

Systems Engineering Research Center Presents:

Workshop:
***“Model Based System Assurance:
Enabled By Digital Engineering”***

Workshop Leaders:
Prof. Tom McDermott, Georgia Institute of Technology
Prof. Ye Yang, Stevens Institute of Technology

Agenda: December 6, 2017

Time	Topic	Lead
8:25	Welcome	Prof. Tom McDermott, Georgia Tech
8:30	Introductory Remarks: Priorities with regard to System Assurance (Security, Safety, Reliability) within a Digital Engineering/Acquisition Environment	Ms. Kristen Baldwin, DASD(SE)
9:00	Featured Talk: Model-Based Development: What's New? What's Needed?	Dr. Nancy Leveson, MIT
10:00	Coffee Break	
Government Perspective – Challenges and Opportunities with Enhancing System Assurance in a Digital Engineering Environment:		
10:15	Challenges with Realizing Robust System Security in Complex Systems	Ms. Melinda Reed, ODASD(SE)
10:45	Challenges and Research Priorities with Digital Engineering as an enabler for Trade Space Exploration/Systems Analysis	Ms. Philomena Zimmermann, OSD
Industry Perspective – Challenges and Opportunities:		
11:15	Hardening Legacy Systems and Cyber Resilient System Architectures	Mr. Irby Thompson, StarLabs
11:45	Functional Modeling for Model Based System Assurance	Dr. Gustavo Quiros and Dr. Arquimedes Canedo, Siemens – Princeton, NJ
12:15	Lunch Break	
13:00	Featured Talk: Model-Based Testing of Complex Concurrent Systems: Lessons Learned and Future Perspectives	Dr. Ed Brinksma, University of Twente, and Mr. Jan Tretmans, ESI and the University of Nijmegen
13:45	Featured Talk: Between Testing and Verification: Dynamic Software Model Checking	Dr. Patrice Godefroid, Microsoft
14:30	Afternoon Break	
14:45	Parallel Breakout Sessions	Prof. Tom McDermott, Georgia Tech Dr. Ye Yang, Dr. Lu Xiaio Stevens
17:00	Reception and Dinner Featured Talk: Integrating Modeling and Simulation into Safety Program	Mr. Mark Denicuolo, FAA

Agenda: December 7, 2017

Time	Topic	Lead
8:25	Welcome/Announcement	Dr. Ye Yang, Stevens
8:30	Featured Talk: Advancing Model Based System Assurance for Complex Systems	Dr. John Evans, NASA
9:15	Featured Talk: Leverage from Models: Inherent Limitations and Open Questions	Dr. Fred Schneider, Cornell University
10:00	<i>Coffee Break</i>	
10:15	IoT and Trust	Dr. Jeff Voas, NIST
10:45	MBSA for cyber failure detection and recovery	Dr. Cody Fleming, UVA
11:15	MBSA for cross-scale resilience	Dr. Val Sitterle, Georgia Tech
11:45	UML Testing Profile: A Language for Model-Based Test Automation	Mr. Marc-Florian Wendland, Fraunhofer
12:15	<i>Lunch Break</i>	
13:00	Breakout groups on MBSA research needs (With afternoon break at 14:30)	Dr. Tom McDermott, Georgia Tech Dr. Ye Yang, Dr. Lu Xiao, Stevens
16:00	Breakout group summary presentations	Dr. Tom McDermott, Georgia Tech Dr. Ye Yang, Dr. Lu Xiao Stevens
16:30	Workshop summary and paths forward	Dr. Tom McDermott, Georgia Tech Dr. Ye Yang, Stevens
17:00	<i>Closing</i>	