March 11, 2019 (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
*Technical Perspectives on the U.S. Election of 2018*
Jeremy Epstein, Deputy Division Director, Division of Computer and Network Systems, National Science Foundation, Alexandria, Virginia, USA

10:10am - 10:40am: Session 1: Themes and Issues
Chair: David Balenson, SRI International, Arlington, Virginia, USA
*Quantifying the Cost of Privacy Resulting from Data Breaches*
Siddharth Dongre, Sumita Mishra, Carol Romanowski and Manan Buddhadev
Rochester Institute of Technology, Rochester, New York, USA

10:40am - 11:00am: Break

11:00am - 12:00pm: Session 2: Infrastructure Security I
Chair: Scott Graham, Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA
*A Comparative Analysis Approach for Deriving Cybersecurity Failure Scenarios for Natural Gas Distribution Infrastructure*
Michael Locasto and David Balenson
SRI International, New York, New York, USA
SRI International, Arlington, Virginia, USA
*Cyber Security Modeling of Non-Critical Nuclear Power Plant Digital Instrumentation*
Trevor MacLean, Michael Haney and Robert Borrelli
University of Idaho, Idaho Falls, Idaho, USA

12:00pm - 1:00pm: Lunch

1:10pm - 2:10pm: Keynote Lecture
*My Experiences Hacking Automobiles, Aircraft and Ships*
James Ashworth, Electronics Engineer, U.S. Navy, Patuxent River, Maryland, USA

2:15pm - 3:15pm: Session 3: Network Infrastructure Security
Chair: Kam-Pui Chow, University of Hong Kong, Hong Kong, China
*A Cyber Vulnerability Assessment of Infiniband Networking*
Daryl Schmitt, Scott Graham, Patrick Sweeney and Robert Mills
Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA
*Securing Wireless Communications Coprocessors from Attack in the Internet of Things*
Jason Staggs and Sujeet Shenoi
University of Tulsa, Tulsa, Oklahoma, USA

3:15pm - 3:45pm: Break
March 11, 2019 (Monday) (continued)

3:45pm - 5:15pm: Session 4: Transportation Infrastructure Security
Chair: Michael Haney, University of Idaho, Idaho Falls, Idaho, USA

*Vehicle Identification and Route Reconstruction via TPMS Data Leakage*
Kenneth Hacker, Scott Graham and Stephen Dunlap
Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

*Electronic Control Unit Discrimination Using Wired Signal Distinct Native Attributes*
Rahn Lassiter, Scott Graham, Timothy Carbino and Stephen Dunlap
Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

*Modeling Liability Data Collection Systems for Intelligent Transportation Infrastructure Using Hyperledger Fabric*
Luis Cintron, Scott Graham and Douglas Hodson
Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, USA

5:15pm - 5:45pm: IFIP WG 11.10 Business Meeting

5:45pm - 7:45pm: Conference Reception
March 12, 2019 (Tuesday)

8:15am - 8:45am: Breakfast

8:45am - 9:45am: Keynote Lecture
Software Component Transparency, or How I Learned to Stop Worrying and Love the S-BOM
Allan Friedman, Director of Cybersecurity Initiatives, National Telecommunications and Information Administration, Washington, DC, USA

9:45am - 10:00am: Break

10:00am - 12:00pm: Session 5: Industrial Control Systems Security
Chair: Richard George, Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland, USA
Advances in Cyber-Physical System Honeypots to Enhance Threat Intelligence
Michael Haney
University of Idaho, Idaho Falls, Idaho, USA
Using TLA+ to Model and Check Bump-in-the-Wire Security for Industrial Control Systems
Mehdi Sabraoui, Jeffrey Hieb, Adrian Lauf and James Graham
University of Louisville, Louisville, Kentucky, USA
Defining Attack Patterns for Industrial Control Systems
Raymond Chan, Kam-Pui Chow and Chun-Fai Chan
Singapore Institute of Technology, Singapore
University of Hong Kong, Hong Kong, China
Refined Incident Response Model for Industrial Control System Forensics Based on Historical Events
Ken Yau, Kam-Pui Chow and Siu-Ming Yiu
University of Hong Kong, Hong Kong, China

12:00pm - 12:45pm: Lunch

12:45pm - 1:45pm: Session 6: Infrastructure Security II
Chair: Art Conklin, University of Houston, Houston, Texas, USA
A Roadmap for Converting an Electric Power Utility Network to Defend Against Crafted Inputs
Michael Millian, Prashant Anantharaman, Sergey Bratus, Sean Smith and Michael Locasto
Dartmouth College, Hanover, New Hampshire, USA
SRI International, New York, New York, USA
An Attack-Fault Tree Analysis of Movable Railroad Swing Bridges
Matthew Jablonski, Yongxin Wang, Chaitanya Yavvari, Zezhou Wang, Xiang Liu, Keith Holt and Duminda Wijesekera
George Mason University, Fairfax, Virginia, USA
Rutgers University, Piscataway, New Jersey, USA
HNTB Corporation, King of Prussia, Pennsylvania, USA

1:45pm - 2:00pm: Break

2:00pm - 3:00pm: Session 7: Infrastructure Security III
Chair: Sujeet Shenoi, University of Tulsa, Tulsa, Oklahoma, USA
Dynamic Repair of Mission-Critical Applications with Runtime Snap-Ins
Peter Brady, Sergey Bratus and Sean Smith
Dartmouth College, Hanover, New Hampshire, USA
Data-Driven Field Mapping of Heterogeneous Security Events for Integrated Monitoring
Seungoh Choi, Yesol Kim, Jeong-Han Yun, Byung-Gil Min and Hyoung-Chun Kim
Affiliated Institute of ETRI, Daejeon, South Korea

3:00pm - 4:00pm: Closing Lecture
Using Open-Source Intelligence to Attack Critical Infrastructure Assets
Sujeet Shenoi, Professor of Computer Science and Chemical Engineering, University of Tulsa, Tulsa, Oklahoma, USA