ATNS 2025

ADVANCED TECHNOLOGY FOR NATIONAL SECURITY WORKSHOP

4–5 NOVEMBER 2025

4 November: 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

5 November: 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.

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AGENDA – DAY 1

ADVANCED IMAGING TECHNOLOGY AND SYSTEMS

TUESDAY, 4 NOVEMBER

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*

AGENDA – DAY 2

ADVANCED LASER TECHNOLOGY AND SYSTEMS

WEDNESDAY, 5 NOVEMBER

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 ..... **Don Shiffler,** Chief Scientist for Directed Energy, Directed Energy Directorate, AFRL

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 Technology ..... **Dale Martz,** nLight

1420 Industry Perspective on Directed Energy Technology ..... **Robert Afzal,** Lockheed Martin

1450 TBA ..... **Liam Skoyles,** Raytheon

1510 Directed Energy Survivability ..... **Sean Keller,** Raytheon

1530 *Break*

Session 4: Emerging Laser Technology

Session Chair: **Kevin Creedon, MIT LL**

1600 2µm Laser Development ..... **Brian Anderson,** AFRL/RD

1630 Panelized HEL Technology Development ..... **Andrew Benedick,** MIT LL

1655 High-Power Supercontinuum Lasers ..... **Jason Langseth,** MIT LL

1720 *Adjourn*