

Eleventh Annual IFIP WG 11.10 International Conference on Critical Infrastructure Protection

**SRI International
1100 Wilson Boulevard, Suite 2800 (28th Floor)
Arlington, Virginia 22209
March 13-15, 2017**

March 13, 2017 (Monday)

8:15am - 8:50am: Breakfast

9:00am - 9:10am: Welcoming Remarks

David Balenson, Conference General Chair, SRI International, Arlington, Virginia, USA

9:10am - 10:10am: Keynote Lecture

Regulating Cyber Security in the Norwegian Energy Sector

Janne Merete Hagen, Head Engineer, Norwegian Water Resources and Energy Directorate, Oslo, Norway

10:10am - 10:30am: Break

10:30am - 12:00pm: Session 1: Industrial Control Systems I

Chair: David Balenson, SRI International, Arlington, Virginia, USA

Improving the Cyber Resilience of Industrial Control Systems

Andrew Chaves, Mason Rice, Stephen Dunlap and John Pecarina

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Threat Landscapes Related to SCADA System Integration

Tor Grotan

SINTEF Technology and Society, Trondheim, Norway

Enforcing End-to-End Security with Application-Level Cryptography in SCADA Systems

Adrian-Vasile Duka, Bela Genge, Piroska Haller and Bogdan Crainicu

Petru Maior University of Tirgu Mures, Tirgu Mures, Romania

12:00pm - 1:00pm: Lunch

1:10pm - 2:10pm: Keynote Lecture

Partnering for Impact: Idaho National Laboratory's Approach to Critical Infrastructure Protection

Zachary Tudor, Associate Laboratory Director, National and Homeland Security, Idaho National Laboratory, Idaho Falls, Idaho, USA

2:15pm - 3:15pm: Session 2: Electric Power Infrastructure I

Chair: Richard George, Johns Hopkins Applied Physics Laboratory, Laurel, Maryland, USA

Security Analysis of an Advanced Metering Infrastructure

Aaron Hansen, Jason Staggs and Sujeet Sheno

University of Tulsa, Tulsa, Oklahoma, USA

Detecting Data Manipulation Attacks on an IEC 61850 Based Substation Interlocking Function Using Direct Power Feedback

Eniye Tebekaemi, Edward Colbert and Duminda Wijesekera

George Mason University, Fairfax, Virginia, USA

U.S. Army Research Laboratory, Adelphi, Maryland, USA

3:15pm - 3:30pm: Break

March 13, 2017 (Monday) (continued)

3:30pm - 5:00pm: Session 3: Infrastructure Protection

Chair: Tor Grotan, SINTEF Technology and Society, Trondheim, Norway

Defending Building Automation Systems with Decoy Networks

Caleb Mays, Mason Rice, Benjamin Ramsey, John Pecarina and Barry Mullins

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Protecting the Transportation Sector from Climate Change: Analysis and Classification of Adaptation Options

Georgia Lykou, George Stergiopoulos, Antonios Papachryssanthou and Dimitris Gritzalis

Athens University of Economics and Business, Athens, Greece

Multiple Security Domain Model of a Vehicle in an Automated Vehicle System

Uday Kanteti and Bruce McMillin

Missouri University of Science and Technology, Rolla, Missouri, USA

5:00pm - 5:30pm: IFIP WG 11.10 Business Meeting

5:30pm - 7:30pm: Conference Reception

March 14, 2017 (Tuesday)

8:15am - 8:50am: Breakfast

9:00am - 10:00am: Keynote Lecture

When You Can't Stop the Vehicle, You Must Stop the Threat!

Robert Hickey, Aviation Program Manager, Cyber Security Division, Science and Technology, U.S. Department of Homeland Security, Washington, DC, USA

10:00am - 10:30am: Break

10:30am - 12:00pm: Session 4: Industrial Control Systems II

Chair: Janne Merete Hagen, Norwegian Water Resources and Energy Directorate, Oslo, Norway

Software Defined Response and Network Reconfiguration for Industrial Control Systems

Hunor Sandor, Bela Genge, Piroska Haller and Flavius Graur

Petru Maior University of Tirgu Mures, Tirgu Mures, Romania

Industrial Control System Honeypot Network Traffic Generation

Htein Lin, Stephen Dunlap, Mason Rice and Barry Mullins

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Industrial Control System Internal Network Threat Analysis: A Study of the Siemens PLC-Controlled Elevator System

Raymond Chan and Kam-Pui Chow

University of Hong Kong, Hong Kong, China

12:00pm - 1:00pm: Lunch

1:10pm - 2:10pm: Session 5: Electric Power Infrastructure II

Chair: Bruce McMillin, Missouri University of Science and Technology, Rolla, Missouri, USA

Wind Farm Security: Attack Surface, Targets, Scenarios and Mitigation

Jason Staggs, David Ferlemann and Sujeet Sheno

University of Tulsa, Tulsa, Oklahoma, USA

Network Forensic Analysis of Electrical Substation Automation Traffic

Megan Leierzapf and Julian Rrushi

Western Washington University, Bellingham, Washington, USA

2:15pm - 3:15pm: Session 6: Infrastructure Data Fusion and Retrieval

Chair: Kam-Pui Chow, University of Hong Kong, Hong Kong, China

Distributed Data Fusion for Situation Awareness in Critical Infrastructures with Link Failures

Antonio Di Pietro, Andrea Gasparri and Stefano Panzieri

Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Rome, Italy

University of Roma Tre, Rome, Italy

Exploiting Web Ontologies for Automatic Critical Infrastructure Data Retrieval

Luca Galbusera and Georgios Giannopoulos

European Commission Joint Research Centre, Ispra, Italy

3:15pm - 3:45pm: Break

3:45pm - 4:45pm: Session 7: Security in Manufacturing Environments

Chair: Julian Rrushi, Western Washington University, Bellingham, Washington, USA

Subtractive vs. Additive Manufacturing -- Similarities and Differences from the Security Perspective

Mark Yampolskiy, Wayne King, Gregory Pope, Sofia Belikovetsky and Yuval Elovici

University of South Alabama, Mobile, Alabama, USA

Lawrence Livermore National Laboratory, Livermore, California, USA

Ben Gurion University, Beersheba, Israel

The Challenge of Automating Security Configuration Checklists in Manufacturing Environments

Joshua Lubell

National Institute of Standards and Technology, Gaithersburg, Maryland, USA

March 15, 2017 (Wednesday)

8:15am - 8:45am: Breakfast

8:45am - 10:15am: Session 8: Internet of Things Security

Chair: Art Conklin, University of Houston, Houston, Texas, USA

A Cyber Risk Scoring System for Medical Devices

Ian Stine, Mason Rice, Stephen Dunlap and John Pecarina

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Securing Bluetooth Low Energy Enabled Locks from Unauthorized Access and Surveillance

Anthony Rose, Jason Bindewald, Benjamin Ramsey, Mason Rice and Barry Mullins

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Enabling Bluetooth Low Energy Auditing through Synchronized Tracking of Multiple Connections

Jose Gutierrez del Arroyo, Jason Bindewald, Scott Graham and Mason Rice

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

10:15am - 10:30am: Break

10:30am - 11:30am: Session 9: Industrial Control System Training Environments

Chair: Mason Rice, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Categorization of Cyber Training Environments for Industrial Control Systems

Evan Plumley, Mason Rice, Stephen Dunlap and John Pecarina

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

Multi Programmable Logic Controller Exercise Environments for Training Industrial Control System First Responders

Joseph Daoud, Mason Rice, Stephen Dunlap and John Pecarina

Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

11:30am - 12:30pm: Lunch