



ALERT
AWARENESS AND LOCALIZATION
OF EXPLOSIVES-RELATED THREATS

Awareness and Localization of Explosives-Related Threats (ALERT)
A Department of Homeland Security Center of Excellence

**Advanced Development for Security Applications (ADSA) Workshop 17:
Systems Engineering Of Aviation Security Systems**

October 17-18, 2017
17th Floor Event Space, East Village
291 Saint Botolph Street, Boston, MA 02115
Northeastern University, Boston, MA

AGENDA

Tuesday, October 17, 2017 - Day 1

Time	Topic	Speaker	Affiliation
7:30 AM	Check-in/Breakfast		
Introductory Perspectives			
8:30 AM	Welcoming Remarks from ALERT	Michael Silevitch	Northeastern University / ALERT
8:35 AM	Welcoming Remarks from College of Engineering Dean	Nadine Aubry	Northeastern University
8:40 AM	Welcoming Remarks from DHS	Laura Parker	Department of Homeland Security
8:45 AM	Setting the Stage	Carl Crawford	Csuptwo
DHS/TSA Perspectives			
9:00 AM	Aviation Security: a complex system or a system of systems	Steve Karoly	Transportation Security Administration
9:50 AM	APEX Program - Screening at Speed	John Fortune	Department of Homeland Security
Passenger Perspectives, Smart Security			
10:20 AM	Deportee Status	Esther Posner	Self
10:40 AM	Smart Security	Jeffrey Barrow	Airports Council International World
11:05 AM	Break		
11:35 AM	Prediction of System Security Performance of Aviation Checkpoints	Jaap de Ruiter	TNO
Weapons Detection			
12:00 PM	Weapons Detection	Toby Breckon	Durham University
12:25 PM	Lunch		
Research, Financial and Vendor Perspectives			
1:25 PM	Office of University Programs Update	Matt Clark	Department of Homeland Security
1:45 PM	ALERT - ADSA Synergy	Michael Silevitch Carl Crawford	Northeastern University / ALERT Csuptwo
2:00 PM	Vendor Perspective	Mark Laustra	Analogic

Deterrence and Modeling

2:25 PM	Deterrence, Hardening and Displacement: Lessons from Israeli Aviation Security	Amir Neeman	Amir Neeman Consulting
2:50 PM	Modeling of Operational Studies for Technology, Tactics, & Procedures at Soft	Nerayo Teclemariam	Sandia National Lab
3:15 PM	Leveraging Pedestrian Analytics to Improve Passenger Processing, Safety, and Experience	Shawn Dagg	CrowdVision

3:35 PM **Break**

Macro and Cyber Security

4:10 PM	Macro Security - Revisited	Andrew Foland	L3 Communications
4:35 PM	Investing in Security Assuming Silver Bullets are Rare	David Schafer	Analogic
5:00 PM	Cybersecurity: An Outsider's Perspective	Avi Kak	Purdue University

New Workshop Series and Project Updates

5:25 PM	DICOS Deployment	Steve Skrzypkowiak	Self
5:50 PM	BMD Cargo Workshop	David Taylor	Department of Homeland Security
6:00 PM	Adjourn	Carl Crawford	Csuptwo



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AGENDA

Wednesday, October 18, 2017 - Day 2

Time	Topic	Speaker	Affiliation
7:30 AM	Check-in/Breakfast		
8:00 AM	Call to Order	Carl Crawford	Csuptwo
Deep Reconstruction, Reconstruction, Grand Challenges, Behavior Detection			
8:05 AM	Deep reconstruction of security data & AAPM Grand Challenge	Quanzheng Li	Harvard / Massachusetts General Hospital
8:25 AM	Metal Artifact Reduction Via Machine Learning	Ge Wang	Rensselaer Polytechnic Institute
8:50 AM	Super Voxels for Iterative CT Reconstruction	Xiao Wang	Harvard Medical School / Boston Children's Hospital
9:05 AM	Kaggle Competitions	Addison Howard	Kaggle
9:30 AM	Behavior and Detection	Mark Frank	University at Buffalo, State University of New York
9:55 AM	Break		
Vendor Introductions			
10:20 AM	Gilardoni Introduction	Marco Gilardoni	Gilardoni
10:40 AM	Synapse Technology	Bruno Faviero	Synapse Technology
10:50 AM	TiaLinx	Fred Mohamadi	TiaLinx, Inc.
Trace and Vapor Detection			
11:00 AM	Trace Sampling Advances	Stephen Beaudoin	Purdue University
11:25 AM	Sparse-Sampling Strategies in Beam-Scanning Imaging	Garth Simpson	Purdue University
11:50 AM	Lunch		
1:00 PM	Multi-Spectral Infrared Sensing Microsystems	Matteo Rinaldi	Northeastern University
1:20 PM	Standoff Detection of Explosives and Chemical Warfare Agents Using Eye Safe Infrared Lasers	Mark Witinski	Pendar Technologies
1:35 PM	Quantum Cascade Lasers (QCL)-Based Hyperspectral Imaging for Standoff Detection of Explosives	Petros Kotidis	Block Engineering

Deep Learning, Simulations and X-ray Diffraction

1:50 PM	Deep Learning - Vendor Perspective	Christopher Gregory	Smiths Detection
2:15 PM	Simulation of Next-Generation Millimeter-Wave AIT Systems	David Sheen	Pacific Northwest National Laboratory
2:40 PM	Strengths and Challenges of X-Ray Diffraction Imaging	Jens-Peter Schlomka	Smiths Detection

3:00 PM **Break**

Next Steps

3:25 PM	Summary and Next Steps	Carl Crawford Suriyun Whitehead Harry Martz	Csuptwo Booz Allen Hamilton Lawrence Livermore National Laboratory
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Closing Remarks

3:50 PM	Closing Remarks from ALERT	Michael Silevitch	Northeastern University / ALERT
3:55 PM	Closing Remarks from DHS	Laura Parker	Department of Homeland Security
4:00 PM	Adjourn	Carl Crawford	Csuptwo