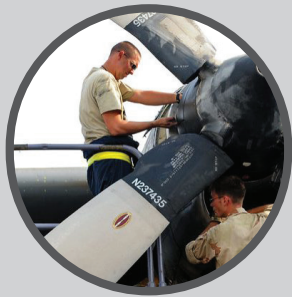


# DEFENSE

## Systems Digest

The Latest From the Defense Systems Information Analysis Center // July 11, 2023



## THE AIRCRAFT AIRWORTHINESS & SUSTAINMENT CONFERENCE

**DATE:**  
August 28–31, 2023

**LOCATION:**  
San Antonio, TX

**ABOUT:**  
The Aircraft Airworthiness and Sustainment Conference serves as the premier forum bringing individuals, industry, and aircraft certification authorities together to focus on existing and future certification...

### DID YOU MISS OUR LAST WEBINAR?

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

 [WATCH NOW!](#)

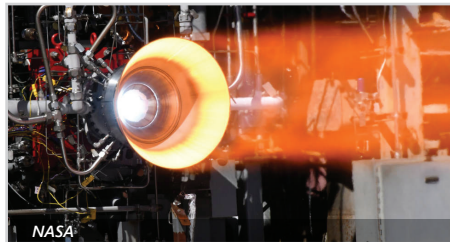
[CAC holders can view the CUI slides via DoDTechipedia](#)

## NOTABLE TECHNICAL INQUIRY

### What computer-vision/machine-learning work has been done to detect battle damage from satellite images?

The Defense Systems Information Analysis Center researched open-source information and literature databases to identify relevant battle damage research. Many studies have demonstrated the use of computer vision or ML on satellite imagery to identify different types of destruction from natural... [READ MORE](#)

## UPCOMING WEBINAR



### A Materials Science Perspective on Space Propulsion Technology

July 19, 2023 12:00 PM – 1:00 PM

*Presenter:* Doyle Motes

*Host:* DSIAC

Space, especially the near-space frontier, is becoming increasingly important to world powers. The space domain is integral to the military, politics, civilian life, and science. Much research and development work is being done to improve space propulsion technologies. Materials are a key element of... [READ MORE](#)

## FUTURE WEBINARS

**USAF Non-Lethal Weapons Program: A Primer for Defense Professionals...**

August 23, 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



DVIDS

## HIGHLIGHT

### The Army Announces New CIO

WASHINGTON – The U.S. Army announced the appointment of Leonel Garciga as its new CIO and principal advisor to the Secretary of the Army.

Garciga will spearhead the Army's technological transformation efforts, ensuring the effective management and utilization of information systems across the organization. [LEARN MORE](#)

## EVENTS

**2023 Space Warfighting Forum**  
August 16–18, 2023  
Colorado Springs, CO

**Hypersonic Technology & Systems Conference (HTSC)**  
October 16–19, 2023  
North Logan, UT

**Fuze/FFC/Demil Conference & Exhibition**  
September 25–28, 2023  
Huntsville, AL

**Want your event listed here?**  
Email [contact@dsiac.org](mailto:contact@dsiac.org), to share your event.



## VOICE FROM THE COMMUNITY

### Nitish Mital

*Research Associate, The Alan Turing Institute*

Nitish Mital is a technical lead of the artificial intelligence (AI)-metaverse/ SynData project in the ARCD research programme at Alan Turing Institute. He generates synthetic electro-optical/ infrared imagery and 3-D scenes in gaming engines using generative AI and rough path theory for defence scenarios and reinforcement learning agent interaction for battle strategy formulation. He has previous experience in information theory and AI for wireless communications and data compression and astrodynamics simulation in gaming engines like Unity.

## 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)

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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

### 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.org/technical-inquiries>

## FOR MORE: FOLLOW US ON SOCIAL!

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## RECENT DSIAC TIs

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- Can you provide a summary of current space-related research and capabilities in China?
- What small form factor EA payloads can degrade the performance of peer or near-peer military systems?
- Who are the leading countries, universities, and researchers for MUM-T in Asia?

## RECENT CSIAC & HDIAC TIs

---

- What radar systems does the U.S. Army use that operate at frequencies above 8 GHz?
- What new technology and research is the U.S. Navy performing to supply/refuel/recharge large unmanned surface vehicles?
- What DoD entities have worked with U.S. partner nations to develop a shared COP, and what was the process?

## FEATURED NEWS

### Navy to Field New Hearing Protection Helmet for Extreme Noise Environments, Improving Safety and Readiness

NAVAL AIR SYSTEMS COMMAND, PATUXENT RIVER, Md. — The Naval Aircrew Systems program office (PMA-202) is using data collected during recent fleet assessments to refine the HGU-99/P Hearing... [READ MORE](#)

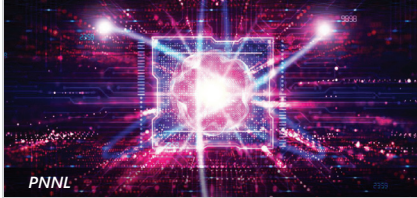
## RECENT NEWS



*U.S. Air Force*


**AFWERX Integrates Uncrewed Traffic Management to Enhance Safety and Security**

U.S. Air Force 



*PNNL*

**When Materials Discovery Glitters**


PNNL 



*Ames National Laboratory*


**Researchers Develop a New Process for Manufacturing Permanent Magnets**

Ames National Laboratory 



*U.S. Marine Corps*


**Ensuring Reliable Communications Between US, Allied Partners at the Tactical Edge**

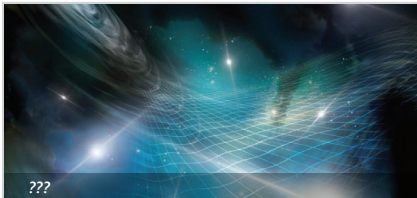
DARPA 



*NIST*


**NIST Lays Groundwork for Future Ultra-Precise Timing Links to Geosynchronous Satellites**











NIST 



*U.S. Navy*

**NRL Scientists Use Pulsar Timing to Measure Gravitational Waves From the Distant Universe**

U.S. Navy 

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

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