

DEFENSE

Systems Digest

The Latest From the Defense Systems Information Analysis Center // December 17, 2024

DSIAC JOURNAL RELEASE

DSIAC is excited to announce the release of our latest DSIAC Journal. This journal features the following exclusive articles:

- Emerging Risks in Space From China and Russia
- A Bioinspired System to Autonomously Detect Tiny, Fast-Moving Objects in Infrared Imagery
- Detecting and Defending Against Malicious Attacks to Ship Sensors
- Uncertainty Quantification to Detect Resident Space Object Anomalies
- Designing Primary Structures With Fiber-Reinforced PEEK Thermoplastic Composite

View and download the journal here:

<https://dsiac.dtic.mil/journals/volume-8-number-2/>.

DID YOU MISS OUR LAST WEBINAR?

“In-Space Developmental Test Persistent Platform at the U.S. Space Force”

 **WATCH NOW!**

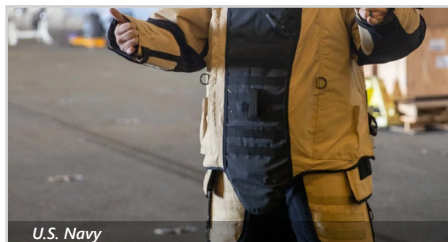
[or download the slides](#)

NOTABLE TECHNICAL INQUIRY

What decoys are being developed and/or fielded by the U.S. Department of Defense?

The Defense Systems Information Analysis Center (DSIAC) was asked to identify what decoys were being developed and/or fielded by the U.S. Department of Defense. Decoys across the Services, including radars, missiles, and vehicles, were included. DSIAC staff provided responses from subject matter experts with the U.S. Naval Air Systems Command (NAVAIR) PMA-208 and NAVAIR’s Target Threat Simulation Program. The inquiry was supplemented with... [READ MORE](#)

UPCOMING WEBINAR



U.S. Navy

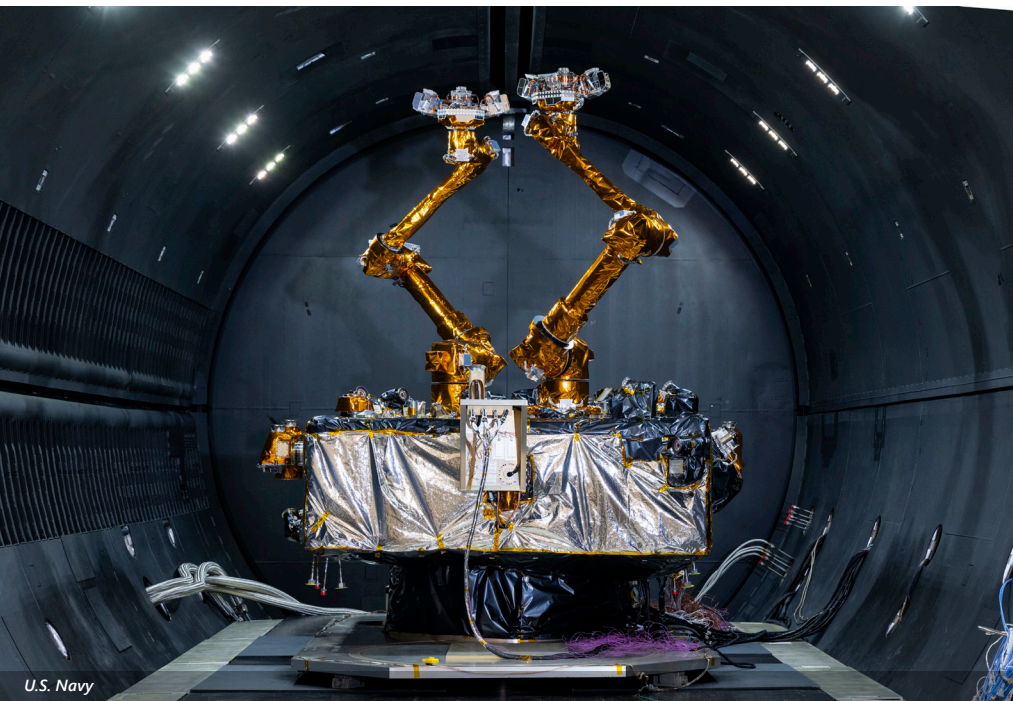
NSWC Indian Head Division Battle Lab

January 15, 2025
12:00 PM – 1:00 PM

Presenter(s): Catherine Eaton

Host: DSIAC

In the last decade, Warfighters have grown reliant on commercial-off-the-shelf (COTS) equipment to meet their operational needs rather than use traditional U.S. Department of Defense acquisition paths. Although COTS systems may offer a responsive and rapid procurement, they carry a substantial risk to front-line Warfighters due to lack of objective test and evaluation in realistic, relevant conditions. Most importantly, there is a lack of operational... [READ MORE](#)



U.S. Navy

HIGHLIGHT

NRL Completes Development of Robotics Capable of Servicing Satellites, Enabling Resilience for the U.S. Space Infrastructure

WASHINGTON – U.S. Naval Research Laboratory (NRL) Naval Center for Space Technology (NCST), in partnership with Defense Advanced Research Projects Agency (DARPA), successfully completed development of a spaceflight-qualified robotics suite capable of servicing satellites in orbit on October 8, 2024.

Under DARPA funding, NRL developed the Robotic Servicing of Geosynchronous Satellites (RSGS) Integrated Robotic Payload... [LEARN MORE](#)

EVENTS

AIAA SciTech Forum
January 6–10, 2025
Orlando, FL

2025 Future Indirect Fires Summit
January 14–15, 2025
Austin, TX

Want your event listed here?
Email contact@dsiac.org to share your event.



VOICE FROM THE COMMUNITY

Michael J. Grotke
*Advanced Armor Composites
Researcher, SURVICE Engineering*

Michael Grotke is a composites engineer for SURVICE Engineering, where he develops novel polymers, composites, and coatings for high-density devices; designs wearable polymer and ceramic composite systems for soldiers; and is a subject matter expert in vacuum-assisted resin infusion and mold fabrication. He also served at the Engineer Research and Development Center, where his team designed and patented a novel high-performance basalt composite system to protect against explosive threats.

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**

ABOUT 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>

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RECENT DSIAC TIs

- Who are the current leading researchers in additive manufacturing of 17-4 precipitation-hardening (PH) steels?
- What is the role of cutinases or esterase activity on the biodegradation of man-made structures?
- Are there any active Defense Department or Service component programs recycling carbon fiber waste?

RECENT CSIAC & HDIAC TIs


- What are the state-of-the-art use cases for augmented/virtual/extended reality in aviation maintenance?
- What is the state of the science for multisensory cueing (visual, haptic, audio) for military aircraft?
- What biometric technologies are used to scan the occupants of a vehicle at speed?

FEATURED NEWS

Army Advances Human-Machine Integration Tests to Enhance, Fight With Combat Units

WASHINGTON — Robots integrated into Army formations can help protect Soldiers and revolutionize warfare in multiple domains. [READ MORE](#)

RECENT NEWS



U.S. Air Force

New York Air Guard Wing Welcomes New, High-Tech Helicopters

U.S. Air Force



MITMECHE

Tunable Ultrasound Propagation in Microscale Metamaterials


MITMECHE



NSRI

NSRI, UNL Developing AI for USSTRATCOM to Maximize Electromagnetic Spectrum

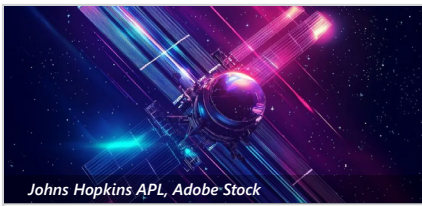
National Strategic Research Institute



U.S. Air Force/Greg Gerken

Revolutionizing Space-Based Thermal Systems: AFRL's SPIRRAL Launch on SPX-31


U.S. Air Force Research Laboratory



Johns Hopkins APL, Adobe-Stock

Shape-Shifting Antenna Poised to Transform Communications


Johns Hopkins Applied Physics Laboratory



Craig Fritz

The Big Drop

Sandia National Laboratories

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

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