# Table of Contents

Copyright Page

Table of Contents

## Sessions

### Session 1: Internet Security
- A Novel Network Platform for Secure and Efficient Malware Collection based on Reconfigurable Hardware Logic (Sascha Mühlbach, Andreas Koch)
- DDoS Attacks Traffic and Flash Crowds Traffic Simulation with a Hardware Test Center Platform (Jie Wang, Raphael C.-W. Phan, John N. Whitley, David J. Parish)
- Assessing the Portuguese Web Applications Security (Nuno Teodoro, Carlos Serrão)

### Session 2: Middleware support for networking
- An AODE-based Intrusion Detection System for Computer Networks (Zubair Baig, Abdulrhman Shaheen, Radwan Abdel Aal)
- Autonomous Agents for Testing and Verification of Softwares after Deployment over Network (Umar Manzoor, Janita Irfan, Samia Nefti)
- Self-Organizing Feature Maps for User-to-Root and Remote-to-Local Network Intrusion Detection on the KDD Cup 1999 Dataset (Ryan Wilson, Charlie Obimbo)

### Session 3: Security, trust and privacy
- Internet-based Management and Consumption of Digital Assets (Yulin Wang, Yixin Chen, Jing Feng, Hong Ding, Wenjia Ding)
- The Concept of a Secure Mobile Wallet (Hao Zhao, Sead Muftic)
- A New and Efficient Approach to Protect AES against Differential Power Analysis (Massoud Masoumi, Soheil Mohammadi)

### Session 4: Cryptography
- Simple Power Analysis Attacks Using Chosen Message against ECC Hardware Implementations (Huiyun Li, Keke Wu, Guoqing Xu, Hai Yuan, Peng Luo)
- Hardware Implementation of Arithmetic for Elliptic Curve Cryptosystems over GF(2m) (Moncef Amara, Amar Siad)
Removing Directory Servers from Anonymous Communication Systems using ID-Based Encryption to Improve Scalability
(Hiroyuki Tanaka, Shoichi Saito, Hiroshi Matsuo) ........................................... 79

Session 5: Data Security

Security Extensions of Windows Environment based on FIPS 201 (PIV) Smart Card
(Abdul Ghafoor Abbasi, Sead Muftic, Shahzad Ahmed Mumtaz) ......................... 86

Giving You Back Control of Your Data - Digital Signing Practical Issues and the eCert Solution
(Lisha Chen-Wilson, Andrew M Gravell, David Argles) ..................................... 93

A Survey of Static Software Watermarking
(James Hamilton, Sebastian Danicic) .............................................................. 100

Session 6: Software Architectures

A Software Application to Analyze the Effects of Temporal and Environmental Metrics on Overall CVSS v2 Score
(Assad Ali, Pavol Zavarsky, Dale Lindskog, Ron Ruhl) .................................... 109

Exploiting Code Mobility for Dynamic Binary Obfuscation
(Paolo Falcarin, Stefano Di Carlo, Alessandro Cabutto, Nicola Garazzino, Davide Barberis) .......................................................... 114

Bio-inspired Visual User Detection for Intelligent Interface
(Woo Joon Han, Il Song Han) ........................................................................ 121

Session 7: Data Security

Secure Confirmation of Sensitive Transaction Data in Modern Internet Banking Services
(Thomas Weigold, Alain Hiltgen) ................................................................. 125

Secure Service-Oriented Architecture for Mobile Transactions
(Feng Zhang, Sead Muftic, Gernot Schmoezler) ............................................. 133

High Level Anti-Phishing Countermeasure: A Case Study
(Abdullah M. Alnajim) ................................................................................ 139

Session 8: Internet Security

What DHCPv6 Says About You
(Stephen Groat, Matthew Dunlop, Randy Marchany, Joseph Tront) .............. 146

Detection of Fraud Use of Credit Card by Extended VFDT
(Tatsuya Minegishi, Ayahiko Niimi) ............................................................. 152

Web Services: Security Challenges
(Mohamad Ibrahim Ladan) ........................................................................ 160
Session 9: Broadband access technologies

Tamper-Resistant Database Logging on Mobile Devices...........................................165
(Subhasish Mazumdar, Anand Paturi)

(Yusnani Mohd Yussoff, Habibah Hashim)

Security Analysis and Countermeasures Assessment against Spit Attacks on VoIP Systems......177
(MariaLisa Scatà, Aurelio La Corte)

Session 10: Future Internet Design and Applications

Secure Application Access to IMS via 4G GAA Architecture...................................185
(Cristina Elena Vintila)

High-performance Modular Exponentiation Algorithm by Using a New Modified Modular Multiplication
Algorithm and Common-Multiplicand-Multiplication Method....................................192
(Abdalhossin Rezai, Parviz Keshavarz)

A User-Centric Approach to eCertificate for Electronic Identities (eIDs) Management in Mobile
Environment...........................................................................................................198
(Michele Schiano di Zenise, Andrea Vitaletti, David Argles)

Session 11: Security, Trust and Privacy

Effective Server Virtualization with Enhanced Security Strategy for Large Organizations........205
(Ramalingam Dharmalingam, Arun Nagarle Shivashankarappa)

Virtual Machine Based Security Architecture................................................................210
(Elahe Borghesi, Reza Azmi, Alireza Gahremanian, Hamed Nemati)

Security, Privacy and Efficiency of Internet Banking Transactions.............................216
(Corrado Ronchi, Akmal Khodjanov, Muzaffar Mathkamov, Shukhrat Zakhidov)

A Graphical Password Authentication System............................................................223
(Ahmad Almulhem)

Session 12: Cryptography

Related-Key Impossible Differential Cryptanalysis on Crypton and Crypton v1.0..............227
(Yuechuan Wei, Chao Li, Bing Sun)

Encryption Algorithm using Programmable Cellular Automata..................................233
(Petre Anghelescu)

New Most Efficient State Recovery Attacks on an eSTREAM Candidate F-FCSR-H v2 and F-FCSR-H
Stream Ciphers.......................................................................................................240
(Arshad Ali)

978-1-4244-8879-7/11 $26.00 © 2011 WorldCIS
Session 13: Data Security

On The Extraction Of Forensically Relevant Information From Physical Memory ........................................248
(Funminiyi Olajide, Nick Savage)

Concurrency Control and Consistency Maintenance with DTD and SSM for Weakly Connected ............. 253
Environments
(K. Chitra, Al-Dahoud Ali)

Toward Protecting the Integrity of Relational Databases .................................................................258
(Ibrahim Kamel, Kareem Kamel)

Session 14: Internet Security

A 2-Level Model for E-commerce Security .......................................................................................263
(Simin Ghesmati, Majid Sate, Abbas Asosheh)

Security Review of Email Summarization Systems ..........................................................................269
(Taiwo Ayodele, Charles A. Shoniregun, Galyna A. Akmayeva)

Security of Mobile Internet Access with UMTS/HSDPA/LTE .........................................................272
(Daniel Caragata, Safwan El Assad, Ion Tutanescu, Charles A. Shoniregun, Galyna A. Akmayeva)

E-STOS: Extending Smart Traffic Online System with Traffic Laws Time Delays ..........................277
(Hatem Halaoui)

Session 15: Internet Security and Software Architecture

FingerID: A New Security Model Based on Fingerprint Recognition for Distributed Systems ............284
(Sara Jeza Alotaibi, David Argles)

Automatic Hand Writer Identification Using the Feed Forward Neural Networks ...........................290
(Constantin Anton, Cosmin Stirbu, Romeo-Vasile Badea)