

# DEFENSE

## Systems Digest

The Latest From the Defense Systems Information Analysis Center // June 17, 2025

## LEARN NOW DSIAC CAN HELP YOU FOR FREE

DSIAC offers brown bag sessions to provide greater insight into our services. These informal meetings last about 30 min and can be held virtually. We can host meetings for any size team and cater topics to your specific areas of interest.

We provide information research and analysis services to military personnel, federal government users, and supporting academia and industry partners at no cost to the user.

Contact us at [contact@dsiac.org](mailto:contact@dsiac.org) to schedule your brown bag today.

## DID YOU MISS OUR PAST WEBINAR?

“Digital Twin Research and Development for a Metal Additive Manufacturing Process”

 **WATCH NOW!**

[or download the slides](#)

## NOTABLE TECHNICAL INQUIRY

**What models and simulation tools model cavitation, bubble growth, and hydrodynamic ram effects within fuel tanks?**

The Defense Systems Information Analysis Center (DSIAC) was asked to identify models, simulations, and tools used to model bubble growth, cavitation, and hydrodynamic ram (HRAM) effects within fuel tanks. When a high-velocity projectile penetrates or impacts a liquid-filled container such as a fuel tank, cavitation occurs. The cavity formed in the liquid results in extreme pressure, which may cause the liquid to bubble and eventually explode... [READ MORE](#)

## UPCOMING WEBINAR



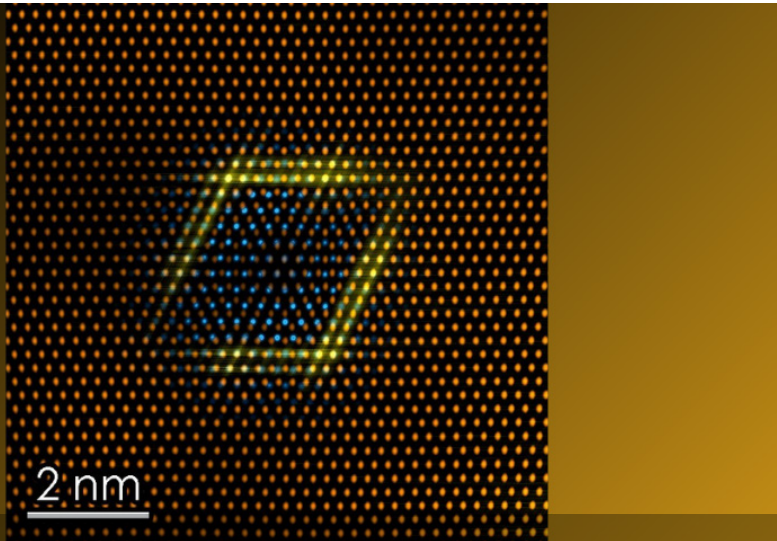
**Attributable Unmanned Aircraft Systems: Conceptualization...**

COMING SOON  
12:00 PM – 1:00 PM

*Presenter(s): Deanna Milonas, Taylor H. Knight*

*Host: DSIAC*

Air domain operations are critical to the U.S. military defense strategy. Military air domain missions use aircraft for tasks like attack; resupply; rescue; intelligence, surveillance, and reconnaissance; etc. Historically, air domain missions required manned aircraft, putting the aviator at risk. In the 1990s, the military began replacing manned aircraft with unmanned aircraft. Unmanned aerial systems (UASs) remove the risk to human aviators and are... [READ MORE](#)



## HIGHLIGHT

### Army Researchers, Academia Create Stronger, More Durable Copper That Could Advance Military Systems

ADELPHI, Md. – U.S. Army researchers, in collaboration with academic partners, invented a stronger copper that could help advance defense, energy, and aerospace industries thanks to its ability to endure unprecedented temperature and pressure extremes.

Extreme materials experts at the U.S. Army Combat Capabilities Development Command, known as DEVCOM, Army Research Laboratory... [LEARN MORE](#)

## EVENTS

### The 2025 NSMMS & CRASTE Symposium

June 23–26, 2025  
Norfolk, VA

### Warrior East

June 25–26, 2025  
Virginia Beach, VA

### Joint Aircraft Survivability Program (JASP) Model Users Meeting (JMUM) 2025

August 5–7, 2025  
Atlanta, GA

### Future Force Capabilities Conference & Exhibition

September 30–October 3, 2025  
Fort Worth, TX

### Want your event listed here?

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



## VOICE FROM THE COMMUNITY

### Paul T. Schrader

*Research Mathematician, U.S. Air Force Research Laboratory (AFRL)*

Paul Schrader is a research mathematician at AFRL, specializing in topological data analysis, artificial intelligence (AI)/machine learning, and data fusion for autonomous systems and advancing multisensor data processing and information warfare technologies. His innovations in dynamic data-driven fusion and explainable AI are transforming autonomy in military and civilian sectors, enabling faster, more reliable decision-making in contested environments.

## 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 a subject matter expert (SME).

Join our team today.

**BECOME A SUBJECT  
MATTER EXPERT**

# TECHNICAL INQUIRIES (TIs)

## 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

## WHY UTILIZE THE TI RESEARCH SERVICE?

- Get a head start on your technical questions or studies
- Discover hard-to-find information
- 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.dtic.mil/technical-inquiries>

## EXAMPLE DSIAC TIs

- What technologies exist that could protect commercial aircraft against jamming and spoofing?
- Is it possible to add additional sensors/instrumentation to the U.S. Department of Defense's ground-based operational surveillance system or rapid aerostat initial deployment system?
- Is there a qualitative report on shielding and/or other protective measures against radio-frequency directed-energy threats?

MORE DSIAC INQUIRIES

## EXAMPLE CSIAC & HDIAC TIs

- Are reinforcement learning techniques available for a next-generation threat system?
- What are the recent innovations in reducing hazardous waste and/or recovering materials during disposal of lithium-based batteries?
- Can research be provided on available products for quick triage and monitoring of mass casualty victims?

## VIEW MORE TIs

The Information Analysis Centers answer more inquiries outside the scope of DSIAC's focus areas. To search more research topics, visit our sister websites to expand your search.

CSIAC INQUIRIES

HDIAC INQUIRIES





# FEATURED NEWS

## DoD Demonstrates Reusability of Hypersonic Test Vehicle

The U.S. Department of Defense (DoD) conducted a second successful flight of a fully recoverable uncrewed hypersonic test vehicle in March 2025, with the first being in December 2024. [READ MORE](#)

# RECENT NEWS



U.S. Army

**U.S. Army Partnerships Bring Critical Assured PNT Capabilities to American Soldiers**

U.S. Army



U.S. Navy

**New Unmanned Test System Accelerates UAS Development at NAWCAD**


Naval Air Systems Command



Craig Fritz

**SkyFox: Revolutionizing Hypersonic Flight Testing**


Sandia National Laboratories



Pixabay

**Supporting Safer Skies: ANSI Unmanned Aircraft Systems Standardization Collaborative...**

American National Standards Institute



NSWCDD

**Capturing the Unseen: The Role of High-Speed Cameras in Weapon Advancements**

Naval Sea Systems Command



U.S. Navy

**U.S. Naval Research Laboratory's NIKE Laser-Target Facility Helps to Advance Department...**

U.S. Naval Research Laboratory

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

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