Registration Day 1
30 September – 2 October 2018
Boston, MA

Registration
12:30 pm – 7:00 pm
Exhibits Open
1:30 pm – 5:00 pm

Tutorial Session A
1:30 pm – 3:00 pm

Building Secure Consortium Blockchains for Decentralized Applications
Chengjun Cai, Huayi Duan, and Cong Wang (City University of Hong Kong)

Secure Coding Practices, Automated Assessment Tools and the SWAMP (Part I)
Barton P. Miller and Elisa Heymann (University of Wisconsin-Madison)

Secure Your Things: Secure Development of IoT Software with Frama-C. (Part I)
Allan Blanchard (Inria Lille – Nord Europe, France), Nikolai Kosmatov (CEA, Software Reliability and Security Lab, France), Frédéric Loulergue (School of Informatics Computing and Cyber Systems, Northern Arizona University)

Continuous Verification of Critical Software. (Part I)
Mike Dodds, Stephen Magill, Aaron Tomb (Galois, Inc.)

DeepState: Bringing Vulnerability Detection Tools into the Development Cycle. (Part I)
Peter Goodman, Gustavo Grieco (Trail of Bits, Inc.), Alex Groce (School of Informatics, Computing & Cyber Systems, Northern Arizona University)

Parry and RIPOSTE: Honing Cybersecurity Skills with Challenge-Based Exercises. (Part I)
Jan Werner (University of North Carolina at Chapel Hill), Fabian Monrose (University of North Carolina at Chapel Hill)

Break
3:00 pm – 3:30 pm

Tutorial Session B
3:30 pm – 5:00 pm

Principles and Practices of Secure Coding
Sazzadur Rahaman, Na Meng, Daphne Yao (Virginia Tech)

Secure Coding Practices, Automated Assessment Tools and the SWAMP. (Part II)
Barton P. Miller and Elisa Heymann (University of Wisconsin-Madison)

Secure Your Things: Secure Development of IoT Software with Frama-C. (Part II)
Allan Blanchard (Inria Lille – Nord Europe, France), Nikolai Kosmatov (CEA, Software Reliability and Security Lab, France), Frédéric Loulergue (School of Informatics Computing and Cyber Systems, Northern Arizona University)

Continuous Verification of Critical Software. (Part II)
Mike Dodds, Stephen Magill, Aaron Tomb (Galois, Inc.)

DeepState: Bringing Vulnerability Detection Tools into the Development Cycle. (Part II)
Peter Goodman, Gustavo Grieco (Trail of Bits, Inc.), Alex Groce (School of Informatics, Computing & Cyber Systems, Northern Arizona University)

Parry and RIPOSTE: Honing Cybersecurity Skills with Challenge-Based Exercises. (Part II)
Jan Werner (University of North Carolina at Chapel Hill), Fabian Monrose (University of North Carolina at Chapel Hill)
A Test Infrastructure for Self-Adaptive Software Systems
E. Kilmer, T. Braje, D. Doyle, T. Meunier, P. Zucker, J. Hughes, M. Depot, M. Mazumder, G. Baah, K. Chadha, R. Cunningham, Lincoln Laboratory, Massachusetts Institute of Technology

Automating Threat Intelligence for SDL
R. Kannavara, M. Lindholm, P. Shrivastav (Intel Corp), J. Vangore, W Roberts (Olivet Nazarene University)

Trapping Spectres in Speculation Domains
Isaac Richter, Yufei Du, John Criswell (University of Rochester)

Transforming Code to Drop Dead Privileges
Xiaoyu Hu (BitFusion.io Inc.), Jie Zhou, Spyridoula Gravani, John Criswell (University of Rochester)

Diversity for Software Resilience
Andrew S. Gearhart (The Johns Hopkins University Applied Physics Laboratory)

Data Integrity
T. McBride, (NIST), A. Townsend, M. Ekstrom, L. Lusty, J. Sexton (MITRE)

Extracting Anti-specifications from Vulnerabilities for Program Hardening
Md Salman Ahmed, Danfeng Yao (Virginia Polytechnic Institute and State University) Haipeng Cai (Washington State University)

Automatic Patch Generation for Security Functional Vulnerabilities with GAN
Ya Xiao (Department of Computer Science, Virginia Tech), Danfeng (Daphne) Yao (Department of Computer Science, Virginia Tech)

Toward Secure and Serverless Trigger-Action Platforms
Pubali Datta (University of Illinois at Urbana-Champaign), Tristan Morris, Hayawardh Vijayakumar, Michael Grace (Samsung Research America), Adam Bates (University of Illinois at Urbana-Champaign), Amir Rahmati, (Samsung Research America, Stony Brook University)

Automatic Detection of Confused-Deputy Attacks on ARM TrustZone Environments
Darius Suciu (Stony Brook University), Stephen McLaughlin, Hayawardh Vijayakumar, Lee Harrison, Michael Grace (Samsung Research America), Amir Rahmati (Stony Brook University, Samsung Research America)

Practitioners Session – Small Businesses are Between a Cyber-Rock and a Cyber-Hard-Place
John R. Budenske, Andrew G. Budenske (Cyberific Secure Autonomous Systems Ltd.)

Command, Control and Coordination of Moving Target Defenses
Marco Carvalho (Florida Institute of Technology)

Moving Target Defenses and Cyber Resiliency
Rosalie M. McQuaid, Deborah J. Bodeau, Richard D. Graubart (MITRE)
Building and Deploying Secure Systems in Practice: Lessons, Challenges and Future Directions
Professor Dawn Song, University of California, Berkeley

Best Practices of Security Session Chair: Christoph Kern, Google

BP: Formal Proofs, the Fine Print and Side Effects
Toby Murray (University of Melbourne) and Paul van Oorschot (Carleton University)

BP: Integrating Cyber Vulnerability Assessments Earlier into the Systems Development Lifecycle
Sonja Glumich, Juanita Riley, Paul Ratazzi, and Amanda Ozanam (Air Force Research Laboratory Information Directorate)

BP: DECREE: A Platform and Benchmark Corpus for Repeatable and Reproducible Security Experiments
Lok Yan (Air Force Research Laboratory), Benjamin Price (MIT Lincoln Laboratory), Michael Zhivich (MIT Lincoln Laboratory), Brian Caswell (Lunge Technology), Christopher Eagle (Naval Postgraduate School), Michael Frantzen (Kudu Dynamics), Holt Sorenson (Google Inc.), Michael Thompson (Naval Postgraduate School), Timothy Vidas (Carnegie Mellon University), Jason Wright (Thought Networks), Vernon Rivet (MIT Lincoln Laboratory), Samuel Colt VanWinkle (MIT Lincoln Laboratory), and Clark Wood (MIT Lincoln Laboratory)

BP: Profiling Vulnerabilities on the Attack Surface
Christopher Theisen, Hyunwoo Sohn, Dawson Tripp, and Laurie Williams (North Carolina State University)

Data Access Security Session Chair: Michael Hicks, University of Maryland, College Park

Tyche: A Risk-Based Permission Model for Smart Homes
Amir Rahmati (Samsung Research America/Stony Brook University), Earlene Fernandes (University of Washington), Kevin Eykholt (University of Michigan), and Atul Prakash (University of Michigan)

Detecting leaks of sensitive data due to stale reads
Will Snively, William Klieber, Ryan Steele, David Svoboda, and Andrew Kotov (Software Engineering Institute – Carnegie Mellon University)

Transforming Code to Drop Dead Privileges
Xiaoyu Hu (BitFusion.io Inc.), Jie Zhou (University of Rochester), Spyridoula Gravani (University of Rochester), and John Criswell (University of Rochester)

Secure Coding and Analysis Session Chair: Toby Murray, University of Melbourne

Checked C: Making C Safe by Extension
Archibald Samuel Elliott (University of Washington), Andrew Ruef (University of Maryland), Michael Hicks (University of Maryland), and David Tarditi (Microsoft Research)

SGL: A domain-specific language for large-scale analysis of open-source code
Darius Foo, Ang Ming Yi, Jason Yeo, and Asankhaya Sharma (SourceClear, Inc.)

Light-touch Interventions to Improve Software Development Security
Charles Weir (Lancaster University, UK), Lynne Blair (Lancaster University, UK), Ingolf Becker (University College London, UK), Angela Sasse (University College London, UK), and James Noble (Victoria University of Wellington, NZ)

A Lingua Franca for Security by Design
Alexander van den Berghe (imec-DistriNet, KU Leuven), Koen Yskout (imec-DistriNet, KU Leuven), Riccardo Scandariato (Software Engineering Division, University of Gothenburg), and Wouter Joosen (imec-DistriNet, KU Leuven)
Day 2
30 September – 2 October 2018
Boston, MA

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<th>Time</th>
<th>Event Description</th>
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<td>4:40 pm – 5:00 pm</td>
<td>Break</td>
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<tr>
<td>5:00 pm – 6:00 pm</td>
<td><strong>Birds of a Feather Sessions</strong></td>
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<td><strong>Women in Cybersecurity</strong></td>
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<td>Leslie Weiner Alger, Creative Edge Leadership,</td>
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<td><strong>Moving Target: Where to Next?</strong></td>
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<td>Hamed Okhravi, MITLL; Marco Carvalho, FIT; Andrew Gearhart, JHU APL; Rosalie McQuaid, MITRE</td>
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<tr>
<td>6:00 pm – 7:00 pm</td>
<td><strong>IEEE SecDev Business Meeting</strong></td>
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<td><strong>Helping Organize IEEE SecDev 2019</strong></td>
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<td>Lee Lerner, Georgia Tech Research Institute</td>
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## Day 3

### 30 September – 2 October 2018

**Boston, MA**

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 am – 5:00 pm</td>
<td>Registration</td>
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<tr>
<td>7:30 am – 8:30 am</td>
<td>Breakfast</td>
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<tr>
<td>8:00 am – 5:00 pm</td>
<td>Exhibits Open</td>
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### Awards

- General Chair Report and Awards
- Best Papers and Best Reviewer Awards
- IEEE Cybersecurity Award for Practice
- IEEE Cybersecurity Award for Innovation

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<tr>
<td>8:30 am – 9:45 am</td>
<td>Awards</td>
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<tr>
<td>9:45 am – 10:00 am</td>
<td>Break</td>
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### Keynote II

**Provably Eliminating Exploitable Bugs**

Professor Kathleen Fisher (Tufts University, Former Program Manager of DARPA’s HACMS Program)

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<tbody>
<tr>
<td>10:00 am – 11:20 am</td>
<td>Keynote II</td>
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<tr>
<td>11:20 am – 11:30 am</td>
<td>Break</td>
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### Practitioners Session A: Enterprise Threat Modeling

Session Chair: Richard Chow, Intel

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>11:30 am – 12:30 pm</td>
<td>Practitioners Session A: Enterprise Threat Modeling</td>
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<tr>
<td>12:30 pm – 2:00 pm</td>
<td>Lunch</td>
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#### Scalable Static Analysis to Detect Security Vulnerabilities: Challenges and Solutions

Francois Gauthier, Nathan Keynes, Nicholas Allen, Diane Corney, and Padmanabhan Krishnan (Oracle Labs, Australia)

#### Applied Threat Driven Security Verification

Danny Dhillon and Vishal Mishra (Dell)

#### Rethinking Secure DevOps Threat Modeling: The Need for a Dual Velocity Approach

Altaz Valani (Security Compass)

#### Automating Threat Intelligence for SDL

Raghudeep Kannavara (Intel Corp), Jacob Vangore (Olivet Nazarene University), William Roberts (Olivet Nazarene University), Marcus Lindholm (Intel Corp), and Priti Shrivastav (Intel Corp)

### Practitioners Session B: New Security Needs and Approaches

Session Chair: Sarah Chmielewski, MIT LL

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<th>Time</th>
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<tr>
<td>3:45 pm – 5:15 pm</td>
<td>Practitioners Session B: New Security Needs and Approaches</td>
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### Lunch

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<tr>
<td>12:00 pm – 2:00 pm</td>
<td>Lunch</td>
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### Towards Understanding the Adoption of Anti-Spoofing Protocols in Email Systems

Hang Hu, Peng Peng, and Gang Wang (Virginia Tech)

### There’s a Hole in the Bottom of the C: On the Effectiveness of Allocation Protection

Ronald Gil (MIT CSAIL), Hamed Okhravi (MIT Lincoln Laboratory), and Howard Shrobe (MIT CSAIL).

### BP: Security Concerns and Best Practices for Automation of Software Deployment Processes – An Industrial Case Study

Vaishnavi Mohan (Deloitte Analytics Institute), Lotfi ben Othmane (Iowa State University), and Andre Kres (IBM)

### Reducing Attack Surface via Executable Transformation

Sukarno Mertoguno, Ryan Craven, Daniel Koller, and Matthew Mickelson (ONR)

### Designing Secure and Resilient Embedded Avionics Systems

Jason H. Li (Intelligent Automation Inc.), Douglas Schafer (Air Force Research Laboratories), David Whelihan (MIT Lincoln Laboratories), Stefano Lassini (GE Aviation Systems), Nicholas Evancich (Intelligent Automation Inc.), Kyung Joon Kwak (Intelligent Automation Inc.), Mike Vai (MIT Lincoln Laboratories), and Haley Whitman (MIT Lincoln Laboratories)
Practitioners Session B: New Security Needs and Approaches Session Chair: Sarah Chmielewski, MIT LL 3:40pm – 5:15pm

Data Integrity: Recovering from Ransomware and Other Destructive Events
Timothy McBride (NIST), Anne Townsend (MITRE), Michael Ekstrom (MITRE), Lauren Lusty (MITRE), and Julian Sexton (MITRE)

Securing Wireless Infusion Pumps
Andrea Arbelaez (NIST), Sue Wang (MITRE), Sallie Edwards (MITRE), Kevin Littlefield (MITRE), and Kangmin Zheng (MITRE)

Best Practice for Developing Secure and Trusted Enterprise Storage & Computing Products
Xuan Tang (Dell)

Experiment: Sizing Exposed Credentials in GitHub Public Repositories for CI/CD
Hasan Yasar (Software Engineering Institute, CMU)

Wrap up and see you at IEEE SecDev 2019!

Thank You!

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