gazelle
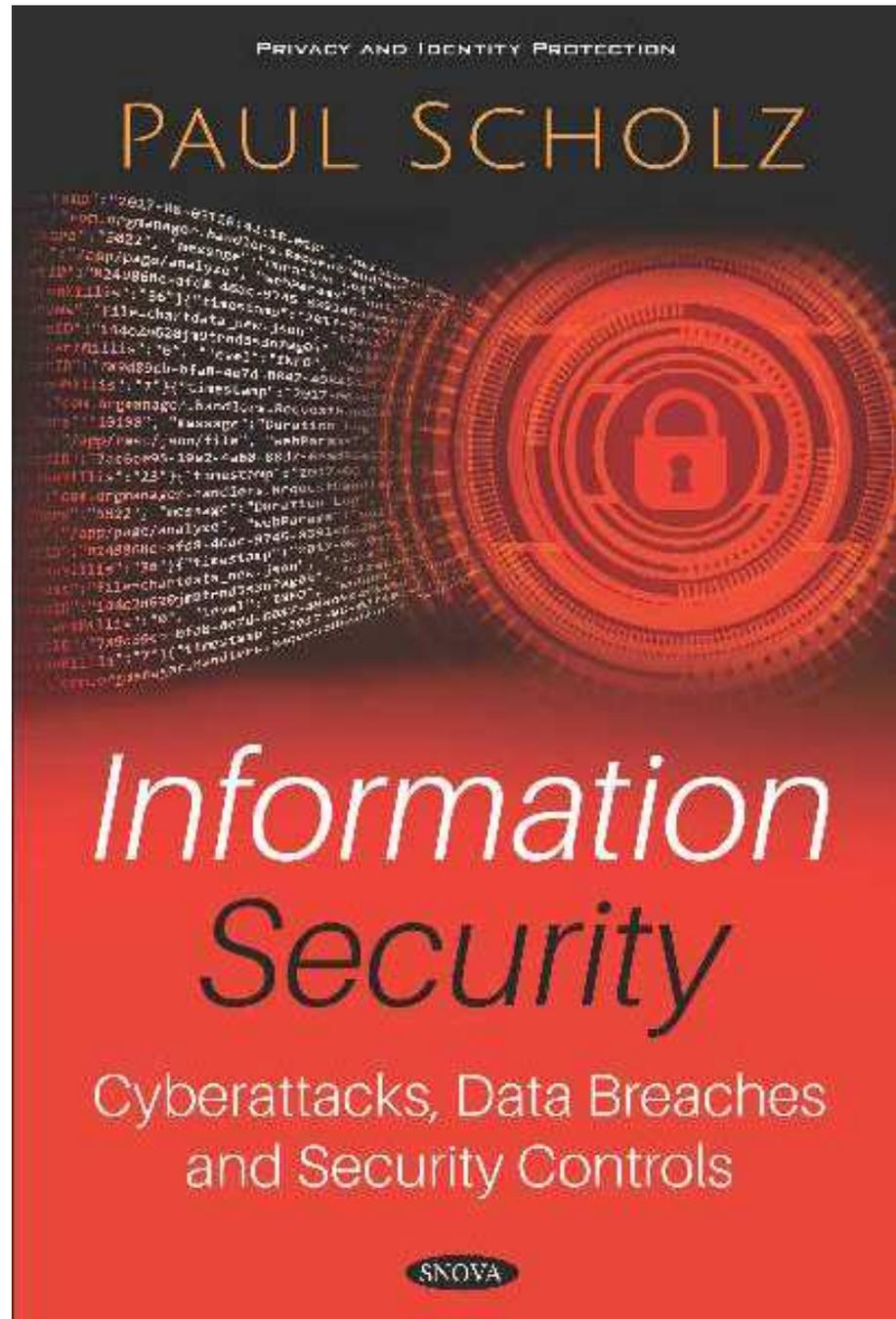
Business Issues,
Competition &
Entrepreneurship

Computer
Science,
Technology &
Applications

Cybercrime &
Cybersecurity
Research

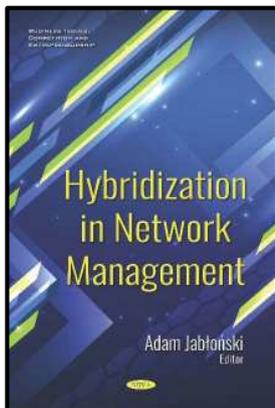Privacy & Identity
Protection

PRIVACY AND IDENTITY PROTECTION

PAUL SCHOLZ

Information Security

Cyberattacks, Data Breaches
and Security Controls

SNOVA

Titles published by Nova Science

Contents

Business Issues, Competition & Entrepreneurship Series

Hybridization in Network Management
Edited by Adam Jabłoński

The dynamics of market changes determine new perspectives both in the theory and practice of management science. The mechanisms of doing business aimed at achieving a high level of company performance are changing. This requires adequate instruments based on the solid pillars of strategic management. Undoubtedly, the key ontological components which determine the success of an organization are effective and efficient business models, strategies and business processes. A kind of strategic hybrid emerges that shapes the principles of doing business subject to pressure, constraints and emerging opportunities. In this approach, companies implement strategies for growth and development not only to survive, but also to achieve strong competitive advantages. Value creation is another area of the development of management science and management practices, defining key factors underlying the conceptualization and operationalization of business models, strategies and business processes.
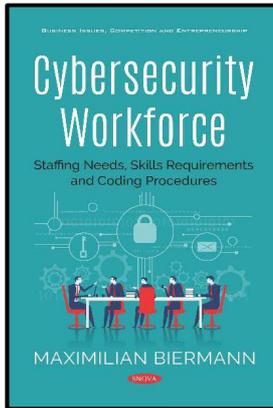
The above-mentioned concepts are nowadays widely discussed, creating a new dimension of strategic management.This monograph consists of chapters focused on both theoretical and practical conditions of modern companies, specifically focused on building effective and efficient business models, strategies and hybrids. This monograph primarily refers to new research perspectives which determine the new challenges of strategic management. The aim of the monograph is to present views and approaches to strategic management determined by the development and growth of companies through building their business models, strategies and hybrids.

The goals of this monograph are to:
– determine key trends in the theory and practice of management science,
– define key ontological factors and their use in the dynamic management of modern companies,
– present the new dimensions of strategic management as seen through the eyes of the international authors of individual chapters,
– and the possibility of applying solutions contained in the monograph.

The editor and authors hope that the presented combination of theory and practice will satisfy the needs of readers, in particular managers of modern companies, business consultants and researchers of phenomena in business.

HB 9781536144079 £219.99 December 2018 Nova Science Publishers 410 pages

Gazelle Book Services Ltd /+44(0) 1524 528500 / sales@gazellebookservices.co.uk / www.gazellebookservices.co.uk

Cybersecurity Workforce: Staffing Needs, Skills Requirements and Coding Procedures
**Staffing Needs, Skills Requirements and Coding Procedures**
Edited by Maximilian Biermann

The security of federal information systems and data is critical to the nation's safety, prosperity, and well-being. However, federal systems and networks are inherently at risk because of their complexity, technological diversity, and geographic dispersion. Further, threats to federal information technology (IT) infrastructure continue to grow in number and sophistication, posing a risk to the reliable functioning of our government. A key component of the government's ability to mitigate and respond to cybersecurity threats is having a qualified, well-trained cybersecurity workforce.

The objectives of chapter 1 are to determine the extent to which federal agencies have assigned work roles for positions performing IT, cybersecurity, or cyber-related functions and describe the steps federal agencies took to identify work roles of critical need. As reported in chapter 2, DHS has identified, categorized, and assigned employment codes to its cybersecurity positions and identified its cybersecurity workforce areas of critical need. Chapter 3 assessed whether: OPM developed a coding structure and procedures for assigning codes to cybersecurity positions and submitted a progress report to Congress; CFO Act agencies submitted complete, reliable baseline assessments of their cybersecurity workforces; and CFO Act agencies established procedures to assign codes to cybersecurity positions.

HB 9781536158182 £152.99 July 2019 Nova Science Publishers 217 pages

Computer Science, Technology & Applications Series
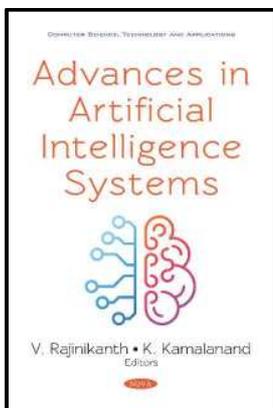
Advances in Artificial Intelligence Systems
Edited by V. Rajinikanth, K. Kamalanand

This book will help in fast decision making and solving complex real-world problems. In recent years, the fields of artificial intelligence along with nanotechnology, robotics and 3D printing have been referred to as the technologies of the future which will help mankind move towards a time of self-sustainability and development even in resource limited environments. Systems which mimic cognitive functions such as learning and problem solving, are referred to as intelligent systems. Such systems have the capability to 'think' and 'act' in times when expert procedures are required in real world scenarios. In recent years, the field of artificial intelligence has given rise to several branches such as swarm intelligence, machine learning and deep learning algorithms.

Swarm intelligence systems mimic the intelligent behaviors of a group or a colony of organisms such as a swarm of bees or a school of fish, in which the individuals of the group collectively work together to reach a common goal. Recent artificial intelligence approaches such as deep learning techniques and swarm intelligence algorithms have been proved to be useful in the development of intelligent systems in a variety of fields such as medical and biological systems, process control, etc. This book discusses few applications of computational intelligence algorithms such as social group optimization, convolutional neural networks, firefly algorithm and non-dominated sorting in genetic algorithms. The purpose of this book is to bring multidisciplinary researchers together to discuss state-of-art applications of artificial intelligence.

PB 9781536154849 £78.99 May 2019 Nova Science Publishers 138 pages
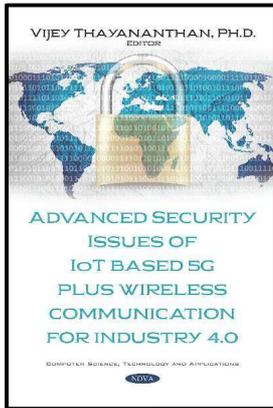
Advanced Security Issues of IoT Based 5G Plus Wireless Communication for Industry 4.0

Edited by Vijey Thayananthan

Advanced IoT based wireless communication has recently received a lot of attention due to a wide range of industry 4.0 applications such as security solutions of CPS in vehicular communication, E_Healthcare over secure wireless communication, privacy issues of E_Learning via cost and energy efficient wireless network communication, etc. In these applications, physical data is continuously monitored by the IoT-based sensor nodes to facilitate the current situations, 5G network management, security solutions, etc. in industry 4.0 environment.

Despite the many security issues considered in existing wireless communication in the industry 4.0 applications, IoT based 5G and 5G+ wireless communication will enhance the future security issues including cybersecurity solutions. The aim of this book to deliver the best services with minimum cost and maximum security in all industry 4.0 applications. For instance, medical priority services against the available sources and devices (IoT, sensors, decision-making units, etc.), patient monitoring services against the waiting list and the population, and security services of CPS against the energy efficiency and the battery lifetime are challenging critical problems in the industry 4.0.

This book covers some improvement methods in security influence to future communication they are cybersecurity issues of IoT based 5G and 5G+ communication systems. These methods can be considered through the efficient channel coding scheme, efficient traffic management, bandwidth guard, cybersecurity solutions, etc. Requirements for future communication such 5G+ support to illustrate the security issues in selected applications of industry 4.0 such as learning style transformation. Sensors are typically capable of wireless communication and are significantly utilized in many applications such as medical communication with IoT-based 5G infrastructure.

Despite many security solutions of communication technologies, decision making, dynamic and intelligent solutions based on sensors, IoT devices, CPS, etc. will be minimizing energy costs and maximizing security issues of industry 4.0. The field of advanced IoT-based 5G+ wireless communication networks merge a lot of functions like secure transmission capacities with latest multiple access schemes, computation of best latency and energy efficiency, and secure communication with location-based services, etc. This book covers many functionalities through the important examples and applications used in industry 4.0.

HB 9781536155389 £152.99 May 2019 Nova Science Publishers 224 pages
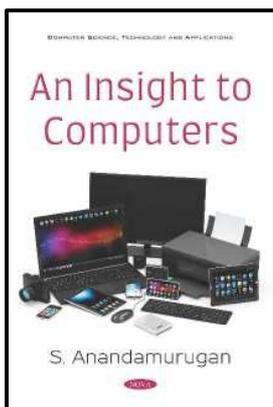
An Insight to Computers

S. Anandamurugan

This book is intended for use by new students taking courses related to computers. The book is structured as an introductory book, but it is designed to be accessible to a wide audience. This book uses a simple approach for better understanding via the help of diagrams. This book can be used as an introductory text to computers by advanced undergraduate or graduate students in computer science or related disciplines such as computer engineering, computer technology and information technology.

PB 9781536149852 £90.99 May 2019 Nova Science Publishers 174 pages
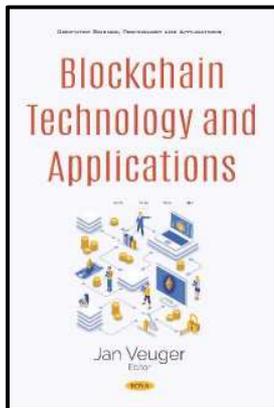
Blockchain Technology and Applications

Edited by Jan Veuger

This book provides an overview of the latest developments on Blockchain technology and its applications. The internet has already made it possible to transfer information quickly and cheaply, without involving intermediaries, while Blockchain gives the same benefits for transferring value. The Internet is used to transfer words and images, while Blockchain is used for transactions. Essentially, Blockchain is a combination of two elements: a shared and distributed ledger with synchronized data spread over multiple sites, countries, and / or institutions, and a cryptography – a digital token with a monetary value.

This technology could have a huge impact on the value chain in our society. This impact includes efficiency, transparency, ownership, value (transfer), automation, and service provision. To understand the world of blockchain, we need to understand the innovation of the currency Bitcoin in 2009, that was built on Blockchain technology. Bitcoin is a combination of four individual elements: (1) cryptography, (2) a peer-to-peer network, (3) an open source protocol and (4) a shared ledger. This makes it a phenomenon that people have been enthusiastic about. This book is comprised of chapters written by experts on Blockchain from Austria, Brazil, China, Croatia, Georgia, Germany, Italy, Netherlands, Slovenia, Spain, and Switzerland, on the following topics: (1) Blockchain and the Agenda 2030 by Danielle Mendes Thame Denny, (2) Application of Blockchain Technology in the Field of E-Government Services by Jiarui Zhang, (3) Can the Cybersecurity of Smart Building be Improved Using Blockchain Technology? by Ben van Lier, (4) Influence of Blockchain Applications and Digitalization on Real Estate by Jan Veuger, (5) Blockchain: Technology Looking For a Problem in Real Estate? by Jo Bronckers and Jan Veuger et al., (6) Real Estate Start-up Get a Brick by Wendel Hulsebos and Jan Veuger, (7) Blockchain: An Efficiency Solution For Housing Associations? by Michel Vonk, (8) Blockchain Applications in Support of the Energy Transition by Mieke Oostra and Jelle Rijpma, and (9) Many Keys of Blockchain for Real Estate by Esther Dekker.

Many questions remain about Blockchain, including whether to continue looking at existing markets for applications of the technology, or at disruptive and innovative newcomers. Is Blockchain only a technological disruption or a real game changer? Will the entire value chain of the market embrace it? Confidence in Blockchain is certainly a precondition for guiding disruption where (new) companies use new technology to offer cheaper and superior alternatives in the market. However, the big question is, how quickly will Blockchain develop as well as all its applications? Stephen Hawking wrote in his book Brief Answers to the Big Questions about how we will shape the future (Hawking, 2018: p207): "In the same way that the internet, our mobile phones, medical imaging, satellite navigation, and social networks would have been incomprehensible to the society of only a few generations ago, our future world is beginning to be conceived. Information on its own will not take us there, but the intelligent and creactive use of it will."
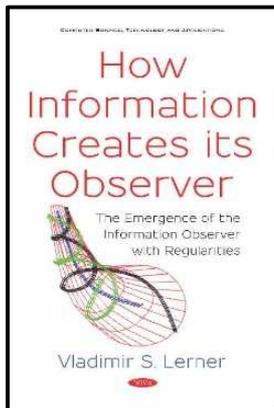
How Information Creates its Observer?
The Emergence of the Information Observer with Regularities
Vladimir S. Lerner

Observers are everywhere, from communicating people, animals, and different species, to any interacting subjects that accept, transform, and exchange information.

Up to now, common information regularities, emergence, differentiation, and appearance have not been studied through a united approach.

This book presents a new approach for understanding the notion of information and its Observers, showing how information creates Observers and generates regularities during observation.

The approach is developed from Wheeler's concept in physics, "It from Bit," which has been modified in this text to "Observer-Participator Bit."

Studying information comes from probabilistic observations, emerging space-time microprocess, entanglement, qubit, encoding bits, and evolving macroprocess, leading to the creation of the Observer, as well as a geometric information structure.

The regularities observed self-organize into information processes that encode information causality, logic, and complexity, and determine the observer's cognition, evolving toward intelligence.

The regularities create a double spiral rotating coding structure, which observation self-generates.

For the first time, this book establishes the observer's united information mechanism, with self-operating integral logic, transforming an observed uncertainty into physical reality.

The book also includes information formalism, which has been applied to solutions for a wide range of computer science and engineering problems implemented in practice.

HB 9781536152869 £257.99 May 2019 Nova Science Publishers 384 pages
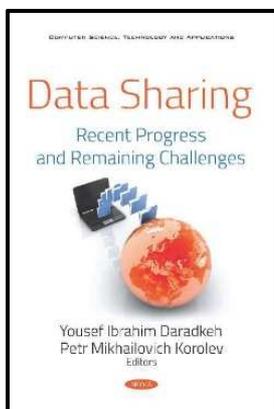
Data Sharing
Recent Progress and Remaining Challenges
Edited by Yousef Ibrahim Daradkeh, Korolev Petr Mikhailovich

Coherence of the information world is needed to approve technology concerning data sharing. This book gives to a wide range of readers the possibility to know what problems exist in the field. An international group of experts discuss the situations in their practices concerning the data exchange. Bio information, education protocols, and investigation of data bases gather at different information resources. These data are needed for protection, invariability and open access. In many cases, opposite goals are encountered and it is important to solve complex problems. The authors of the chapters found within this book give their solutions to different problems. These tools and methods have been described in different conditions of locality (from the developed to the developing world) and domains of practice (from art and research to government and schooling). This book is founded on many sources, such as books, papers, reports, data bases, legislative acts, etc.

The editorial board and editors hope that this book will become a table book for readers and that they will often refer to it.

PB 9781536146776 £78.99 February 2019 Nova Science Publishers 100 pages
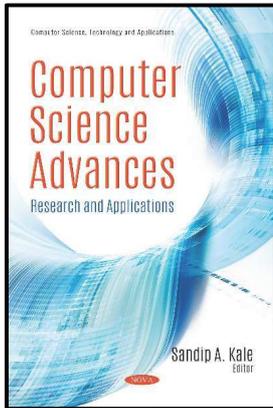
Computer Science Advances
## Research and Applications
Edited by Sandip A. Kale

This book is comprised of eleven chapters about computer application and research areas to discuss the latest issues and technologies. Interesting and important topics like fuzzy and cognitive applications, fuzzy classifiers, neural network, data analytics, clustering and classification models, artificial intelligence, controller area network, digital technology industry 4.0, etc. are included in this book.

The first chapter presents neuro-fuzzy and cognitive researches for the development of objects on the basis of location and territory. The second chapter is about the method of parametric identification using a neuro-fuzzy classifier. The third chapter describes the research on the internet of things enabled smart campus for effectual data transit from one entity to another for classroom notes.

Chapters Four and Five are dedicated to the use of advanced computer science of the medical applications. Chapter Six presents the detection and estimation of obstacle position for imminent crash prediction to enhance the driver and vehicle interface using the controller area network. Chapter Seven presents the development of accurate models for estimation of pure CO_2-oil minimum miscibility pressure based on artificial intelligence methods. Chapter Eight addresses dynamic, massive data handling with swarm intelligence based algorithms for finding the solution of a difficult problem. The next chapter proposes an encryption model which focuses on bit-level confusion and bit-level diffusion followed by block-level diffusion by using 1-D chaotic maps. Chapter Ten is dedicated to digital technologies of the industry 4.0. The last chapter compares the pattern sequence based forecasting method with ARIMA in univariate time series forecasting.

HB 9781536148442 £152.99 February 2019 Nova Science Publishers 228 pages
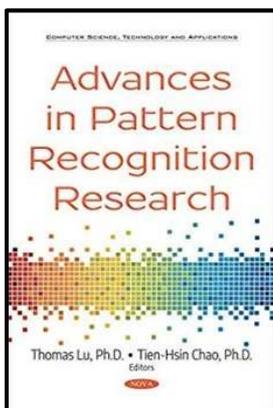
Advances in Pattern Recognition Research
Edited by Thomas Lu, Tien-Hsin Chao

Artificial Intelligence (AI) has become a popular research topic recently. Pattern recognition (PR) is an important part of an AI system. If the AI is considered as the digital "brain", then the PR is the visual and auditory "cortex" that converts the optical signals from the eyes and the acoustic signals from the ears to meaningful symbolic texts that the brain can digest. Over the past 40+ years, the processing speed of a digital computer has increased from kbits/s to tera floating point operations per second (TFLOPS), a 109 times acceleration. PR research has made significant advancements along the advancement of digital hardware, especially the graphical processing unit (GPU) technology that helps the rapid processing of complex images. In this book, the authors have collected the latest work from leading researchers in the PR fields. The topics are broad, which include optical implementation of various filters, digital implementation of state-of-the-art neural network (NN) training methods, and the latest deep leaning (DL) models. We also included applications of PR in various fields.

HB 9781536144291 £185.99 November 2018 Nova Science Publishers 205 pages
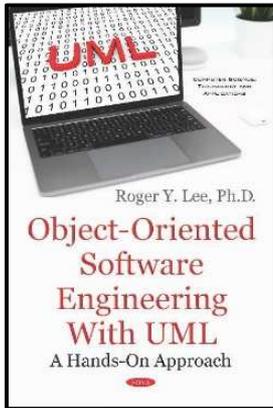
Object-Oriented Software Engineering with UML
A Hands-On Approach
Roger Y. Lee

The object-oriented paradigm supplements traditional software engineering by providing solutions to common problems such as modularity and reusability. Objects can be written for a specific purpose acting as an encapsulated black-box API that can work with other components by forming a complex system. This book provides a comprehensive overview of the many facets of the object-oriented paradigm and how it applies to software engineering. Starting with an in-depth look at objects, the book naturally progresses through the software engineering life cycle and shows how object-oriented concepts enhance each step. Furthermore, it is designed as a roadmap with each chapter, preparing the reader with the skills necessary to advance the project.

This book should be used by anyone interested in learning about object-oriented software engineering, including students and seasoned developers. Without overwhelming the reader, this book hopes to provide enough information for the reader to understand the concepts and apply them in their everyday work. After learning about the fundamentals of the object-oriented paradigm and the software engineering life cycle, the reader is introduced to more advanced topics such as web engineering, cloud computing, agile development, and big data. In recent years, these fields have been rapidly growing as many are beginning to realize the benefits of developing on a highly scalable, automated deployment system. Combined with the speed and effectiveness of agile development, legacy systems are beginning to make the transition to a more adaptive environment.

Core Features:
1. Provides a thorough exploration of the object-oriented paradigm.
2. Provides a detailed look at each step of the software engineering life cycle.
3. Provides supporting examples and documents.
4. Provides a detailed look at emerging technology and standards in object-oriented software engineering.

HB 9781536147551 £219.99 February 2019 Nova Science Publishers 325 pages

Cloud, Fog, and Edge
Technologies and Trends in Telecommunications Industry
Abdulrahman Yarali

The 21st century has marked the arrival of new digital technologies that transform the way enterprises operate and people live their lives. From social media sites and smartphone technology to video streaming and cloud computing, there has been a bevy of new applications that are impacting society and business seemingly on a daily basis. Considering technology and networking is a constantly changing field, some of its aspects need to be changed to conform to newly set trends. Even though prior network management frameworks have proved efficient in the past years, change is inevitable.

More and more people use the internet and more scalable network management architecture needs to be developed. In that respect, the telecommunication industry has seen tremendous growth accompanied by various challenges. Ideally, the expectations of all these include the quality of service and customer services as well as mitigating any threats that are affecting the service providers. With many opportunities being granted, telecommunication has a wide range of emerging content. For instance, there is the exponential growth of the Internet of Things devices and 5G network data, and the acceleration of cloud-based network adoption. More so, there are smart cities, mobile broadband, massive connectivity, artificial intelligence, and automation.

HB 9781536144437 £219.99 October 2018 Nova Science Publishers 326 pages
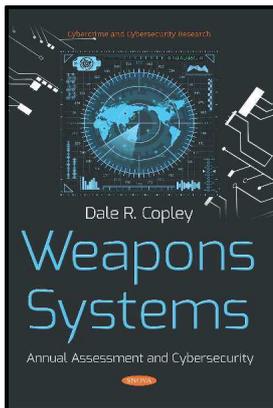
Weapons Systems
Annual Assessment and Cybersecurity
Edited by Dale R. Copley

DOD acquires new weapons for its warfighters through a management process known as the Defense Acquisition System. Chapter 1 contains GAO's 16th annual assessment of the Department of Defense's (DOD) $1.66 trillion portfolio of 86 major weapon systems acquisition programs. It examines changes in the portfolio since 2016, including DOD's progress implementing acquisition reforms.

The Department of Defense (DOD) faces mounting challenges in protecting its weapon systems from increasingly sophisticated cyber threats. Chapter 2 addresses (1) factors that contribute to the current state of DOD weapon systems' cybersecurity, (2) vulnerabilities in weapons that are under development, and (3) steps DOD is taking to develop more cyber resilient weapon systems.

HB 9781536155952 £219.99 May 2019 Nova Science Publishers 329 pages
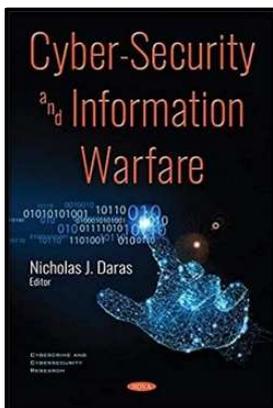
## Cyber-Security and Information Warfare
Edited by Nicholas J. Daras

A variety of modern research methods in a number of innovating cyber-security techniques and information management technologies are provided in this book along with new related mathematical developments and support applications from engineering. This allows for the exploration of new approaches, useful practices and related problems for further investigation. Distinguished researchers and scientists coming from different scientific origins present their research and views concerning cyber-security, information warfare and communications systems.

Graduate students, scientists and engineers interested in a broad spectrum of current theories, methods, and applications in interdisciplinary fields will find this book invaluable.

Topics covered include: Electronic crime and ethics in cyberspace, new technologies in security systems/systems interfaces, economic information warfare, digital security in the economy, human factor evaluation of military security systems, cyber warfare, military communications, operational analysis and information warfare, and engineering applications to security systems/detection theory.

HB 9781536143850 £219.99 December 2018 Nova Science Publishers 421 pages
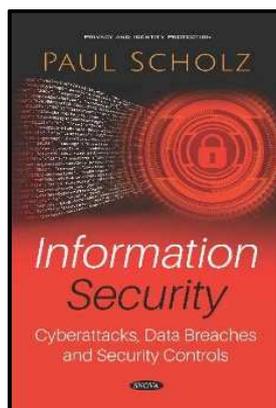
Information Security
Cyberattacks, Data Breaches and Security Controls

Federal agencies and our nation's critical infrastructures, such as communications and financial services, are dependent on information technology systems and electronic data to carry out operations and to process, maintain, and report essential information. Yet, cyber-based intrusions and attacks on federal and nonfederal systems have become not only more numerous and diverse, but also more damaging and disruptive as discussed in chapter 1.

The IRS has a demanding responsibility to collect taxes, process tax returns, and enforce the nation's tax laws. It relies extensively on computerized systems to support its financial and mission-related operations and on information security controls to protect the sensitive financial and taxpayer information that reside on those systems. As part of its audit of IRS's fiscal year 2017 and 2016 financial statements, GAO assessed whether controls over financial and tax processing systems were effective in ensuring the confidentiality, integrity, and availability of financial and sensitive taxpayer information as reported in chapter 2.

Reliance on a global supply chain introduces multiple risks to federal information systems. Chapter 3 highlights information security risks associated with the supply chains used by federal agencies to procure IT systems.

The Office of Personnel Management (OPM) collects and maintains personal data on millions of individuals, including data related to security clearance investigations. In June 2015, OPM reported that an intrusion into its systems had affected the personnel records of about 4.2 million current and former federal employees. Then, in July 2015, the agency reported that a separate but related incident had compromised its systems and the files related to background investigations for 21.5 million individuals. From February 2015 through August 2017, multiple reviews of OPM's information security were conducted. Four reports based on these reviews were issued. The reports contained 80 recommendations for improving the agency's security posture. Chapter 4 reviews relevant documents and artifacts reflecting OPM's actions and progress toward implementing the 80 recommendations contained in the four reports, and assessed the actions against the intent of the recommendations.

CDC is responsible for detecting and responding to emerging health threats and controlling dangerous substances. In carrying out its mission, CDC relies on information technology systems to receive, process, and maintain sensitive data. Accordingly, effective information security controls are essential to ensure that the agency's systems and information are protected from misuse and modification. Chapter 5 reviews the extent to which CDC has taken corrective actions to address the previously identified security program and technical control deficiencies and related recommendations for improvement.

Federal agencies are dependent on information systems to carry out operations. The risks to these systems are increasing as security threats evolve and become more sophisticated. To reduce the risk of a successful cyberattack, agencies can deploy intrusion detection and prevention capabilities on their networks and systems. Chapter 6 determined the reported effectiveness of agencies' implementation of the government's approach and strategy; the extent to which DHS and OMB have taken steps to facilitate the use of intrusion detection and prevention capabilities to secure federal systems; and the extent to which agencies reported implementing capabilities to detect and prevent intrusions.

Gazelle Book Services Order Form - (Books listed alphabetically by title)

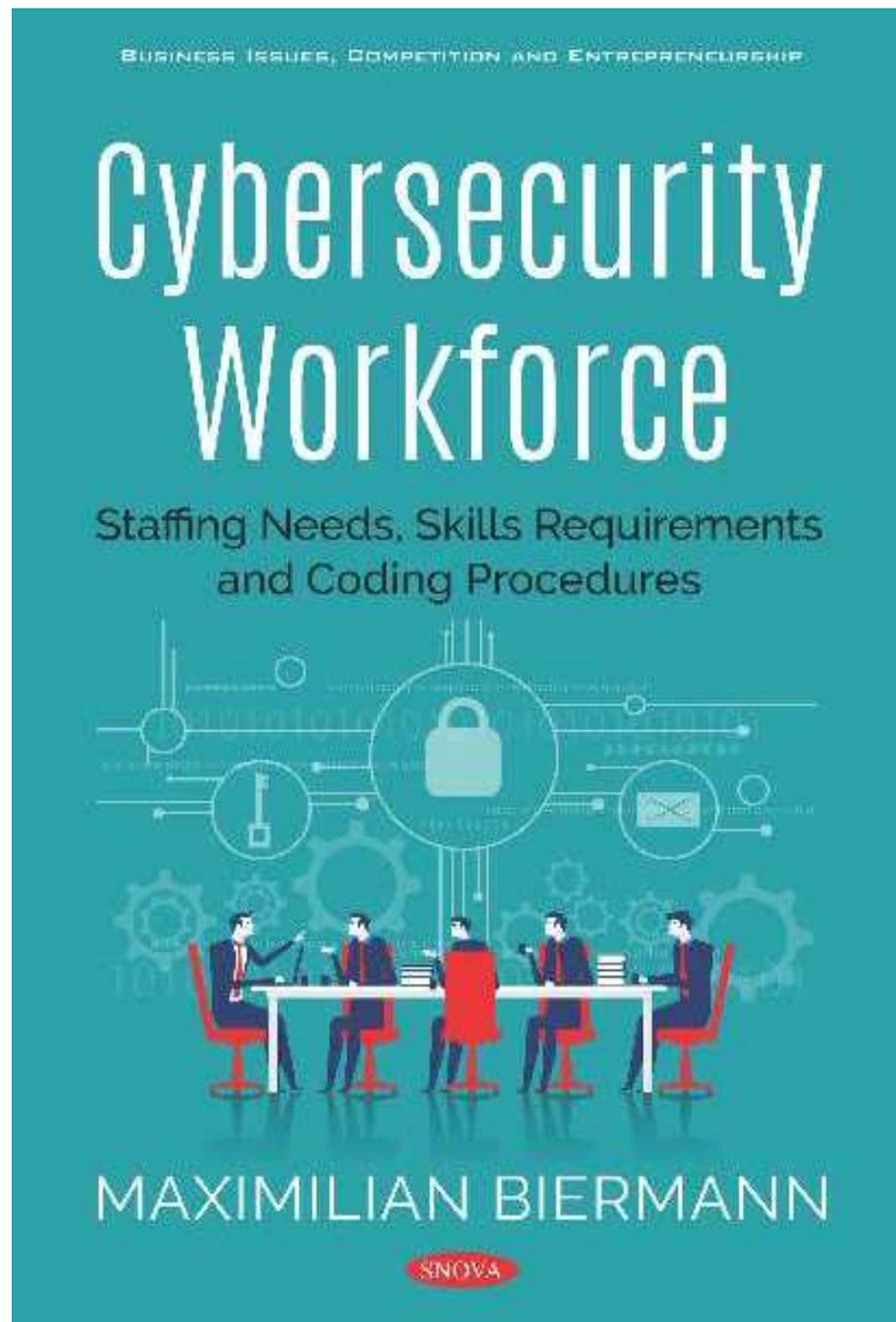| Title	FORMAT	ISBN	RRP (£)	Qty	Total
Advanced Security Issues of IoT Based 5G Plus Wireless Communication for Industry 4.0	HB	9781536155389	£152.99		
Advances in Artificial Intelligence Systems	PB	9781536154849	£ 78.99		
Advances in Pattern Recognition Research	HB	9781536144291	£185.99		
An Insight to Computers	PB	9781536149852	£ 90.99		
Blockchain Technology and Applications	HB	9781536152883	£219.99		
Cloud, Fog, and Edge	HB	9781536144437	£219.99		
Computer Science Advances	HB	9781536148442	£152.99		
Cyber-Security and Information Warfare	HB	9781536143850	£219.99		
Cybersecurity Workforce: Staffing Needs, Skills Requirements and Coding Procedures	HB	9781536158182	£152.99		
Data Sharing	PB	9781536146776	£ 78.99		
How Information Creates its Observer?	HB	9781536152869	£257.99		
Hybridization in Network Management	HB	9781536144079	£219.99		
Information Security: Cyberattacks, Data Breaches and Security Controls	HB	9781536158809	£219.99		
Object-Oriented Software Engineering with UML	HB	9781536147551	£219.99		
Weapons Systems	HB	9781536155952	£219.99		

gazelle

Computing & IT
New Titles

BUSINESS ISSUES, COMPETITION AND ENTREPRENEURSHIP

Cybersecurity Workforce

Staffing Needs, Skills Requirements and Coding Procedures

MAXIMILIAN BIERMANN

SNOVA

Titles published by Nova Science