

HILT 2018 Workshop on *Languages and Tools for Ensuring Cyber-Resilience in Critical Software-Intensive Systems*

As part of [SPLASH 2018](#), November 5 & 6, 2018, Boston, MA, USA

Sponsored by ACM SIGAda

This is the fifth in the HILT series of conferences and workshops focused on the use of *High Integrity Language Technology* to address challenging issues in the engineering of software-intensive critical systems. HILT 2018 will focus on addressing cybersecurity and cyber-resilience issues that arise in real-time, embedded, and/or safety-critical systems, where such a system must be trusted to maintain a continual delivery of services, as well as ensuring safety in its operations. Such needs have common goals and shared strategies, tools, and techniques, recognizing the multiple interactions between security and safety.

Keynote speakers:

Bob Martin, MITRE



Common Vulnerabilities Enumeration (CVE), Common Weakness Enumeration (CWE), and Common Quality Enumeration (CQE) – Attempting to systematically catalog the safety and security challenges for modern, networked, software-intensive systems.

Ray Richards, DARPA



DARPA's new Cyber-Assured Systems Engineering (CASE) Program – Motivations, Challenges, and Technical Approaches to addressing cyber-resilience in critical software-intensive systems

This workshop is designed as a forum for communities of researchers and practitioners from academic, industrial, and governmental settings, to come together, share experiences, and forge partnerships focused on integrating and deploying tool and language combinations to address the challenges of building cyber-resilient software-intensive systems. The workshop will be a combination of presentations and panel discussions, with a number of invited speakers.

Tentative HILT 2018 Schedule:

Time	Monday November 5 th	Tuesday November 6 th
8:30AM-9:00AM	Welcome to HILT 2018	ACM SIGAda Awards
9:00AM-10:00AM	Bob Martin, <i>MITRE</i> , CVE, CWE, CQE, and all that	Ray Richards, <i>DARPA</i> , DARPA CASE program, motivation and challenges
10:00AM-10:30AM	<i>Coffee Break</i>	<i>Coffee Break</i>
10:30AM-11:15AM	David Wheeler, <i>IDA</i> , Approaches to Cyber-Resilience	Lucas Wagner, <i>Rockwell Collins</i> , SpeAR – Using a formal specification language for security
11:15AM-12:00PM	Stephen Chong, <i>Harvard Univ.</i> , Language-Based Security	Sam Procter, <i>SEI</i> , Architecture-level Security concerns in a safety-critical system
12:00PM – 1:30PM	<i>Lunch Break</i>	<i>Lunch Break</i>
1:30PM – 2:15PM	Ina Schaefer, <i>TU Braunschweig</i> , Confidentiality-by-Construction	Jeff Foster, <i>Tufts Univ.</i> , Permission systems on Android and beyond
2:15PM – 3:00PM	Panel on <i>Language-Based Security (X10, SPARK, Rust, SpeAR, ...)</i>	<TBD> Hardware support for cyber resilience
3:00PM – 3:30PM	<i>Coffee Break</i>	<i>Coffee Break</i>
3:30PM – 4:00PM	<submitted paper#1>	Security Tools Showcase
4:00PM – 4:30PM	<submitted paper#2>	
4:30PM – 5:00PM	<submitted paper#3>	Workshop Wrapup
5:15PM – 6:15PM	SIGAda Annual Meeting	
6:30PM – 9:00PM	<i>HILT Banquet at Legal Sea Foods, 26 Park Plaza, Boston</i>	

Workshop Co-Chairs

- Bill Bail, MITRE
- Tucker Taft, AdaCore, Inc

Organizing Committee

- Dirk Craeynest, ACM SIGAda International Representative, KU Leuven
- Drew Hamilton, Chair, ACM SIGAda, Mississippi State University, CCI
- Clyde Roby, Secretary-Treasurer, ACM SIGAda, Institute for Defense Analyses
- Alok Srivastava, Editor, ACM Ada Letters, Engility Corp.
- Ricky E. Sward, Past Chair, ACM SIGAda, MITRE