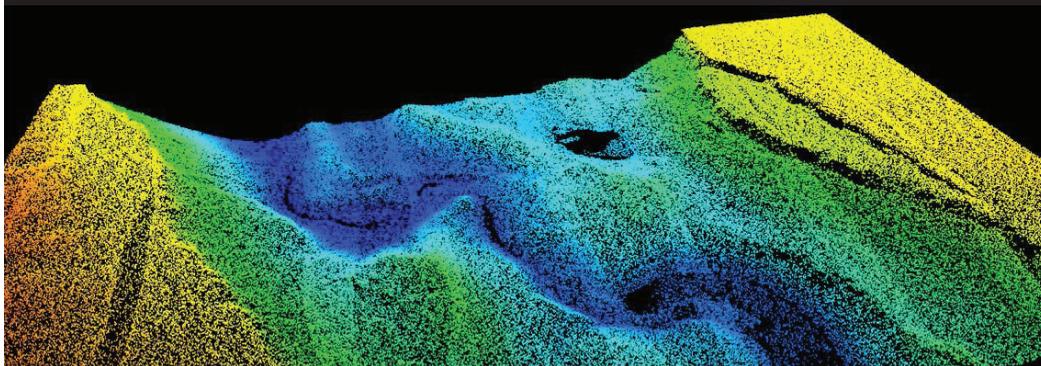


DEFENSE

Systems Digest

The Latest From the Defense Systems Information Analysis Center // August 23, 2022



[SUBMIT A TECHNICAL INQUIRY](#)

National Science Foundation

NOTABLE TECHNICAL INQUIRY

Can you provide the latest research and development on LiDAR detection of UAVs?

The Defense Systems Information Analysis Center was asked to identify the latest research and development of LiDAR for use in detecting UAVs. LiDAR uses lasers with a lower wavelength compared to radio waves used by radar. This allows LiDAR to be more accurate and precise in detecting smaller objects with greater detail. Three-dimensional images are also easier to create based on the high-resolution images made in LiDAR. Current research is trying to develop and lower the costs of solid-state LiDAR technology for commercial and U.S. Department of defense (DoD) use. [LEARN MORE](#)



SNEAK PEEK

UPCOMING WEBINAR:

X-Ray Computed Tomography as a Reverse Engineering Tool

DATE:

September 1, 2022

TIME:

12:00 PM

PRESENTED BY:

Chris Peitsch

HOST:

DSIAC



VOICE FROM THE COMMUNITY

Travis Keen

Research Analyst

Travis Keen is a research analyst and additive manufacturing subject matter expert at the Defense Systems Information Analysis Center, where he answers technical inquiries and generates research reports that focus on advanced materials, autonomous systems, and energetics. Prior to joining DSIAC, he was an additive manufacturing intern at America Makes. His graduate research concentrated on the high-strain rate mechanical and material properties of selective laser melted stainless steel 316L and was published in the *International Journal of Rapid Manufacturing*. He has also performed printability and material properties testing on a variety of novel materials for Alcoa and other organizations.

BECOME A SUBJECT MATTER EXPERT



HIGHLIGHT

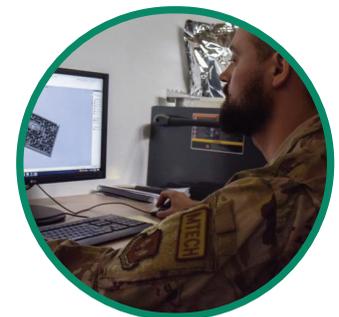
What are the state-of-the-art uses of machine learning and/or artificial intelligence to optimize additive manufacturing for military applications?

The Defense Systems Information Analysis Center (DSIAC) is looking for the latest research into military applications of artificial intelligence (AI) and/or machine learning (ML) in additive manufacturing (AM) processes to support an upcoming state-of-the-art report (SOAR). We want your input to ensure that we have included the most up-to-date information in our SOAR. [LEARN MORE](#)

FEATURED NEWS

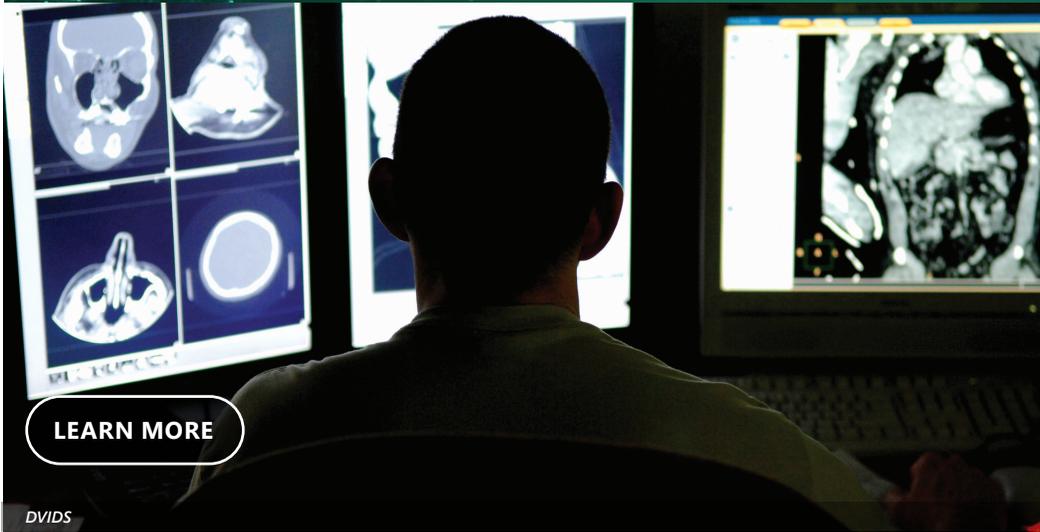
Defense Department Invests to Re-establish Domestic Production of Critical Propellant

The Department of Defense's (DoD's) Industrial Base Support (IBS) office, through the Defense Production Act (DPA) Title III authority, is supporting a Louisiana facility that produces black powder, a widely used propellant in artillery, firearms, rocketry, pyrotechnics, and numerous weapons systems.



The \$3.5 million investment by the DoD will allow the facility, owned by Estes Energetics, through its Goex subsidiary, to reopen after an accident shut down production. [READ MORE](#)

Image: DVIDS



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DVIDS

WEBINARS

X-Ray Computed Tomography as a Reverse Engineering Tool

Presented: September 1, 2022 12:00 PM - 12:45 PM

Presenter: Chris Peitsch

Host: DSIAC

A tool to see the invisible? It sounds too good to be true. Just as medical X-ray computed tomography (CT) scanning is used to visualize critical features inside a body to diagnose an elusive illness, industrial X-ray CT is used to uncover hidden information in a part or product to solve a wide variety of research and development, quality, and/or failure challenges.

In this webinar, we will discuss how industrial X-ray CT can be used in hardware reverse engineering to create computer-aided design models of internal and hidden surfaces or trace connections buried within a complex, multilayer printed circuit board (PCB).

The following topics will be covered:

- What is industrial X-ray CT?
- General applications of X-ray CT
- How to use CT data effectively
- Dimensional inspection with CT
- CT analysis of electronics and PCBs
- How to access CT hardware and services

LEARN MORE

EVENTS

Mechanical Shock Testing & Data Analysis Training in Albuquerque, NM

August 23-25, 2022

Aircraft Airworthiness and Sustainment (AA&S) Conference

August 29-September 1, 2022

Fundamentals of Random Vibration and Shock Testing Open Course (NTS Longmont, CO)

September 13-15, 2022

Air, Space, and Cyber Conference

September 19-21, 2022

FY22 JAS Program Review (JPR)

September 27-29, 2022

Want your event listed here?

Email contact@dsiac.org, to share your event.

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

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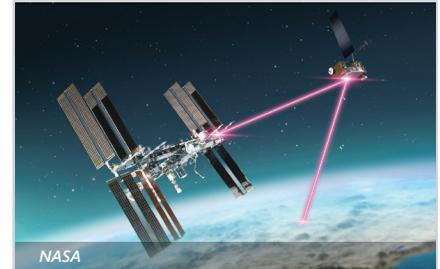
RECENT NEWS



U.S. Army

The Vital Role of Satellite Communication in KFOR

C4ISR



NASA

What's Next: The Future of NASA's Laser Communications

C4ISR; Directed Energy



U.S. Air Force

Minuteman III Test Launch Showcases Readiness of U.S. Nuclear Force's Safe, Effective Deterrent

RMQSI; Weapons Systems



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MIT Researchers Use AI to Correct Additive Manufacturing Errors in Real Time

Advanced Materials; Autonomous Systems



U.S. Army

Testing of the Army's First Autonomous Vehicle Speeds Ahead

Autonomous Systems; RMQSI



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Next Generation Handheld Targeting System: Lightening the Load for JTACs

Military Sensing

