HoTSoS Symposium and Bootcamp
HOT TOPICS *in the* SCIENCE OF SECURITY

APRIL 4-5, 2017 | HANOVER, MARYLAND

http://hot-sos.com

Monday, April 3

1830 - 2030 **Evening Reception at The Hotel at Arundel Preserve**
Patuxent Ballroom

Tuesday, April 4

0800 - 1730 **Registration**

0830 - 0900 **Welcome and Introduction**

0900 - 1000 **Keynote: Security of Cyber-Physical Systems: Challenges and Approaches**
Insup Lee, UPenn

1000 - 1030 **Posters and Break**

1030 - 1200 **SESSION 2**

Paper: Leveraging Unique CPS Properties to Design Better Privacy-Enhancing Algorithms
Jairo Giraldo, Alvaro A. Cárdenas, Murat Kantarcioglu
University of Texas at Dallas

Paper: Characterizing Scientific Reporting in Security Literature: An analysis of ACM CCS and IEEE S&P Papers
**Morgan Burcham, *Mahran Al-Zyoud, *Jeffrey C. Carver, [†]Mohammed Alsaleh, **Hongying Du, [‡]Fida Gilani, [‡]Jun Jiang, **Akond Rahman; **Özgür Kafali, [‡]Ehab Al-Shaer, **Laurie Williams*
*University of Alabama, [†]UNC Charlotte, **NC State University, [‡]UNC Chapel Hill*

Paper: Optimal Security Investments in a Prevention and Detection Game
Carlos Barreto, Alvaro A. Cárdenas, Alain Bensoussan
University of Texas at Dallas

1200 - 1330 **Lunch *(on your own)***

1330 - 1600 **SESSION 3**

1330 - 1430 **Keynote: Navigating Privacy Issues in A Data Driven World**
Jules Polonetsky, Future of Privacy Forum

1430 - 1530 **Panel Discussion**
MODERATOR: **William L. Scherlis*
PANELISTS: ***David Melski, ***Charles Nelson, [†]Sam Septembre, [†]Yan Shoshitaishvili*
Carnegie Mellon University*, GrammaTech**, USCC***, Navy[†], UC Santa Barbara[†]

1530 - 1600 **Posters and Break**

1600 - 1730 **SESSION 4 - Parallel Tutorial Session**

The Bugs Framework (BF) "Hands-On"
Irena Bojanova and Paul E. Black
National Intitute of Standards and Technology

System Monitoring for Security
Xusheng Xiao, Case Western Reserve University

1800 **Shuttle to American Visionary Art Museum**
(Meet in the Hotel Lobby - Don't be late!)

1830 - 2100 **Dinner at the American Visionary Art Museum**
800 Key Highway, Baltimore, MD 21230

Wednesday, April 5

0800 - 1530 **Registration**

0900 - 1200 **SESSION 5**

0900 - 1000 **Keynote: Differential Privacy and Data Analysis**
Aaron Roth, UPenn

1000 - 1030 **Posters and Break**

1030 - 1200 **Paper: Learning a Privacy Incidents Database**
**Pradeep K. Murukannaiah, [†]Chinmaya Dabral, [‡]Karthik Sheshadri, [‡]Esha Sharma, [†]Jessica Staddon*
*Rochester Institute of Technology, [†]NC State University

Paper: On the Tradeoff Between Privacy and Utility in Collaborative Intrusion Detection Systems- A Game Theoretical Approach
**Richeng Jin, [†]Xiaofan He, *Huaiyu Dai*
*NC State University, [†]Lamar University

Paper: Use of Phishing Training to Improve Security Warning Compliance: Evidence from a Field Experiment
**Weining Yang, *Aiping Xiong, [†]Jing Chen, *Robert W. Proctor, *Ninghui Li*
*Purdue University, [†]New Mexico State University

1200 - 1330 **Lunch *(on your own)***

1330 - 1345 **Announcement of Best HoTSoS 2017 Poster**

HoTSoS 2018
Laurie Williams, North Carolina State University

1345 - 1515 **SESSION 6**

Paper: Global Variation in Attack Encounters and Hosting
**Ghita Mezzour, [†]Kathleen M. Carley, [†]L. Richard Carley*
*International University of Rabat, [†]Carnegie Mellon University

Paper: An Approach to Incorporating Uncertainty in Network Security Analysis
Hoang Hai Nguyen, Kartik Palani, David M. Nicol
University of Illinois at Urbana-Champaign

Paper: Surveying Security Practice Adherence in Software Development
**Patrick Morrison, **Benjamin H. Smith, *Laurie Williams*
North Carolina State University*, IBM**

1515 - 1530 **Closing Remarks**

1530 **SYMPOSIUM ADJOURNED**

All sessions are in the Chesapeake Ballroom

Posters

A Value Model for Implementing Cyber Metrics and Best Practices
**Natalie Scala, *Emil Manuel, *Rachel Fredman, *Jasmin Farahani and [†]Paul Goethals*
*Towson University, [†]United States Military Academy

Advanced Metrics for Risk-Based Attack Surface Approximation
Christopher Theisen and Laurie Williams
North Carolina State University

An Instruction Set Randomization Framework for Developing Secure and Resilient CPS
Brad Potteiger, Zhenkai Zhang, and Xenofon Koutsoukos
Vanderbilt University

Analysis of Two Parallel Surveys on Cybersecurity: Users & Security Administrators - Notable Similarities & Differences
**Sean Smith, *Vijay Kothari, [†]Jim Blythe, and [‡]Ross Koppel*
*Dartmouth College, [†] ISI, University of Southern California, [‡] University of Pennsylvania

Convoy Leader: What Happens When They Know What They're Doing?
Carl Pearson, Allaire K. Welk, and Christopher B. Mayhorn
North Carolina State University

Cyber Knowledge is Here, but Not Evenly Distributed
Susan Campbell, Sunhee Kim, Valerie Karuzis, Scott Jackson, Meredith Hughes, and Alison Tseng
University of Maryland

Exploring Defect Categories for Infrastructure as Code
Akond Rahman and Laurie Williams
North Carolina State University

Factors for Differentiating Human from Automated Attacks
Kelly Greeling, Alex Withers, and Masooda Bashir
University of Illinois at Urbana-Champaign

FARM: a Toolkit for Finding the Appropriate Level of Realism for Modeling
Jim Blythe
ISI at University of Southern California

Flawed Mental Models Lead to Bad Cyber Security Decisions: Let's Do a Better Job
**Sean Smith, *Vijay Kothari, [†]Jim Blythe, and [‡]Ross Koppel*
*Dartmouth College, [†] ISI, University of Southern California, [‡] University of Pennsylvania

Learning Factor Graphs for Preempting Multi-Stage Attacks in Cloud Infrastructure
Phuong Cao, Alexander Withers , Zbigniew Kalbarczyk, and Ravishankar Iyer
University of Illinois at Urbana Champaign

Formulating a Method for Using Search Query Trends as a Measure of Mass-User Interest
Shaown Sarker, Andrew McNamara, and Jessica Staddon
North Carolina State University

Multi-agent System for Detecting False Data Injection Attacks Against the Power Grid
**Esther Amullen, **Hui Lin, and **Zbigniew Kalbarczyk*
Tennessee State University*, University of Illinois at Urbana-Champaign**

No (Privacy) News is Good News: An Analysis of Privacy News in the U. S. and U. K. from 2010-2016
Karthik Sheshadri, Nirav Ajmeri, and Jessica Staddon
North Carolina State University

Obsidian: A Safer Blockchain Programming Language
Michael Coblenz, Tyler Etzel, Joshua Sunshine, Jonathan Aldrich, Brad Myers, Eli Kanal, and Mark Sherman
Carnegie Mellon University

On the Disconnect between CVSS Scores and Vulnerability Bounties
Nuthan Munaiah and Andrew Meneely
Rochester Institute of Technology

Semantic Similarity in Security Regulations
Sarah Elder, Hui Guo, Munindar Singh, and Laurie Williams
North Carolina State University

Toward Effective Adoption of Security Practices
Shams Al-Amin, Nirav Ajmeri, Emily Berglund, Jon Doyle, and Munindar P. Singh
North Carolina State University

Toward Normative Threat Models to Prevent Misuse
Özgür Kafali, Munindar P. Singh, and Laurie Williams
North Carolina State University

Towards Privacy-Preserving Mobile Apps: A Balancing Act
**Dengfeng Li, *Wing Lam, *Wei Yang, *Chengkai Wu, [†]Xusheng Xiao, and *Tao Xie*
*University of Illinois at Urbana-Champaign and [†]Case Western Reserve University

What Makes Air Force Cyber Warfare Training Hard?
Lelyn Saner, Amber N. Bloomfield and Susan G. Campbell
University of Maryland

