



# ADVANCED TECHNOLOGY FOR NATIONAL SECURITY WORKSHOP

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8–9 APRIL 2025

## 8 April: Advanced Imaging Technology and Systems

- Emerging Surveillance Concepts
- Search and Acquisition
- Classification and Coordination

**Keynote:** Government Perspective  
Ben Conley, NSWC Crane Division

**Keynote:** EO/IR and Photonics Sensing at AFRL  
Emily Heckman, AFRL Sensors Directorate

**Keynote:** The Defense Innovation Ecosystem  
John Griffin, Autonomy Portfolio/Boston Community Lead at DIU

## 9 April: Advanced Laser Technology and Systems

- Tracking and Targeting
- Directed Energy Systems
- Emerging Laser Technology

**Keynote:** DoD Directed Energy Roadmap and Joint S&T Investments  
Mark Spencer, Acting OUSD R+E Directed Energy PD and JDETO Director

**Note:** Attendance is limited to U.S. Citizens with an active DoD security clearance.

## ADVANCED IMAGING TECHNOLOGY AND SYSTEMS

### TUESDAY, 8 APRIL

#### Plenary Session

- 0830 Introduction
- 0835 Keynote - Government Perspective ..... **Ben Conley**,  
Senior Scientist and Technology Manager for EO and IR Sensing , NSWC Crane Division
- 0915 Keynote - EO/IR and Photonics Sensing at AFRL..... **Emily Heckman**,  
Photonics Area Lead at AFRL Sensors Directorate
- 0955 Keynote - The Defense Innovation Ecosystem..... **John Griffin**,  
Autonomy Portfolio/Boston Community Lead at DIU

1035 *Break*

#### Session 2: Emerging Surveillance Concepts

*Session Chair: Serkay Olmez, MIT LL*

- 1105 Global Persistent ISR ..... **Robert Michniak, Jonathan Leu, and Kyle McNicholas**, MIT LL
- 1145 Single-Photon Sensitive, Energy-Resolving Superconducting Detectors..... **Kevin Ryu**, MIT LL
- 1215 Off-Axis Laser Detection, Geolocation, and Characterization ..... **Erin Tomlinson**, MIT LL

1245 *Lunch*

#### Session 3: Search and Acquisition

*Session Chair: Mallory Jensen, MIT LL*

- 1345 Commercial Perspective..... **Pradip Mitra** , Leonardo DRS
- 1415 Astrix ..... **Seth Hunter**, MIT LL
- 1445 WISP Update - Tactical Wide-Area Scanning IR System..... **Michael Kelly**, Anduril Imaging

1515 *Break*

#### Session 4: Classification and Coordination

*Session Chair: Dan Gastler, MIT LL*

- 1545 Commercial Perspective..... **Stephen Griggs**, SRI International
- 1615 Advanced Classification/ID for cUAS Leveraging Passive IR Systems ..... **Vladimir Liberman**, MIT LL
- 1645 Mid-IR Free Space Optical Communication ..... **Matthew Byrd**, MIT LL

1715 *Workshop Reception*

## ADVANCED LASER TECHNOLOGY AND SYSTEMS

### WEDNESDAY, 9 APRIL

#### Plenary Session

- 0830 Introduction
- 0835 Keynote - DoD Directed Energy Roadmap and Joint S&T Investments ..... **Mark Spencer**,  
Acting OUSD R+E Directed Energy Principal Director and JDETO Director
- 0920 Air Force Perspectives on Directed Energy ..... TBA
- 1005 US Army S&T for Continuous Transformation of DEW Systems..... **Neset Akozbek**,  
Senior Research Scientist, ST, US Army SMDC
- 1035 *Break*

#### Session 2: Tracking and Targeting

*Session Chair: Andrew Benedick, MIT LL*

- 1105 High-Energy Laser Systems and Their Effects ..... **Kevin Creedon**, MIT LL
- 1130 Target Aimpoint Tracking with 3D Imaging LADAR..... **John Ogren**, MIT LL
- 1155 Low-Noise Ge DFPA for Fine Tracking..... **Ilya Prigozhin**, MIT LL
- 1220 *Lunch*

#### Session 3: Directed Energy Systems

*Session Chair: Scot Shaw, MIT LL*

- 1320 S&T to Operational Capabilities – Naval Perspectives on DE Systems ..... **Matthew Ketner**, ONR
- 1350 Industry Perspective on Directed Energy Systems ..... TBA
- 1420 Industry Perspective on Directed Energy Technology..... **Dale Martz**, nLight
- 1450 Industry Perspective on Directed Energy Technology..... **Robert Afzal**, Lockheed Martin
- 1520 *Break*

#### Session 4: Emerging Laser Technology

*Session Chair: Kevin Creedon, MIT LL*

- 1550 2µm Laser Development..... **Brian Anderson**, AFRL/RD
- 1620 Panelized HEL Technology Development ..... **Andrew Benedick**, MIT LL
- 1645 High-Power Supercontinuum Lasers..... **Jason Langseth**, MIT LL
- 1710 *Adjourn*