

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION
FEDERAL SERVICE FOR TECHNICAL AND EXPORT CONTROL
STAFF OF THE SECURITY COUNCIL OF THE RUSSIAN FEDERATION
RUSSIAN FOUNDATION FOR BASIC RESEARCH

Invitation and Program of the Third International Conference on Security of Information and Networks (SIN 2010)

TRACKS OF THE CONFERENCE

- 1. Security Assessment, Policies, Privacy, and Educational Programs
- 2. Management and Models of Security and Integrity
- 3. Cryptography, Security and Networks
- 4. Attacks and Intrusion Detection

7—11 September 2010

Southern Federal University Russia, Taganrog

Organized by



Dept. of Security of Information
Technologies,
South-Russian Regional
Scientific-Educational Center for
Information Security Problems,
Southern Federal University,
Taganrog, Rostov, Russia



Center for Advanced Security Research Darmstadt, Germany



Information and Networked Systems Security (INSS) & The Intelligent Systems Group (ISG), Dept. of Computing Macquarie University Sydney, Australia



Internet Technologies Research Center, Eastern Mediterranean University, North Cyprus

In technical cooperation with



SIN 2010 CONFERENCE PROGRAM

September 7			September 8	September 9			September 10		September 11	
time	event	time	event	time	event	time	event		time	event
9:00	Bus transfer	9:00	Bus transfer	9:00	Bus transfer	9:00	Bus transfer			
9:30	Registration, Room I-409 Tutorial ID #1: "Selected Exercises on Ethical Hacking from Security CTF Competitors" by Artem Blagodarenko, Konstantin Olshanov, Anton Rechkov, Sergey Cherementsev and Alexander Boiko	9:30	Registration, Room I-409 Tutorial ID #2: "Wavelets and Network Anomaly Detection" by Michele Pagano	9:30	Registration, Atrium Opening Ceremony (Council Room)	09:30	Invited Talk: Alexander Sukhinov "Experience of solving economic security problems on a supercomputer at TIT SFedU" (Council Room) Chair: Olga Peskova			
10:45	Coffee break	10:45	Coffee break	10:45	Coffee break	10:15	Coffee break			
11:00	Tutorial ID #1 (cont)	11:00	Tutorial ID #2 (cont)	11:00	Keynote: Josef Pieprzyk "Evolution of Cryptographic Hashing" Chair: Atilla Elçi	10:30	Keynote: Alexander Tereshkin "Evil Maid Goes After PGP Whole Disk Encryption" Chair: Maxim Anikeev			
12:00	Lunch break	13:00	Lunch break	12:00	Lunch break	12:00	Lunch break			
13:00	Tutorial ID #1 (cont)	14:00	Tutorial ID #3: "Interactive Proof Systems for Cryptography" by Vadym Fedyukovych	13:00	Council Room Session SA.1: Security Assessment, Policies, Privacy, and Educational Programs Chair: Alexander Chefranov Room D-406 Session AI.1: Attacks and Intrusion Detection Chair: Vijay Laxmi	13:00	Council Room Session CS.1: Cryptography, Security and Networks Chair: Josef Pieprzyk	Session SI.1: Management and Models of Security and Integrity Chair: Maxim Kalinin	11:00 - 14:00	Yachting
14:45	Coffee break	15:45	Coffee break	14:45	Coffee break	14:45	Coffee break			
15:00	Tutorial ID #1	15:00	Tutorial ID #3	15:00	Session SA.2: Security Assessment, Policies, Privacy, and Educational Programs Chair: Alexander V. Lyubimov Session AI.1: Attacks and Intrusion Detection Chair: Evgeny Abramov	15:00	Session CS.2: Cryptography, Security and Networks Chair: Lyudmila Babenko	Session SI.2: Management and Models of Security and Integrity Chair: Takeshi Takahashi		
-	(cont)		(cont)	15:45	Coffee break 15:45 Coffee break		fee break			
17:00		17:00		16:00 - 17:00	Session SA.3: Security Assessment, Policies, Privacy, and Educational Programs Chair: Alexander Basan	16:00	Session CS.3: Cryptography, Security and Networks Chair: Saïd Gharout	Session SI.3: Management and Models of Security and Integrity Chair: Irina Mashkina		
18:00	Yachting	17:30 - 19:30	City Tour (Bus pickup at 17:00 at the hotel or at 17:30 at the tutorial venue)	17:30 - 18:30	Excursion to the Research Institute of Multiprocessor Computing Systems and IT-Security Department	17:30	Closing (Council Room) Concert			
20:00		19:30	Cocktail (Congress-Hotel Taganrog)	19:00 - 21:30	Banquet and Awards (restaurant "Albatross")	18:30 - 19:30				

Tuesday, September 7, 2010

9:30 - 10:00

Registration (Room I-409, Chekhova st., 2)

10:00 - 17:00

Tutorial ID#1: Selected Exercises on Ethical Hacking from Security CTF Competitors

Tutors: Artem Blagodarenko, Konstantin Olshanov, Anton Rechkov, Sergey Cherementsev and

Alexander Boiko (Technological Institute of Southern Federal University)

Location: Room I-409

Coffee breaks at 10:45 and 14:45

Lunch break at 12:00

18:00 - 20:00

Yachting

Wednesday, September 8, 2010

9:30 - 10:00

Registration (Room I-409, Chekhova st., 2)

10:00 - 12:00

Tutorial ID #2: Wavelets and Network Anomaly Detection

Tutor: Michele Pagano (University of Pisa, Italy)

Location: Room I-409 Coffee break at **10:45**

13:00 - 14:00

Lunch break

14:00 - 17:00

Tutorial ID #3: Interactive Proof Systems for Cryptography

Tutor: Vadym Fedyukovych (IntroPro LLC, Ukraine)

Location: Room I-409 Coffee break at **15:45**

17:30 - 19:30

City Tour

19:30

Cocktail (Congress-Hotel "Taganrog", Dzerjinskogo st., 161)

Thursday, September 9, 2010

9:30 - 10:00

Registration (Atrium, Nekrasovskiy st., 44)

10:00 -10:45

Opening Session

Presenter: Maxim Anikeev (Southern Federal University, Russia)

Location: Council Room

Conference welcome:

Oleg Makarevich (Southern Federal University, Russia, Taganrog)

Welcome remarks from Program Committee SIN 2010

10:45 - 11:00

Coffee break

11:00 - 11:45

Keynote 1 Session

Session Chair: Atilla Elçi (Toros University, Turkey)

Location: Council Room

Evolution of Cryptographic Hashing

Josef Pieprzyk (Macquarie University, Sydney, Australia)

12:00 - 13:00

Lunch break

13:00 – 14:45 Parallel Sessions

Session SA.1: Security Assessment, Policies, Privacy, and Educational Programs

Session Chair: Alexander Chefranov (Eastern Mediterranean University, North Cyprus)

Location: Council Room

• Integral Engineering Technique for Information Security Methodologies

Alexander V. Lyubimov (Saint-Petersburg State Polytechnical University)

• An Application of Integral Engineering Technique to Information

Security Standards Analysis and Refinement

Dmitry V. Cheremushkin (National Research University of Information Technologies, Mechanics and Optics),

Alexander V. Lyubimov (Saint-Petersburg State Polytechnical University)

• Towards a System-Wide and Transparent Security Mechanism

Using Language-Level Information Flow Control

Mohammad R. Azadmanesh, Mohsen Sharifi (Iran University of Science and Technology)

• A Trust Quantification Method Based on Grey Fuzzy Theory

Shunan Ma, Jingsha He, Feng Gao, Yuqiang Zhang (Beijing University of Technology)

Session AI.1: Attacks and Intrusion Detection

Session Chair: Vijay Laxmi (Malaviya National Institute of Technology, India)

Location: Room D-406

• A DSL for Intrusion Detection Based on Constraint Programming

Pedro D. Salgueiro, Salvador P. Abreu (Universidade de Évora, Portugal)

• Immune Model Based Approach for Network Intrusion Detection

Vadim D. Kotov, Vladimir Vasilyev (Ufa State Aviation Technical University, Russian Federation)

• A Distributed Multi-Approach Intrusion Detection System for Web Services

Meisam S. A. Najjar, Mohammad Abdollahi Azgomi (Iran University of Science and Technology)

• FPGA Based Programmable Embedded Intrusion Detection System

Taner Tuncer, Yetkin Tatar (Firat University, Turkey)

14:45 - 15:00

Coffee break

15:00 –15:45 Parallel Sessions

Session SA.2: Security Assessment, Policies, Privacy, and Educational Programs

Session Chair: Alexander V. Lyubimov (St.-Petersburg State Polytechnical University, Russia) Location: Council Room

• Bachelor of Information Security ("Automated Systems Security" Profile)

Alexander Tolstoy, Natalia Miloslavskaya (National Research Nuclear University MEPhI, Russia)

• Protecting User Privacy with Multi-Field Anonymisation of LP Addresses

Carsten Schmoll, Nikolaos Chatzis (Fraunhofer Institute Fokus),

Christian Henke (Technical University Berlin)

• Analysis of Privacy in Online Social Networks of Runet

Slava Kisilevich, Florian Mansmann (*University of Konstanz*)

• The Weak and the Strong Password Preferences: A Case Study on Turkish Users

Ilker Korkmaz (Izmir University of Economics),

Mehmet Emin Dalkilic (Ege University)

Session AI.2: Attacks and Intrusion Detection

Session Chair: Evgeny Abramov (Southern Federal University, Russia)

Location: Room D-406

• A Novel Defense Mechanism Against Sybil Attacks in VANET

Jyoti Grover, Manoj Singh Gaur, Vijay Laxmi (Malaviya National Institute of Technology, India)

• A Collusion Attack Detection Method for OLSR-Based

MANETs Employing Scruple Packets

Lalith Suresh P., Rajbir Kaur, Manoj Singh Gaur, Vijay Laxmi (Malaviya National Institute of Technology, India)

• MEDUSA: MEtamorphic malware Dynamic analysis Using Signature from API

Vinod P. Nair, Harshit Jain, Yashwant K. Golecha, Manoj Singh Gaur, Vijay Laxmi (*Malaviya National Institute of Technology, India*)

15:45 - 16:00

Coffee break

16:00 - 17:00

Session SA.3: Security Assessment, Policies, Privacy, and Educational Programs

Session Chair: Alexander Basan (Southern Federal University, Russia)

Location: Council Room

• A Calculus for the Qualitative Risk Assessment of Policy Override Authorization

Steffen Bartsch (TZI, Universität Bremen)

• Rating the Raters: A Reputation System for Wiki-Like Domains

Alexis V. Pantola (De La Salle University),

Susan Pancho-Festin (*University of the Philippines*),

Florante Salvador (De La Salle University)

• Trust Based Multi-Path Routing for End to End Secure Data Delivery in MANETs

Poonam Gera, Kumkum Garg, Manoj Misra (Indian Institute of Technology, Roorkee)

• Digital Camera Identification Based on Rotated Images

Dmitry Rubley, Vladimir Fedorov, Oleg Makarevich (Southern Federal University, Russia)

17:30 - 18:30

Excursion to the Research Institute of Multiprocessor Computing Systems and IT-Security Department

Location: Chekhova st., 2

19:00 - 21:30

Banquet and Awards

Location: restaurant "Albatross", Pushkinskaya emb. 1

Friday, 10 September, 2010

09:30 – 10:15 Invited Talk

Session Chair: Olga Peskova (Southern Federal University, Russia)

Location: Council Room (Nekrasovskiy st., 44)

Experience of solving economic security problems on a supercomputer at TIT SFedU

Alexander Sukhinov (Southern Federal University, Russia)

10:15 - 10:30

Coffee break

10:30 - 11:30

Keynote Session 2

Session Chair: Maxim Anikeev (Southern Federal University, Russia)

Location: Council Room

Evil Maid Goes After PGP Whole Disk Encryption

Alexander Tereshkin (Independent Security Researcher)

12:00 - 13:00

Lunch break

13:00 – 14:45 Parallel Sessions

Session CS.1: Cryptography, Security and Networks

Session Chair: Josef Pieprzyk (Macquarie University, Australia)

Location: Council Room

• Differential Analysis of GOST Encryption Algorithm

Ludmila Babenko, Evgeniya Ishchukova (Southern Federal University, Russia)

• Estimation of Influence of Error Correction and Privacy Amplification on Kevs Generation Rate in OKD Systems

Dmitry M. Golubchikov, Konstantin E. Rumiantsev (Southern Federal University, Russia)

• Elgamal Public Key Cryptosystem and Signature Scheme in GU(m, p, n)

Alexander G. Chefranov, Ahmed Y. Mahmoud (Eastern Mediterranean University, North Cyprus)

• Efficient Hardware Implementations of High Throughput SHA-3 Candidates Keccak, Luffa and Blue Midnight Wish for Single- and Multi-Message Hashing

Abdulkadir Akın, Aydın Aysu, Onur Can Ulusel, Erkay Savaş (Sabanci University, Turkey)

Session SI.1: Management and Models of Security and Integrity

Session Chair: Maxim Kalinin (St. Petersburg Polytechnical University, Russia)

Location: Room D-406

• The Development of Information Security Operational Management System Based on the Intelligent Technologies

Irina V. Mashkina, Timur Kh. Tukhvatshin, Murat B. Guzairov (*Ufa State Aviation Technical University*)

• Ontological Approach Toward Cybersecurity in Cloud Computing

Takeshi Takahashi (National Institute of Information and Communications Technology, Japan),

Youki Kadobayashi (Nara Institute of Science and Technology, Japan),

Hiroyuki Fujiwara (Solution Crew Inc., Japan)

• Reinforcement Learning Intellectual Agent of Protection for Adapting to Surrounding Environment

Iryna Borysivna Tregubenko (Ministry of Science and Education of Ukraine Cherkasy State Technological University)

Coffee break

15:00 – 15:45 Parallel Sessions

Session CS.2: Cryptography, Security and Networks

Session Chair: Lyudmila Babenko (Southern Federal University, Russia)

Location: Council Room

• Design and Implementation of Robust Embedded Processor for Cryptographic Applications

Kazim Yumbul, Serdar Süer Erdem (Gebze Institute of Technology, Turkey),

Erkay Savas (Sabanci University, Turkey)

• Key Management with Host Mobility in Dynamic Groups

Saïd Gharout, Abdelmadjid Bouabdallah (Compiegne University of Technology),

Mounir Kellil (CEA LIST),

Yacine Challal (Compiegne University of Technology)

• Implementation and Performance Evaluation of the RSEP Protocol on ARM and Intel Platforms

Suleyman Kondakci, Gökhan Yilmaz (Izmir University of Economics)

Session SI.2: Management and Models of Security and Integrity

Session Chair: Takeshi Takahashi (National Institute of Information and Communications Technology, Japan)

Location: Room D-406

• Homogeneity Analysis of Power Consumption for Information Security Purposes

Tatiana Stepanova, Maxim Kalinin, Peter Baranov, Dmitry Zegzhda (*Polytechnical University*, St. Petersburg)

• Permanent Protection of Information Systems with Method

of Automated Security and Integrity Control

Maxim O. Kalinin (St. Petersburg Polytechnical University)

• Improving First Order Differential Power Attacks Through Digital Signal Processing

Alessandro Barenghi (Politecnico di Milano),

Gerardo Pelosi (Università degli Studi di Bergamo),

Yannick Teglia (STMicroelectronics)

15:45 - 16:00

Coffee break

16:00 –17:00 Parallel Sessions

Session CS.3: Cryptography, Security and Networks

Session Chair: Saïd Gharout (Université de Technologie de Compiègne, France)

Location: Council Room

Automated Method for Constructing of Network Traffic Filtering Rules

Evgeny Abramov, Denis Mordvin, Oleg Makarevich (Southern Federal University, Russia)

• Securing RFID-Based Authentication Systems Using ParseKey

Behnam Rahnama (European University of Lefke, Turkey),

Atilla Elci (Middle East Technical University, Turkey),

Selcuk Celik (European University of Lefke, Turkey)

• A Mobile IP Based WLAN Security Management Framework

with Reconfigurable Hardware Acceleration

Soumya Maity, Padmalochan Bera, Soumya Kanti Ghosh (Indian Institute of Technology, Kharagpur)

Session SI.3: Management and Models of Security and Integrity

Session Chair: Irina Mashkina (Ufa State Aviation Technical University, Russia)

Location: Room D-406

• Review of European Patents for Methods of Security System Design

Alexander S. Mosolov, Olga V. Grafova (Amulet JSC)

• Ontology-Based Analysis of Information Security Standards and Capabilities for Their Harmonization

Vladimir I. Vorobiev, Ludmila N. Fedorchenko, Vadim P. Zabolotsky (Russian Academy of Sciences).

Alexander V. Lyubimov (St. Petersburg State Polytechnical University)

• Cyber Security Quantification Model

M. Asif Khan, Mureed Hussain (SZABIST, Islamabad)

17:00 - 17:30

Closing

Location: Council Room

18:30 - 19:30

Concert

Saturday, 11 September, 2010

11:00 - 14:00

Yachting

SIN 2010 Conference Organization

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