

# DEFENSE

## Systems Digest

The Latest From the Defense Systems Information Analysis Center // June 20, 2023



## NSMMS & CRASTE JOINT SYMPOSIA

### DATE:

June 26–29, 2023

### LOCATION:

Tucson, AZ

### ABOUT:

NSMMS and CRASTE, two space-focused conferences, will colocate events for the 11th year. These collocated Symposia continue their outstanding legacy in bringing together technologists, users, and decision-makers from across the nation.

## DID YOU MISS OUR LAST WEBINAR?

“Electromagnetic Shielding With  
Composite Materials”

 WATCH NOW!

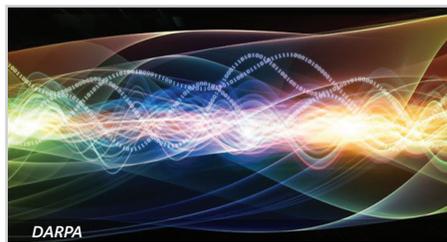
[or download the slides](#)

## NOTABLE TECHNICAL INQUIRY

**What gaps are there between civilian and U.S. Department of Defense (DoD) aerospace for determining airworthiness of additively manufactured (AM) parts and repairs?**

The U.S. Department of Defense (DoD) has made some progress certifying additive manufacturing (AM) parts for airworthiness, but certification has been limited to the lab, with significant engineering and inspections required for each part. Over the last two decades, each branch of the DoD... [READ MORE](#)

## UPCOMING WEBINAR



**High-Power, Radio  
Frequency/Microwave, Directed  
Energy Weapons Models and  
Simulations**

June 21, 2023 12:00 PM – 1:00 PM

*Presenter: John Tatum*

*Host: DSIAC*

This webinar presentation will provide a survey overview of the state of the art in modeling and simulation (M&S) tools related to researching and developing high-power, radio frequency/microwave, directed energy weapons (HPM DEWs) and evaluating their effectiveness. [READ MORE](#)

## FUTURE WEBINARS

**A Materials Science  
Perspective on Space  
Propulsion Technology**

July 19, 2023 12:00 PM-1:00 PM

**Integration of Shipborne  
Additively Manufacturing  
Systems Onto Naval Vessels...**

September 20, 2023 12:00 PM-1:00 PM



## HIGHLIGHT

### Russia's Use of Uncrewed Systems in Ukraine

Consistent with Russian military doctrine, the Russian military has used uncrewed aerial vehicles (UAVs) extensively in intelligence, surveillance, and reconnaissance (ISR) operations in Ukraine. This has enabled them to play prominent roles in artillery, counter-battery, and precision strikes missions.

While ISR drones play a central role in much of the Russian military's targeting process, it appears that the rate of response is slow, making it... [LEARN MORE](#)

## EVENTS

### NSMMS & CRASTE Joint Symposia

June 26–29, 2023  
Tucson, AZ

### Space and Missile Defense Symposium

August 8–10, 2023  
Huntsville, AL

### Military Standard 810 (MIL-STD-810) Test Training (NTS Chicago, IL)

July 10–13, 2023  
Chicago, IL

### Want your event listed here?

Email [contact@dsiac.org](mailto:contact@dsiac.org), to share your event.



## VOICE FROM THE COMMUNITY

### Scott Armistead

*DSIAC Senior Staff Engineer*

Scott Armistead is a senior staff engineer for SURVICE Engineering, with nearly 35 years working in munitions research, development, operational, and live-fire test and evaluation. He previously served as the Senior Test Manager and Program Engineer for the Joint Munitions T&E Program Office. His experience includes infrared, visible, ultraviolet, millimeter-wave, seismic, magnetic, and acoustic sensors and weapons technologies; kinetic and directed energy weapon systems effectiveness; countermeasures/counter-countermeasures development; signature management; and platform survivability.

## ARE YOU A SME?

If you are a contributing member of the information systems community and are willing to help others with your expertise, you are an subject matter expert!

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**BECOME A SUBJECT  
MATTER EXPERT**

## ABOUT TECHNICAL INQUIRIES (TIs)

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### WHAT IS THE TI RESEARCH SERVICE?

- FREE service conducted by technical analysts
- 4 hours of information research
- Response in 10 business days or less

### WHO CAN SUBMIT A TI?

- U.S. government (federal, state, or local)
- Military personnel
- Contractors working on a government or military contract

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- Find and connect with other subject matter experts in the field
- Reduce redundancy of efforts across the government

To submit a TI, go to <https://dsiac.org/technical-inquiries>

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## RECENT DSIAC TIs

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- What small form factor EA payloads can degrade the performance of peer or near-peer military systems?
- Can you provide information on the U.S. Navy's platform integration core technology specific to unmanned underwater vehicles (UUVs)?
- What are the current U.S. Department of Defense capabilities in standoff threat detection using passive sensors?

## RECENT CSIAC & HDIAC TIs

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- What COTS/GOTS technologies are available to aid operators in automated annotation of photos and video collected during a mission to classify objects of interest?
- Has there been any research or testing on an injectable decontaminant into firefighting foam or an air filtration/HVAC system?
- How can directed energy be used for decontamination or contamination mitigation?

## FEATURED NEWS

### AFRL Conducts Swarm Technology Demonstration

KIRTLAND AIR FORCE BASE, N.M. – The U.S. Air Force Research Laboratory, or AFRL, conducted a demonstration, April 5, 2023, of its high-power microwave counter drone weapon, the Tactical High-power Operational Responder, or THOR, as it engaged a swarm of multiple... [READ MORE](#)

## RECENT NEWS



### ITL Team Contributes to Future of Aircraft

U.S. Army



### AFRL Completes Flight Tests for Directed Energy Laser System Beam Director

AFRL



### A Mission Out of This World: The Benefield Anechoic Facility Tests First Space Satellite in Decades

AFRL



### Highly Dexterous Robot Hand Can Operate in the Dark — Just Like Humans

National Science Foundation



### Increasing Female Aviator Safety One Test at a Time

U.S. Army



DARPA

### Beyond Liquid Crystal: DARPA Seeks Novel Tunable Optical Materials

DARPA



- Advanced Materials
- Autonomous Systems
- C4ISR
- Directed Energy
- Energetics
- Military Sensing
- Non-Lethal Weapons
- RMQSI
- Survivability & Vulnerability
- Weapons Systems

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