

Table of Contents

A Generic Feature-based Detection for Facebook Spamming Groups <i>Meng-Jia Yen, Yang-Ling Hwang, Cheng-Yu Tsai, Fu-Hau Hsu, and Chih-Wen Ou</i>	1
Beyond the Dolev-Yao Model: Realistic Application-Specific Attacker Models for Applications Using Vehicular Communication <i>Christoph Ponikwar, Hans-Joachim Hof, Smriti Gopinath, and Lars Wischhof</i>	4
Cost-Effective Biometric Authentication using Leap Motion and IoT Devices <i>Louis-Philip Shahim, Dirk Snyman, Tiny Du Toit, and Hennie Kruger</i>	10
Node Compromise Detection Based on Parameter Grouping in Wireless Sensor Networks <i>Manyam Thaile and Oruganti Bala Venkata Ramanaiah</i>	14
Embedded Security Testing with Peripheral Device Caching and Runtime Program State Approximation <i>Markus Kammerstetter, Daniel Burian, and Wolfgang Kastner</i>	21
The Principle of 3D Sensors <i>Miroslav Marcanik, Michal Sustek, Pavel Tomasek, and Jiri Dvorak</i>	27
A Secure Frequency Hiding Index for Encrypted Databases <i>Somayeh Sobati Moghadam</i>	32
Analysis of Direct Punch in Professional Defence Using Multiple Methods <i>Dora Lapkova, Milan Adamek, and Lukas Kralik</i>	34
Methodology of the Determination of the Uncertainties by Using the Biometric Device the iCAM 7000 <i>Hana Talandova, Lukas Kralik, and Milan Adamek</i>	41
Scanning Probe Microscopy Used for 3D Topography Image Acquisition of Marks on Cartridge Cases in Forensic Ballistics <i>Milan Navratil, Vojtech Kresalek, Adam Koutecky, and Zdenek Malanik</i>	45
Security of Seniors – The Detection and Prevention of Falls <i>Lubomir Macku and Marketa Matejickova</i>	51
Improvement of CPRNG of the PM-DC-LM Mode and Comparison with its Previous Version <i>Petr Zacek, Roman Jasek, and David Malanik</i>	57
Severity Assessment of Security Incidents <i>Lukas Kralik, Petr Stipek, Roman Senkerik, and Roman Jasek</i>	63

Methodology of Future Security Studies <i>Jan Valouch and Hana Urbanocokova</i>	69
Measurement of Electromagnetic Interference of Electronic Devices <i>Hana Urbanocokova, Jan Valouch, Stanislav Kovar, and Milan Adamek</i>	72
Object Oriented Role-Based Access Control <i>Petr Stipek, Lukas Kralik, and Roman Senkerik</i>	76
Introduction to Web Security and Evaluation Methods of Web Application Vulnerabilities <i>Petra Holbikova and Roman Jasek</i>	82
Electromagnetic Weapons as Means of Stopping Vehicles <i>Jan Valouch and Hana Urbanocokova</i>	86
An Empirical Survey on how Much Security and Privacy Customers Want in Instant Messengers <i>Thomas Paul and Hans-Joachim Hof</i>	89
The Mathematical Modeling of Road Transport in Context of Critical Infrastructure Protection <i>Jan Mrazek, Lucia Duricova, and Martin Hromada</i>	95
Linkages Types with an Emphasis on Important Critical Infrastructure Sectors <i>Martin Hromada and Frantisek Paulus</i>	100
Security and Safety Processes in Czech Republic Universities <i>Lucia Duricova, Martin Hromada, and Jan Mrazek</i>	105
Comprehensive System of Intense Convective Precipitation Forecasts for Regional Crisis Management <i>David Saur and Lucia Duricova</i>	111
Insight into Contemporary Dissemination Techniques of Mobile Botnet Clients (Bots) <i>Milan Oulehla and David Malanik</i>	117
Innovation Standard Methods of Evaluating the Results of Shooting <i>Zdenek Malanik and David Malanik</i>	124
The Possibilities of the Search Engine Shodan in Relation to SCADA <i>Jan Vavra and Martin Hromada</i>	130
The Configuration of Alarm Systems during the Measurement of Electromagnetic Interference <i>Jan Valouch and Stanislav Kovar</i>	136
Comparison of Security Devices in Terms of Interception	141

<i>Stanislav Kovar, Jan Valouch, Hana Urbancokova, and Milan Adamek</i>	
Theoretical Sources for a Theory of Safety and Security <i>Ludek Lukas</i>	146
Comparison of Various Encryption Techniques Based on Deterministic Chaos <i>Miroslav Popelka</i>	151
Using Ethical Hacking to Analyze BYOD Safety in Corporations <i>Roman Jasek and Jakub Nozicka</i>	157
Critical Infrastructure Protection – Modeling of Domino and Synergy Effects <i>Martin Hromada</i>	162
Towards Extensible Signature Policies in Brazil: A Case Study <i>Mauricio Oliveira, Martin Vigil, Marcelo Carlomagno Carlos, and Ricardo Custodio</i>	167
Information Support System Development in Relation to Critical Infrastructure Element Resilience Evaluation <i>Martin Hromada</i>	174
Strengthening Software Diversity Through Targeted Diversification <i>Vipin Singh Sehrawat and Yvo Desmedt</i>	185
Education System in Commercial Security <i>Vladislav Stefka</i>	191
Possibilities of Technical Security of Elementary Schools <i>Rudolf Drga and Hana Charvatova</i>	195
Resistance of Passive Security Elements as A Quantitative Parameter Influencing The Overall Resistance and Resilience of A Critical Infrastructure Element <i>Tomas Lovecek, Anton Siser, David Rehak, and Martin Hromada</i>	200
Electromagnetic Compatibility and Power-Line Quality <i>Frantisek Hruska and Milan Navratil</i>	206
Interception Methods and GSM <i>Michal Sustek, Miroslav Marcanik, Milan Oplustil, Pavel Tomasek, and Zdenek Urednicek</i>	211
Preliminary Study of Shielding of 802.11ah <i>Pavel Tomasek</i>	217
Authentication of Czech Banknotes using Raman Microscopy	220

<i>Hana Vaskova and Pavel Valasek</i>	
An Efficient Pseudo Chaotic Number Generator Based on Coupling and Multiplexing Techniques <i>Ons Jallouli, Safwan El Assad, Mohammed Abu Taha, Maryline Chetto, Rene Lozi, and Daniel Caragata</i>	224
A Novel Verifiable Multi-Secret Sharing Scheme Based on Elliptic Curve Cryptography <i>Nisha Patel, Prakash D. Vyavahare, and Manish Panchal</i>	230
An Improved ID-based Proxy Signature Scheme Based on Elliptic Curve Cryptography <i>Deepa Mukherjee, Prakash Vyavahare, and Manish Panchal</i>	235
Selective Hybrid Chaotic-Based Cipher for Real-Time Image Application <i>Moussa Farajallah, Rawan Qumsieh, and Samer Isayed</i>	241
Seven Steps to a Quantum-Resistant Cipher <i>Julian Murguia Hughes</i>	247
Reflecting on the Use of Sonification for Network Monitoring <i>Louise Axon, Sadie Creese, Michael Goldsmith, and Jason R. C. Nurse</i>	254
LoT: a Reputation-based Trust System for Long-term Archiving <i>Martin Vigil, Denise Demirel, Sheikh Mahbub Habib, Sascha Hauke, Johannes Buchmann, and Max Muhlhauser</i>	262
Security and Safety Requirements for Soft Targets in Czech Republic <i>Lucia Duricova, Martin Hromada, and Jan Mrazek</i>	271
General Model for Personal Data Sensitivity Determination <i>Tomas Lovecek, Marian Magdolen, Jozef Ristvej, and Martin Hromada</i>	276
A Study on User Perceptions of ICT Security <i>Christine Schuster, Martin Latzenhofer, Stefan Schauer, Johannes Gollner, Christian Meurers, Andreas Peer, Peter Prah, Gerald Quirchmayr, and Thomas Benesch</i>	281
Visualization of Privacy Risks in Software Systems <i>George O. M. Yee</i>	289
Information Security Maturity as an Integral Part of ISMS based Risk Management Tools <i>Ben Fetler and Carlo Harpes</i>	295
Modeling Vulnerable Internet of Things on SHODAN and CENSYS : An Ontology for Cyber Security <i>Marc Arnaert, Yoann Bertrand, and Karima Boudaoud</i>	299
Energy-aware Security Adaptation in Ubiquitous Mobile Network	303

Tewfiq El Maliki and Aicha Rizzotti-Kaddouri

Security Update and Incident Handling for IoT-devices; A Privacy-Aware Approach 309
Geir Koien

Attacker-Parametrised Attack Graphs 316
Alastair Janse van Rensburg, Jason R. C. Nurse, and Michael Goldsmith

Study on Dual Data Structure in Enterprise Information Security Architecture 320
Mikio Suzuki and Fumihiro Kubota