



Awareness and Localization of Explosives-Related Threats (ALERT)

ALERT is supported by the Department of Homeland Security (DHS) Science and Technology (S&T) Directorate through the Office of University Programs (OUP)

**Advanced Development for Security Applications (ADSA) Workshop 22:
Reducing Operator Cognitive Load in Aviation Security
Virtual Workshop**

November 17, 2020, 11 AM - 1 PM ET
 November 24, 2020, 11 AM - 1 PM ET
 December 1, 2020, 11 AM - 1 PM ET
 December 8, 2020, 11 AM - 1 PM ET

Early arrival and virtual breakfast, 10:30 - 11:00 AM ET
 Additional discussion, networking and virtual lunch, 1:00 - 2:00 PM ET

Webex Meetings
 Links and passwords to be emailed

Northeastern University, Boston, Massachusetts

AGENDA

Subject to Change

Tuesday, November 17, 2020 - Day 1

Time	Topic	Speaker
10:30 AM	Early arrival and virtual breakfast	
11:00 AM		Introductions
11:00 AM	Welcoming Remarks - ALERT	Michael Silevitch <i>Director</i> <i>Northeastern University / ALERT</i>
		Carey Rappaport <i>Deputy Director</i> <i>Northeastern University / ALERT</i>
11:02 AM	Welcoming Remarks	Laura Parker <i>Senior Advisor for Sensors</i> <i>Science and Technology Directorate</i> <i>Department of Homeland Security</i>
11:04 AM	Setting the Stage	Carl Crawford <i>President</i> <i>Csuptwo</i>
11:09 AM		TSA Perspectives

11:09 AM	Keynote Address	Austin Gould <i>Assistant Administrator - Requirements and Capabilities Analysis</i> <i>Transportation Security Administration</i>
11:34 AM	TSA Identity Management: CAT-2 Overview	Jason Lim <i>Identity Management Capability Manager</i> <i>Transportation Security Administration</i>
11:49 AM	Innovation Task Force (ITF)	Matt Gilkeson <i>Innovation Task Force Division Director</i> <i>Transportation Security Administration</i>
12:04 PM	Non-Explosives Prohibited Items (PI) Detection	Jason Hull <i>Accessible Property Screening Capability Manager</i> <i>Transportation Security Administration</i>
12:19 PM	On-Person Screening Capability Management	David Farcht <i>Program Analyst</i> <i>On-Person Screening</i> <i>Requirements and Capabilities Analysis</i> <i>Transportation Security Administration</i>
12:34 PM	TSA COVID Response	Daniel Williams <i>On-Person Screening Capability Manager</i> <i>Transportation Security Administration</i>
12:49 PM	Checked Baggage Capability	Melissa Conley <i>Requirements and Capabilities Analysis (RCA)</i> <i>Senior Advisor</i> <i>Transportation Security Administration</i>
1:04 PM	Adjourn	Craig Mosford <i>Checked Baggage Capability Manager</i> <i>Transportation Security Administration</i>
1:05 PM	Additional discussion, networking and virtual lunch	Carl Crawford President Csuptwo
2:05 PM	Session ends	

Tuesday, November 24, 2020 - Day 2

Time	Topic	Speaker
10:30 AM	Early arrival and virtual breakfast	
11:00 AM	Call to Order & Setting the Stage	Carl Crawford President Csuptwo
11:05 AM	TSA Perspectives Continued and DHS &T Perspectives	

11:05 AM	PPBE-S Framework Overview	Jeff Middleton <i>Program & Budget Branch Chief Office of Finance and Administration Transportation Security Administration</i>
11:15 AM	Screening at Speed	John Fortune <i>Screening at Speed Program Manager Science and Technology Directorate Department of Homeland Security</i>
11:30 AM	Reducing Operator Cognitive Load	
11:30 AM	Improving Operator Performance ² High Level Perspective	Matthew Merzbacher <i>Volunteer Alameda County Community Food Bank</i>
11:40 AM	Impact of trust in automation on human performance	Stephen Mitroff <i>Professor, Department of Psychological & Brain Sciences George Washington University</i>
		Bonnie Kudrick <i>HumanLink</i>
11:55 AM	Cognitive Assistance at TSA	Kristopher Korbelak <i>Engineering Psychologist Transportation Security Administration</i>
12:10 PM	Rare threats pose cognitive challenges	Jeremy Wolfe <i>Professor of Ophthalmology & Radiology Harvard Medical School</i>
12:25 PM	Automation reliability, human machine system performance and operator compliance	David Huegli <i>Research Scientist University of Applied Sciences and Arts Northwestern Switzerland</i>
12:40 PM	Time on task and detection performance in cabin baggage X-ray screening	Daniela Buser <i>Researcher University of Applied Sciences and Arts Northwestern Switzerland</i>
12:55 PM	Adjourn	Carl Crawford <i>President Csuptwo</i>
1:00 PM	Additional discussion, networking and virtual lunch	Carl Crawford <i>President Csuptwo</i>
2:00 PM	Session ends	

Tuesday, December 1, 2020 - Day 3

Time	Topic	Speaker
10:30 AM	Early arrival and virtual breakfast	

11:00 AM	Call to Order & Setting the Stage	Carl Crawford <i>President</i> <i>Csuptwo</i>
11:05 AM	Thought Provoking Presentations	
11:05 AM	Public Misunderstanding of Measurement Errors in Video Assistant Refereeing	Harry Collins <i>Distinguished Research Professor</i> <i>School of Social Sciences</i> <i>Cardiff University</i>
11:25 AM	Improving on Imperfection	Matthew Merzbacher <i>Volunteer</i> <i>Alameda County Community Food Bank</i>
11:35 AM	Reducing Operator Cognitive Load (continued)	
11:35 AM	Faking it -Threat Image Projection within 3D Computed Tomography Scanners	Toby Breckon <i>Professor, Engineering and Computer Science</i> <i>Durham University</i>
11:45 AM	Next-Gen Luggage scanner operations: Processes, interfaces, and tools	James Intriligator <i>Professor, Mechanical Engineering</i> <i>Tufts University</i>
12:00 PM	Emerging Technologies	
12:00 PM	Simulated Air Cargo	David Castanon <i>Professor</i> <i>Department of Electrical and Computer Engineering</i> <i>Boston University</i>
		Carl Crawford <i>President</i> <i>Csuptwo</i>
		Michael Silevitch <i>Director</i> <i>Northeastern University / ALERT</i>
		Franco Rucpich <i>President</i> <i>Cich Solutions</i>
		Chris Larkee <i>Visualization Technology Specialist</i> <i>Marquette University</i>
		Joel Greenberg <i>President and CEO</i> <i>Quadridox</i>
		David Coccarelli <i>Vice President Operations</i> <i>Quadridox</i>
12:10 PM	OPSL (Open Platform Software Library) 2020 Updates	Austin Silva <i>Senior member of technical staff</i> <i>Sandia National Laboratories</i>

12:20 PM	Differential Phase Contrast (DPC) Enabled Checkpoint and Checked Bag X-ray Scanners	Lambertus Hesselink <i>Professor of Electrical Engineering Stanford University</i>
12:35 PM	Deterrence Impact on Risk Evaluation	Nathan Adderson <i>Field Intelligence Officer – WA SEATAC International Airport, Seattle Office of Intelligence Transportation Security Administration</i>
12:50 PM	AI technology for 3D reconstruction of knees from x-ray images	Ron Soferman <i>Founder and CEO RSIP Vision</i>
1:00 PM	Adjourn	Carl Crawford <i>President Csuptwo</i>
1:00 PM	Additional discussion, networking and virtual lunch	Carl Crawford <i>President Csuptwo</i>
2:00 PM	Session ends	

Tuesday, December 8, 2020 - Day 4

Time	Topic	Speaker
10:30 AM	Early arrival and virtual breakfast	
11:00 AM	Call to Order & Setting the Stage	Carl Crawford <i>President Csuptwo</i>
11:05 AM	Emerging Technologies	
11:05 AM	Aerodynamic Particle Resuspension and Non-Contact Surface Sampling	Igor Novosselov <i>Research Associate Professor Mechanical Engineering University of Washington</i>
11:20 AM	Highly Sensitive and Specific Gas Sensors for Instant Detection of Pathogens from the Air	Nian Sun <i>Professor Electrical and Computer Engineering Northeastern University</i>
11:30 AM	Quantum-based technologies: Overview and application to aviation security	Celia Merzbacher <i>Deputy Director Quantum Economic Development Consortium SRI International</i>
11:45 AM	Airline Perspectives	
11:45 AM	An Airline Perspective on Seeking Innovation	Ben Herbig <i>Security Innovation American Airlines</i> Tim Lorenzen <i>American Airlines</i>
12:00 PM	Company Introductions and Emerging Technologies	

12:00 PM	Hi-Throughput Ultra-Wideband concealed weapons detection	Michael Lanzaro <i>Chief Technology Officer</i> <i>Liberty Defense</i>
12:10 PM	Standoff Detection of Chemical Threats on Shipped Parcels	Bachir Kharraja <i>Senior Vice-President of Technology and Engineering</i> <i>Block Engineering</i>
12:20 PM	Detection of concealed threats on people in uncontrolled public spaces and in bags/containers	Vito Levi D'Ancona <i>Director</i> <i>Scientific Venture Partners</i>
12:30 PM	Advances in explosive detection using vapor	Jimmie Oxley <i>Professor and Co-director of Center of Excellence in Explosives, Detection, Mitigation, and Response</i> <i>University of Rhode Island</i>
12:40 PM		Next Steps
12:40 PM	Summary and Next steps	Harry Martz <i>Associate Program Leader</i> <i>Center for Nondestructive Characterization</i> <i>Lawrence Livermore National Laboratory</i>
		Carl Crawford <i>President</i> <i>Csuptwo</i>
		Matthew Merzbacher <i>Volunteer</i> <i>Alameda County Community Food Bank</i>
12:56 PM	Closing Remarks	Laura Parker <i>Senior Advisor for Sensors</i> <i>Science and Technology Directorate</i> <i>Department of Homeland Security</i>
12:58 PM	Closing Remarks - ALERT	Michael Silevitch <i>Director</i> <i>Northeastern University / ALERT</i>
1:00 PM	Adjourn	Carl Crawford <i>President</i> <i>Csuptwo</i>
1:00 PM	Additional discussion, networking and virtual lunch	Carl Crawford <i>President</i> <i>Csuptwo</i>
2:00 PM	Session ends	