

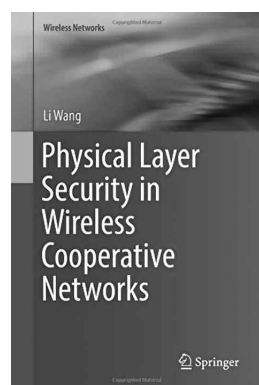
## Forthcoming SPRINGER Books in IT Security

We present here some of the forthcoming books in the important **IT security & cybersecurity** fields, which will be published by the well-known international publishing house **SPRINGER** in 2018.

These valuable books will be reviewed in the future issues of the journal „*Asigurarea calitatii – Quality Assurance*”.

**Li Wang:**

***Physical Layer Security in Wireless Cooperative Networks***



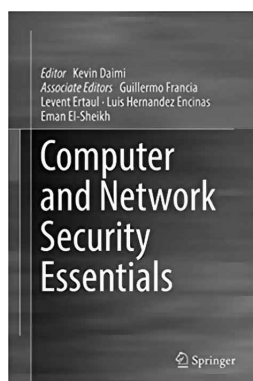
This book provides a comprehensive overview for physical layer security in wireless cooperative networks, including fundamental concepts, typical solutions, and some recent achievements. It investigates the secrecy performance with respect to time reversal transmission and multi-antenna spatial modulation techniques. Both of which are proposed as effective physical layer processing schemes in wireless multipath channel environment.

Resource allocation strategies to enhance secrecy performance in D2D communications are also discussed in this book. It contributes to formulating user social behaviors and utilizing social characteristics to improve the secrecy performance in wireless cooperative networks. This book not only analyzes the secrecy enhancement with certain techniques, but also pursues to find the relationships or tradeoffs among the secrecy performance, energy consumption, channel conditions, and other essential factors in wireless communications.

This book targets researchers and professionals specializing in electronic engineering, computer science, wireless communications and networks. Advanced level students in electrical engineering and computer science will also find this book useful as a secondary text.

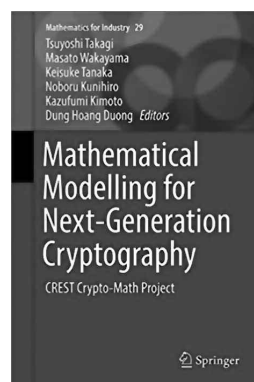
**Kevin Daimi (Ed.):**  
***Computer and Network Security Essentials***

This book introduces readers to the tools needed to protect IT resources and communicate with security specialists when there is a security problem. The book covers a wide range of security topics including Cryptographic Technolo-



gies, Network Security, Security Management, Information Assurance, Security Applications, Computer Security, Hardware Security, and Biometrics and Forensics. It introduces the concepts, techniques, methods, approaches, and trends needed by security specialists to improve their security skills and capabilities. Further, it provides a glimpse into future directions where security techniques, policies, applications, and theories are headed. The book represents a collection of carefully selected and reviewed chapters written by diverse security experts in the listed fields and edited by prominent security researchers.

**Takagi, T., Wakayama, M., Tanaka, K., Kunihiro, N., Kimoto, K., Duong, D.H. (Eds.):**  
***Mathematical Modelling for Next-Generation Cryptography. CREST Crypto-Math Project***



This book presents the mathematical background underlying security modeling in the context of next-generation cryptography. By introducing new mathematical results in order to strengthen information security, while simultaneously presenting fresh insights and developing the respective areas of mathematics, it is the first-ever book to focus on areas that have not yet been fully exploited for cryptographic applications such as representation theory and mathematical physics, among others.

Recent advances in cryptanalysis, brought about in particular by quantum computation and physical attacks on cryptographic devices, such as side-channel analysis or power analysis, have revealed the growing security risks for state-of-the-art cryptographic schemes. To address these risks, high-performance, next-generation cryptosystems must be studied, which requires the further development of the mathematical background of modern cryptography. More specifically, in order to avoid the security risks posed by adversaries with advanced attack capabilities, cryptosystems must be upgraded, which in turn relies on a wide range of mathematical theories. This book is suitable for use in an advanced graduate course in mathematical cryptography, while also offering a valuable reference guide for experts.

Professor **Ioan C. BACIVAROV**, PhD  
President of the:

*Romanian Association for Information Security (RAISA)*  
Editor-in-Chief:

„*Asigurarea calitatii – Quality Assurance*”