Program
of the Fourth International Scientific School
"Incident Management and Countering Targeted Cyber-Physical Attacks in Distributed Largescale Critical Systems" (IM&CTCPA 2018)"

St. Petersburg, October 23–25, 2018

Organizers:

St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS) and ITMO University

ITMO University, St. Petersburg, Lomonosova str. 9, assembly hall

http://www.comsec.spb.ru/imctcpa18

October 23

Timing	Title of presentation	Presenter
9.00-9.30	Registration	
9.30-9.50	Opening the **4th International scientific school IM&CTCPA 2018** Introduction	**Igor Kotenko**, Doctor of Technical Sciences, Professor, Head of Laboratory of Computer Security Problems, St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, SPIIRAS, Co-Head of the International Laboratory "Information security of cyberphysical systems", ITMO University, St. Petersburg, Russia
Session 1.1. Chair - Prof. Dr. Igor Kotenko		
10.00-10.50	High performance computing issues in cyber-physical systems and the fourth industrial revolution	**Didier El Baz**, PhD, Head of the Distributed Computing and Asynchronism team, The National Center for Scientific Research (CNRS), Toulouse, France, Co-Head of the International Laboratory "Information security of cyberphysical systems", ITMO University, St. Petersburg, Russia
11.00-11.50	Machine Learning Methods for In-Vehicle Intrusion Detection	**Roland Rieke**, PhD, Senior researcher of Department Cyber-Physical Systems Security, Fraunhofer-Institute for Secure Information Technology SIT, Darmstadt, Germany
12.00-13.00	Lunch	

Session 1.2. Chair – Dr. Andrey Chechulin		
13.00-13.50	Advanced Security Analytics	**Igor Kotenko**, Doctor of Technical Sciences, Professor, Head of Laboratory of Computer Security Problems, St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences, SPIIRAS, Co-Head of the International Laboratory "Information security of cyber-physical systems", ITMO University, St. Petersburg, Russia
14.00-14.50	Securing Insecure Protocols	**Yannick Chevalier**, PhD, Assistant Professor, Paul Sabatier University (Paul Sabatier University, Toulouse III), Toulouse, France
14.50-15.00	Coffee-break	
Session 1.3. Chair – Dr. Vasily Desnitsky		
15.00-15.20	Reasoning about Database Queries and Updates	**Martin Strecker**, PhD, Assistant Professor, Paul Sabatier University (Paul Sabatier University, Toulouse III), Toulouse, France
15.20-15.40	Modeling of the Cyber-Physicals Systems. Design and Validation	**Dmitry Levshun**, Researcher of the laboratory of computer security problems of SPIIRAS, postgraduate student of ITMO University, St. Petersburg, Russia
15.40-16.00	Manual security analysis: visualization means vs automated analysis	**Maxim Kolomeec**, Researcher of the laboratory of computer security problems of SPIIRAS, postgraduate student of ITMO University, St. Petersburg, Russia

October 24

Timing	Title of presentation	Presenter
Session 2.1. Chair – Prof. Dr. Igor Saenko		
9.00-9.50	Monitoring of social networks	**Lidia Vitkova,** Researcher of the laboratory of computer security problems of SPIIRAS
10.00-10.50	Semantic computing, big data and aspects of their application for cybersecurity	**Vladimir Gorodetsky**, Doctor of Technical Sciences, Professor, TRA Robotics, St. Petersburg, Russia
11.00-11.50	Application of the method of topological transformation of stochastic networks for solving information security problems	**Andrey Privalov**, Professor of the Emperor Alexander I St. Petersburg State Transport University (PGUPS), St. Petersburg, Russia
12.00-13.00	Lunch	
Session 2.2. Chair – Lidia Vitkova		
13.00-13.50	Visual analytics: illuminating the Employees' Routes	**Evgenia Novikova,** PhD, Senior researcher of the laboratory of computer security problems of SPIIRAS, St. Petersburg, Russia
14.00-14.50	Approach to modeling of information conflicts in the interaction of complex multi-level systems	**Sergey Makarenko**, PhD, Intel Group Corporation, St. Petersburg, Russia

October 25

Timing	Title of presentation	Presenter
Session 3.1. Chair – Dr. Olga Tushkanova		
10.00-10.50	Model of information integrity in a long period of time	**Anatoly Minzov,** Doctor of Technical Sciences, Professor of the Department of Security of Information Technology, MPEI, Moscow, Russia
11.00-11.50	Network Security	**Andrey Chechulin,** PhD, Lead researcher of the laboratory of computer security problems of SPIIRAS, senior researcher of ITMO University, St. Petersburg, Russia
12.00-13.00	Lunch	
Session 3.2. Chair – Dr. Vasily Desnitsky		
13.00-13.50	Architecture of Cisco Application Centric Infrastructure and its security	**Igor Ushakov**, Senior Lecturer, Department of Secure Communication Systems, Bonch-Bruevich St. Petersburg State University of Telecommications, St. Petersburg, Russia
14.00-14.50	Information integrity methods based on wavelet transformations to protect information storage means	**Sergey Taranov**, Department of Design and Security of Computer Systems, ITMO University, St. Petersburg, Russia
14.50-15.10	Coffee-break	
15.10-16.00	Models and methods of adaptive monitoring of automated special-purpose systems operating in cyberspace	**Roman Zakharchenko**, PhD, Doctoral student of the Krasnodar Higher Military School named after SM. Shtemenko
16.10-17.00	Computational intelligence methods and their application to network attack detection	**Alexander Branitskiy**, PhD, researcher of the laboratory of computer security problems of SPIIRAS, engineer of ITMO University, St. Petersburg, Russia
17.10-18.00	Energy resource exhausting attacks on cyber-physical systems	**Vasily Desnitsky**, PhD, Senior researcher of the laboratory of computer security problems of SPIIRAS, senior researcher of ITMO University, St. Petersburg, Russia
18.00-18.10	Concluding remarks	