they relate to international law and governance; critical examinations of cyber partners at home and abroad; legislative developments and processes; dimensions of cybercrime and cyberterrorism; implications of cyber-security policies and strategies. This book will be of much interest to students and practitioners in the fields of cyber-security, national security, strategic studies, foreign policy, and international relations.

As threats to the security of information pervade the fabric of everyday life, *A Vulnerable System* describes how, even as the demand for information security increases, the needs of society are not being met. The result is that the confidentiality of our personal data, the integrity of our elections, and the stability of foreign relations between countries are increasingly at risk. Andrew J. Stewart convincingly shows that emergency software patches and new security products cannot provide the solution to threats such as computer hacking, viruses, software vulnerabilities, and electronic spying. Profound underlying structural problems must first be understood, confronted, and then addressed. *A Vulnerable System* delivers a long view of the history of information security, beginning with the creation of the first digital computers during the Cold War. From the key institutions of the so-called military industrial complex in the 1950s to Silicon Valley start-ups in the 2020s, the relentless pursuit of new technologies has come at great cost. The absence of knowledge regarding the history of information security has caused the lessons of the past to be forsaken for the novelty of the present, and has led us to be collectively unable to meet the needs of the current day. From the very beginning of the information age, claims of secure systems have been crushed by practical reality. The myriad risks to technology, Stewart reveals, cannot be addressed without first understanding how we arrived at this moment. *A Vulnerable System* is an enlightening and sobering history of a topic that affects crucial aspects of our lives.

This volume in the *Advances in Management Information Systems* series covers the managerial landscape of information security.

Implementing Information Security in Healthcare: Building a Security Program offers a critical and comprehensive look at healthcare security concerns in an era of powerful computer technology, increased mobility, and complex regulations designed to protect personal information. Featuring perspectives from more than two dozen security experts, the book explores the tools and policies healthcare organizations need to build an effective and compliant security program. Topics include information security frameworks, risk analysis, senior management oversight and involvement, regulations, security policy development, access control, network security, encryption, mobile device management, disaster recovery, and more. Information security is a concept that has never been more important to healthcare as it is today. Special features include appendices outlining potential impacts of security objectives, technical security features by regulatory bodies (FISMA, HIPAA, PCI DSS and ISO 27000), common technical security features, and a sample risk rating chart.

Information security cannot be effectively managed unless secure methods and standards are integrated into all phases of the information security life cycle. And, although the international community has been aggressively engaged in developing security standards for network and information security worldwide, there are few textbooks available that

This book discusses the role of human personality in the study of behavioral cybersecurity for non-specialists. Since the introduction and proliferation of the Internet, cybersecurity maintenance

issues have grown exponentially. The importance of behavioral cybersecurity has recently been amplified by current events, such as misinformation and cyber-attacks related to election interference in the United States and internationally. More recently, similar issues have occurred in the context of the COVID-19 pandemic. The book presents profiling approaches, offers case studies of major cybersecurity events and provides analysis of password attacks and defenses. Discussing psychological methods used to assess behavioral cybersecurity, alongside risk management, the book also describes game theory and its applications, explores the role of cryptology and steganography in attack and defense scenarios and brings the reader up to date with current research into motivation and attacker/defender personality traits. Written for practitioners in the field, alongside nonspecialists with little prior knowledge of cybersecurity, computer science, or psychology, the book will be of interest to all who need to protect their computing environment from cyber-attacks. The book also provides source materials for courses in this growing area of behavioral cybersecurity.

The new emphasis on physical security resulting from the terrorist threat has forced many information security professionals to struggle to maintain their organization's focus on protecting information assets. In order to command attention, they need to emphasize the broader role of information security in the strategy of their companies. Until now, however, most books about strategy and planning have focused on the production side of the business, rather than operations. Strategic Information Security integrates the importance of sound security policy with the strategic goals of an organization. It provides IT professionals and management with insight into the issues surrounding the goals of protecting valuable information assets. This text reiterates that an effective information security program relies on more than policies or hardware and software, instead it hinges on having a mindset that security is a core part of the business and not just an afterthought. Armed with the content contained in this book, security specialists can redirect the discussion of security towards the terms and concepts that management understands. This increases the likelihood of obtaining the funding and managerial support that is needed to build and maintain airtight security programs.

In this new book, The authors share their experience to help you navigate today's dangerous information security terrain and take proactive steps to measure your company IT Governance and information security maturity and prepare your organization to survive, thrive and keep your data safe.

Distributed and peer-to-peer (P2P) applications are increasing daily, and cyberattacks are constantly adopting new mechanisms to threaten the security and privacy of users in these Internet of Things (IoT) environments. Blockchain, a decentralized cryptographic-based technology, is a promising element for IoT security in manufacturing, finance, healthcare, supply chain, identity management, e-governance, defence, education, banking, and trading. Blockchain has the potential to secure IoT through repetition, changeless capacity, and encryption. Blockchain for Information Security and Privacy provides essential knowledge of blockchain usage in the mainstream areas of security, trust, and privacy in decentralized domains. This book is a source of technical information regarding blockchain-oriented software and applications. It provides tools to researchers and developers in both computing and software engineering to develop solutions and automated systems that can promote security, trust, and privacy in cyberspace. FEATURES Applying blockchain-based secured data management in confidential cyberdefense applications Securing online voting systems using blockchain Safeguarding electronic healthcare record (EHR) management using blockchain Impacting security and privacy in digital identity management Using blockchain-based security and privacy for smart contracts By providing an overview of blockchain technology application domains in IoT (e.g., vehicle web, power web, cloud internet, and edge computing), this book features side-by-side comparisons of modern methods toward secure and privacy-preserving blockchain technology. It also examines safety objectives, efficiency, limitations, computational complexity, and communication overhead of various applications using blockchain. This book also addresses the combination of blockchain and industrial IoT. It explores novel various-levels of information sharing systems.

"In Human Dimensions of Cyber Security, Terry Bossomaier, Steven D'Alessandro, and Roger Bradbury have produced a book that ... shows how it is indeed possible to achieve what we all need; a multidisciplinary, rigorously researched and argued, and above all accessible account of cybersecurity — what it is, why it matters, and how to do it." --Professor Paul Cornish, Visiting Professor, LSE IDEAS, London School of Economics Human Dimensions of Cybersecurity explores social science influences on cybersecurity. It demonstrates how social science perspectives can enable the ability to see many hazards in cybersecurity. It emphasizes the need for a multidisciplinary approach, as cybersecurity has become a fundamental issue of risk management for individuals, at work, and with government and nation states. This book explains the issues of cybersecurity with rigor, but also in simple language, so individuals can see how they can address these issues and risks. The book provides simple suggestions, or cybernuggets, that individuals can follow to learn the dos and don'ts of cybersecurity. The book also identifies the most important human and social factors that affect cybersecurity. It illustrates each factor, using case studies, and examines possible solutions from both technical and human acceptability viewpoints.

"Information Security Awareness: The Psychology Behind the Technology" is a book written for information security managers and organizational leaders. This text focuses on the behaviors of information systems users in an organizational setting and why this is critical to successful information security awareness programs. This book examines the link between employee behavior and companies' safeguard policies and establishes that psychology is a key to lowering information security risks. The ultimate goal of all information security awareness programs from a business perspective is to change the behavior of users, resulting in fewer user-related errors that cause costly and destructive security incidents. Rather than taking a traditional technology-oriented approach the author has taken a unique method by exploring and discussing six key psychological aspects of people's behavior. Specifically, the author discusses how these phenomena relate to, and impact, an information security program. The six behavioral-oriented phenomena reviewed in this book are: motivation, attitude, beliefs, personality, morals, and ethics. These six phenomena are the basis for "The Psychology of Security and Technology" or POSTTM, a new framework he has created. Many organizations take the approach of "informing" their user community of their security policies, guidelines, and procedures. This would be described as a descriptive approach, meaning the users are told they must comply because management requires them to. Recent research in organizational psychology and information security awareness postulates that this approach is flawed. The descriptive-based approach does nothing to help the users internalize or justify the organizations requirements, therefore their attitudes and motivations will be lacking and ultimately produce undesirable results. A new prescriptive-based approach to information security awareness is presented in the book which leverages the POSTTM constructs. This new approach focuses on users internalizing

information security messages and policies. The prescriptive approach leverages a person's internal drivers, which, if leveraged properly leads to a desirable outcome for the organization. The author purports the POSTTM framework is the foundation for a new set of information security awareness metrics. A series of newly developed psychological-based metrics could better target users and enable management by providing them with information they may not otherwise have had access to in the past. The POSTTM framework will yield new information that most organizations have

The Psychology of Information Security – Resolving conflicts between security compliance and human behaviour considers information security from the seemingly opposing viewpoints of security professionals and end users to find the balance between security and productivity. It provides recommendations on aligning a security programme with wider organisational objectives, successfully managing change and improving security culture?.

Specifically oriented to the needs of information systems students, PRINCIPLES OF INFORMATION SECURITY, 5e delivers the latest technology and developments from the field. Taking a managerial approach, this bestseller teaches all the aspects of information security—not just the technical control perspective. It provides a broad review of the entire field of information security, background on many related elements, and enough detail to facilitate understanding of the topic. It covers the terminology of the field, the history of the discipline, and an overview of how to manage an information security program. Current and relevant, the fifth edition includes the latest practices, fresh examples, updated material on technical security controls, emerging legislative issues, new coverage of digital forensics, and hands-on application of ethical issues in IS security. It is the ultimate resource for future business decision-makers. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Effective security rules and procedures do not exist for their own sake—they are put in place to protect critical assets, thereby supporting overall business objectives. Recognizing security as a business enabler is the first step in building a successful program. Information Security Fundamentals allows future security professionals to gain a solid understanding of the foundations of the field and the entire range of issues that practitioners must address. This book enables students to understand the key elements that comprise a successful information security program and eventually apply these concepts to their own efforts. The book examines the elements of computer security, employee roles and responsibilities, and common threats. It examines the need for management controls, policies and procedures, and risk analysis, and also presents a comprehensive list of tasks and objectives that make up a typical information protection program. The volume discusses organizationwide policies and their documentation, and legal and business requirements. It explains policy format, focusing on global, topic-specific, and application-specific policies. Following a review of asset classification, the book explores access control, the components of physical security, and the foundations and processes of risk analysis and risk management. Information Security Fundamentals concludes by describing business continuity planning, including preventive controls, recovery strategies, and ways to conduct a business impact analysis.

With the growth in social networking and the potential for larger and larger breaches of sensitive data, it is vital for all enterprises to ensure that computer users adhere to corporate policy and project staff design secure systems. Written by a security expert with more than 25 years' experience, this book examines how fundamental staff awareness is to establishing security and addresses such challenges as containing threats, managing politics, developing programs, and getting a business to buy into a security plan. Illustrated with real-world examples throughout, this is a must-have guide for security and IT professionals.

This new volume, edited by industrial and organizational psychologists, will look at the important topic of cyber security work in the US and around the world. With contributions from experts in the fields of industrial and organizational psychology, human factors, computer science, economics, and applied anthropology, the book takes the position that employees in cyber security professions must maintain attention over long periods of time, must make decisions with imperfect information with the potential to exceed their cognitive capacity, may often need to contend with stress and fatigue, and must frequently interact with others in team settings and multiteam systems. Consequently, psychosocial dynamics become a critical driver of cyber security effectiveness. Chapters in the book reflect a multilevel perspective (individuals, teams, multiteam systems) and describe cognitive, affective and behavioral inputs, processes and outcomes that operate at each level. The book chapters also include contributions from both research scientists and cyber security policy-makers/professionals to promote a strong scientist-practitioner dynamic. The intent of the book editors is to inform both theory and practice regarding the psychosocial dynamics of cyber security work.

Organizations rely on digital information today more than ever before. Unfortunately, that information is equally sought after by criminals. New security standards and regulations are being implemented to deal with these threats, but they are very broad and organizations require focused guidance to adapt the guidelines to their specific needs.

This edited book, Introduction to Cyber Forensic Psychology: Understanding the Mind of the Cyber Deviant Perpetrators, is the first of its kind in Singapore, which explores emerging cybercrimes and cyber enabled crimes. Utilising a forensic psychology perspective to examine the mind of the cyber deviant perpetrators as well as strategies for assessment, prevention, and interventions, this book seeks to tap on the valuable experiences and knowledge of leading forensic psychologists and behavioural scientists in Singapore. Some of the interesting trends discussed in this book include digital self-harm, stalkerware usage, livestreaming of crimes, online expression of hate and rebellion, attacks via smart devices, COVID-19 related scams and cyber vigilantism. Such insights would enhance our awareness about growing pervasiveness of cyber threats and showcase how behavioural sciences is a force-multiplier in complementing the existing technological solutions.

Information Security and Optimization maintains a practical perspective while offering theoretical explanations. The book explores concepts that are essential for academics as well as organizations. It discusses aspects of techniques and tools—definitions, usage, and analysis—that are invaluable for scholars ranging from those just beginning in the field to established experts. What are the policy standards? What are vulnerabilities and how can one patch them? How can data be transmitted securely? How can data in the cloud or cryptocurrency in the blockchain be secured? How can algorithms be optimized? These are some of the possible queries that are answered here effectively using examples from real life and case studies.

Features: A wide range of case studies and examples derived from real-life scenarios that map theoretical explanations with real incidents. Descriptions of security tools related to digital

forensics with their unique features, and the working steps for acquiring hands-on experience. Novel contributions in designing organization security policies and lightweight cryptography. Presentation of real-world use of blockchain technology and biometrics in cryptocurrency and personalized authentication systems. Discussion and analysis of security in the cloud that is important because of extensive use of cloud services to meet organizational and research demands such as data storage and computing requirements. Information Security and Optimization is equally helpful for undergraduate and postgraduate students as well as for researchers working in the domain. It can be recommended as a reference or textbook for courses related to cybersecurity.

“It is about time that a book like *The New School* came along. The age of security as pure technology is long past, and modern practitioners need to understand the social and cognitive aspects of security if they are to be successful. Shostack and Stewart teach readers exactly what they need to know--I just wish I could have had it when I first started out.” --David Mortman, CSO-in-Residence Echelon One, former CSO Siebel Systems

Why is information security so dysfunctional? Are you wasting the money you spend on security? This book shows how to spend it more effectively. How can you make more effective security decisions? This book explains why professionals have taken to studying economics, not cryptography--and why you should, too. And why security breach notices are the best thing to ever happen to information security. It's about time someone asked the biggest, toughest questions about information security. Security experts Adam Shostack and Andrew Stewart don't just answer those questions--they offer honest, deeply troubling answers. They explain why these critical problems exist and how to solve them. Drawing on powerful lessons from economics and other disciplines, Shostack and Stewart offer a new way forward. In clear and engaging prose, they shed new light on the critical challenges that are faced by the security field. Whether you're a CIO, IT manager, or security specialist, this book will open your eyes to new ways of thinking about--and overcoming--your most pressing security challenges. *The New School* enables you to take control, while others struggle with non-stop crises. Better evidence for better decision-making Why the security data you have doesn't support effective decision-making--and what to do about it Beyond security “silos”: getting the job done together Why it's so hard to improve security in isolation--and how the entire industry can make it happen and evolve Amateurs study cryptography; professionals study economics What IT security leaders can and must learn from other scientific fields A bigger bang for every buck How to re-allocate your scarce resources where they'll do the most good

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.

Discover the latest trends, developments and technology in information security today with Whitman/Mattord's market-leading *PRINCIPLES OF INFORMATION SECURITY*, 7th Edition. Designed specifically to meet the needs of those studying information systems, this edition's balanced focus addresses all aspects of information security, rather than simply offering a technical control perspective. This overview explores important terms and examines what is needed to manage an effective information security program. A new module details incident response and detection strategies. In addition, current, relevant updates highlight the latest practices in security operations as well as legislative issues, information management toolsets and digital forensics. Coverage of the most recent policies and guidelines that correspond to federal and international standards further prepare you for success both in information systems and as a business decision-maker. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book presents a framework to model the main activities of information security management and governance. The same model can be used for any security sub-domain such as cybersecurity, data protection, access rights management, business continuity, etc.

Managing Risk and Information Security: Protect to Enable, an ApressOpen title, describes the changing risk environment and why a fresh approach to information security is needed. Because almost every aspect of an enterprise is now dependent on technology, the focus of IT security must shift from locking down assets to enabling the business while managing and surviving risk. This compact book discusses business risk from a broader perspective, including privacy and regulatory considerations. It describes the increasing number of threats and vulnerabilities, but also offers strategies for developing solutions. These include discussions of how enterprises can take advantage of new and emerging technologies—such as social media and the huge proliferation of Internet-enabled devices—while minimizing risk. With ApressOpen, content is freely available through multiple online distribution channels and electronic formats with the goal of disseminating professionally edited and technically reviewed content to the worldwide community. Here are some of the responses from reviewers of this exceptional work: “*Managing Risk and Information Security* is a perceptive, balanced, and often thought-provoking exploration of evolving information risk and security challenges within a business context. Harkins clearly connects the needed, but often-overlooked linkage and dialog between the business and technical worlds and offers actionable strategies. The book contains eye-opening security insights that are easily understood, even by the curious layman.” Fred Wettling, Bechtel Fellow, IS&T Ethics & Compliance Officer, Bechtel “As disruptive technology innovations and escalating cyber threats continue to create enormous information security challenges, *Managing Risk and Information Security: Protect to Enable* provides a much-needed perspective. This book compels information security professionals to think differently about concepts of risk management in order to be more effective. The specific and practical guidance offers a fast-track formula for developing information security strategies which are lock-step with business priorities.” Laura Robinson, Principal, Robinson Insight Chair, Security for Business Innovation Council (SBIC) Program Director, Executive Security Action Forum (ESAF) “The mandate of the information security function is being completely rewritten. Unfortunately most heads of security haven't picked up on the change, impeding their companies' agility and ability to innovate. This book makes the case for why security needs to change, and shows how to get started. It will be regarded as marking the turning point in information security for years to come.” Dr. Jeremy Bergsman, Practice Manager, CEB “The world we are responsible to protect is changing dramatically and at an accelerating pace. Technology is pervasive in virtually every aspect of our lives. Clouds, virtualization and mobile are redefining computing – and they are just the beginning of what is to come. Your security perimeter is defined by wherever your information and people happen to be. We are attacked by professional adversaries who are better funded than we will ever be. We in the information security profession must change as dramatically as the environment we protect. We need new skills and new strategies to do our jobs effectively. We literally need to change the way we think. Written by one of the best in the business, *Managing Risk and Information Security* challenges traditional security theory with clear examples of the need for change. It also provides expert advice on how to dramatically increase the success of your security strategy and methods – from dealing with the misperception of risk to how to become a Z-shaped CISO. *Managing Risk and Information Security* is the ultimate treatise on how to deliver effective security to the world we

live in for the next 10 years. It is absolute must reading for anyone in our profession – and should be on the desk of every CISO in the world.” Dave Cullinane, CISSP CEO Security Starfish, LLC “In this overview, Malcolm Harkins delivers an insightful survey of the trends, threats, and tactics shaping information risk and security. From regulatory compliance to psychology to the changing threat context, this work provides a compelling introduction to an important topic and trains helpful attention on the effects of changing technology and management practices.” Dr. Mariano-Florentino Cuéllar Professor, Stanford Law School Co-Director, Stanford Center for International Security and Cooperation (CISAC), Stanford University “Malcolm Harkins gets it. In his new book Malcolm outlines the major forces changing the information security risk landscape from a big picture perspective, and then goes on to offer effective methods of managing that risk from a practitioner's viewpoint. The combination makes this book unique and a must read for anyone interested in IT risk.” Dennis Devlin AVP, Information Security and Compliance, The George Washington University “Managing Risk and Information Security is the first-to-read, must-read book on information security for C-Suite executives. It is accessible, understandable and actionable. No sky-is-falling scare tactics, no techno-babble – just straight talk about a critically important subject. There is no better primer on the economics, ergonomics and psycho-behaviourals of security than this.” Thornton May, Futurist, Executive Director & Dean, IT Leadership Academy “Managing Risk and Information Security is a wake-up call for information security executives and a ray of light for business leaders. It equips organizations with the knowledge required to transform their security programs from a “culture of no” to one focused on agility, value and competitiveness. Unlike other publications, Malcolm provides clear and immediately applicable solutions to optimally balance the frequently opposing needs of risk reduction and business growth. This book should be required reading for anyone currently serving in, or seeking to achieve, the role of Chief Information Security Officer.” Jamil Farshchi, Senior Business Leader of Strategic Planning and Initiatives, VISA “For too many years, business and security – either real or imagined – were at odds. In Managing Risk and Information Security: Protect to Enable, you get what you expect – real life practical ways to break logjams, have security actually enable business, and marries security architecture and business architecture. Why this book? It's written by a practitioner, and not just any practitioner, one of the leading minds in Security today.” John Stewart, Chief Security Officer, Cisco “This book is an invaluable guide to help security professionals address risk in new ways in this alarmingly fast changing environment. Packed with examples which makes it a pleasure to read, the book captures practical ways a forward thinking CISO can turn information security into a competitive advantage for their business. This book provides a new framework for managing risk in an entertaining and thought provoking way. This will change the way security professionals work with their business leaders, and help get products to market faster. The 6 irrefutable laws of information security should be on a stone plaque on the desk of every security professional.” Steven Proctor, VP, Audit & Risk Management, Flextronics

The Psychology of Information Security Resolving conflicts between security compliance and human behaviour IT Governance Ltd

Information Security in Healthcare is an essential guide for implementing a comprehensive information security management program in the modern healthcare environment. Combining the experience and insights of top healthcare IT managers and information security professionals, this book offers detailed coverage of myriad

Most introductory texts provide a technology-based survey of methods and techniques that leaves the reader without a clear understanding of the interrelationships between methods and techniques. By providing a strategy-based introduction, the reader is given a clear understanding of how to provide overlapping defenses for critical information. This understanding provides a basis for engineering and risk-management decisions in the defense of information. Information security is a rapidly growing field, with a projected need for thousands of professionals within the next decade in the government sector alone. It is also a field that has changed in the last decade from a largely theory-based discipline to an experience-based discipline. This shift in the field has left several of the classic texts with a strongly dated feel. Provides a broad introduction to the methods and techniques in the field of information security Offers a strategy-based view of these tools and techniques, facilitating selection of overlapping methods for in-depth defense of information Provides very current view of the emerging standards of practice in information security

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