



Safe & Secure Systems & Software Symposium (S5)

Dayton, OH | 10, 11, and 12 June 2014

Day 1	Agenda - Tuesday, 10 June
0730-0800	On-Site Registration
0800-0810	Welcome and Administrative Remarks
0810-0840	Keynote: Big Picture for Autonomy Research in DoD <i>Dr. Jim Overholt, Senior Scientist for Autonomous Systems, Human Effectiveness Directorate, AFRL</i>
0840-0905	Test and Evaluation, Verification and Validation of Autonomous Systems From AFRL/RQ to DoD <i>Mr. Matt Clark, AFRL/RQQA</i>
0905-0930	Requirements, Models, and Properties: Their Relationship and Validation <i>Dr. Mats Heimdahl, University of Minnesota</i>
0930-0955	Development and Analysis of Formal Requirements Using the SpeAR Framework <i>Mr. Lucas Wagner, Rockwell Collins</i>
0955-1015	BREAK
1015-1040	Statistical Model Checking for Real-Time Scheduling Validation <i>Dr. Jeffery Hansen, Carnegie Mellon University</i>
1040-1105	MARGInS: Model-based Analysis of Realizable Goals in Systems <i>Dr. Misty Davies, NASA</i>
1105-1130	Quantifying Resiliency in Component-Based Software Architecture Models <i>Dr. Daniel Balasubramanian, Vanderbilt University</i>
1130-1330	LUNCH
1330-1355	Integration of Analysis contracts for Cyber-Physical Systems <i>Dr. Dionisio de Niz, Carnegie Mellon University</i>
1355-1420	Proving Cyber-Physical Systems with KeYmaera <i>Dr. Andre Platzer, Carnegie Mellon University</i>
1420-1445	Fault Tree Generation and Augmentation <i>Dr. Chris Walter, WW Technology Group</i>
1445-1510	Automated Formal Verification of Distributed Cyber-Physical Systems <i>Dr. Taylor Johnson, University of Texas</i>
1510-1530	BREAK
1530-1555	A Modal Specification Approach for Assuring the Safety of On-Demand Medical Cyber-Physical Systems <i>Dr. Lu Feng, University of Pennsylvania</i>
1555-1620	AGREE: Compositional Reasoning for AADL Models <i>Dr. John Backes, Rockwell Collins</i>
1620-1645	Programming Languages for High-Assurance Autonomous Vehicles <i>Dr. Lee Pike, Galois</i>



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Day 2	Agenda - Wednesday, 11 June
0730-0800	Sign-in at Registration Desk
0800-0930	Breakout Sessions
0930-0950	BREAK
0950-1020	Keynote: Research Challenges facing academia for Autonomous Vehicles <i>Ms. Constance Heitmeyer, Naval Research Laboratory</i>
1020-1045	Run Time Assurance Methodologies for Advanced, Highly Adaptive Aerospace Systems <i>Dr. John Schierman, Barron Associates, Inc.</i>
1045-1110	Using Hybrid-system Verification Tools in the Design of Simplex-Based Systems <i>Dr. Scott Stoller</i>
1110-1135	A Unified Run-Time Assurance Scheme using Real-Time Reachability <i>Dr. Stanley Bak, AFRL/RI</i>
1135-1200	Verifying Synchronous Distributed Applications <i>Dr. Sagar Chaki, Carnegie Mellon University</i>
1200-1330	LUNCH
1330-1355	Testing Robustness of UAS Technology (TRUST) <i>Mr. John Sauter, Soar Technology</i>
1355-1420	Stability Analysis of Hybrid Systems Using Model Checking <i>Mr. Jon Hoffman, AFRL/RQQA</i>
1420-1445	Control Theorists are from Mars and Computer Scientists are from Venus <i>Mr. Romain Jobredeaux, Georgia Institute of Technology</i>
1445-1510	Getting it right the first time: Verification of Autonomous Behavior-based Multirobot Missions <i>Prof. Damian Lyons, Fordham University</i>
1510-1530	BREAK
1530-1555	Domain-Specific Modeling Environment as the Basis for an Autonomous Systems Integrated Development <i>Dr. David Conner, TORC Robotics</i>
1555-1620	Verification of Cyber-Physical Controller Software Using the AVM Meta Tool Suite and HybridSAL <i>Dr. Joseph Porter, Vanderbilt University</i>
1620-1645	USAF Avionics Weapon Systems Cybersecurity Risk Management Framework Assessment <i>Mr. Harrell Van Norman, USAF</i>



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Day 3	Agenda - Thursday, 12 June
0730-0800	Sign-in at Registration Desk
0800-0805	Welcome and Administrative Remarks
0805-0835	Keynote: Complex Systems Development Risks <i>Mr. Yuri Gawdiak, Manager of Strategic Analysis, NASA ARMD Headquarters</i>
0835-0900	Evolution of Software Only Simulation at NASA IV&V <i>Mr. Scott Zemerick, TMC Technologies</i>
0900-0925	Creating Trust In Autonomous Systems – the TRUST V <i>Dr. Dan Zwillinger, Raytheon</i>
0925-0950	Information Retrieval Based Analysis of Software Artifacts <i>Dr. Dewayne Perry, University of Texas</i>
0950-1015	SAFE: A Clean Slate, Safe, Secure Computing Platform <i>Dr. Gregory Sullivan, BAE Systems</i>
1015-1035	BREAK
1035-1100	Robustness of Simulink/Stateflow Model Against Implementation Imperfections <i>Prof. Ratnesh Kumar, Iowa State University</i>
1100-1125	Certifiable Modular Avionics Software Development using FACE TSS <i>Dr. Paul Pazandak, Real-Time Innovations, Inc</i>
1125-1150	Affordable Avionics through Commercial Certified Middleware <i>Dr. Paul Pazandak, Real-Time Innovations, Inc.</i>
1150-1215	A Quantum Computing Approach to the Verification and Validation of Complex Cyber-Physical Systems <i>Mr. Todd Belote, Lockheed Martin Aeronautics</i>

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