TCCOE Summit Technical Program

May 15-16, 2025

Theme: Technology Advances, Trust and Trustworthiness, and Software Ecosystems

Thursday May 15, 2025	**Chair & Time**
	Dr. Ray Richards
Keynote – Dr. Bill Scherlis, Carnegie Mellon University **Grounding and social process: Verification isn't enough**	08:45AM – 09:45AM
Break (15 minutes)	09:45AM – 10:00AM
	Dr. Stuart Card
MonT: Toward Real-time Model Checking, Dr. Sukarno Mertoguno, Georgia Tech	10:00AM – 10:30AM
Secure High-Assurance Aberdeen Architecture RISC-V Complier and Softcore (SHAAARCS), Dr. Michael Doran, DornerWorks	10:30AM – 11:00AM
Modular Provably Secure High-Assurance Hardware Software Co-design (MPS-HAHSC), Dr. Amit Vasudevan, Nirubi Technologies	11:00AM – 11:30AM
Hardware Attacks and Defenses for High Assurance Systems, Dr. Sean Zhou, Trusted Science and Technology	11:30AM – 12:00PM
Lunch (on your own)	12:00PM – 13:30PM
	Patrick Hurley
Towards Comprehensive Memory Safety Using Memory Safety Validation, Dr. Trent Jaeger, UC Riverside	13:30PM – 14:00PM
Kry10 OS - Trustworthy, Dynamic, and Easy To Use, Dr. Ihor Kuz, Kry10	14:00PM – 14:30PM
Unikernels: A DevSecOps alternative to containers, Robbie VanVossen, DornerWorks	14:30PM – 15:00PM
Secure Robotic Operating System (seROS), Nathan Studer, DornerWorks	15:00PM – 15:30PM
Break (30 Minutes)	15:30PM – 16:00PM
Panel Discussion – Technology Advances, Trust, and Trustworthiness (Moderator: Dr. Ray Richards)	16:00PM – 17:00PM
• Dr. Evan Austin, Leidos • Dr. Trent Jaeger, UC Riverside • Dr. Steve Kuhn, DARPA • Dr. Sandeep Neema, Vanderbilt University	
Adjourn for the day	17:00PM

Friday, May 16, 2025	**Chair & Time**
	Dr. David Musliner
Cross-Domain Solutions in Safety-Critical Military Ground Vehicle Applications, Leonard Elliott, DEVCOM/GVSC	08:30AM – 09:00AM
LITESHIELD: A Lightweight Userspace μKernel Architecture for Secure Container Isolation, Dr. Hui Lu, University of Texas at Arlington	09:00AM – 09:30AM
Mobile Software Understanding for Compound Vulnerabilities Using Knowledge Graph (KG) and Graph Neural Network (GNN), Fei Sun, Leidos	09:30AM – 10:00 AM
Break (30 minutes)	10:00AM – 10:30AM
	Dr. Jason Li
Building a Memory Safe Software Ecosystem with CHERI, Brooks Davis, SRI	10:30AM – 11:00AM
Fine-Grained Security Control through Combined Memory Access Protection and Isolation, Dr. Thomas Wahl, Trusted Science and Technology	11:00AM – 11:30AM
Exploring Next-Generation Hardware Platforms to Harness the Benefits of CHERI Experimental Implementations, Dr. Hui Zeng, PJR Corp	11:30AM – 12:00PM
SWITCHing to CHERI – Smoothing the Path to Cyber Security, Dr. David Musliner, Smart Information Flow Technologies (SIFT)	12:00PM – 12:30PM
Updates from TCCOE, Patrick Hurley, TCCOE	12:30PM – 12:45PM
Closing Remarks (Matt Wilding, DARPA)	12:45PM – 13:00PM