DEFENSE
Systems Digest

NEXT GENERATION FIRE MODEL (NGFM)

The NGFM is a software tool for estimating the probability of ballistically-induced fires in aircraft dry bays. Version 1.1 provides an initial capability for determining probability of ignition for a limited set of scenarios involving steel fragments against aluminum structures. Future research, development, and validation efforts intend to improve the prediction performance found in version 1.1 as well as expand the... **READ MORE**

DID YOU MISS OUR LAST WEBINAR?

"A Materials Science Perspective on Space Propulsion Technology"

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or download the slides

NOTABLE TECHNICAL INQUIRY

What are fractal radars, and how do they work?

The Defense Systems Information Analysis Center (DSIAC) was asked to deliver general information explaining fractal radar. DSIAC performed a literature search and delivered a list of publications/documents with summaries to the inquirer.

Fractal radars have been around for the last 20 years and are now just getting traction due to U.S. adversarie showing signs of using this... **READ MORE**

UPCOMING WEBINAR

U.S. Navy
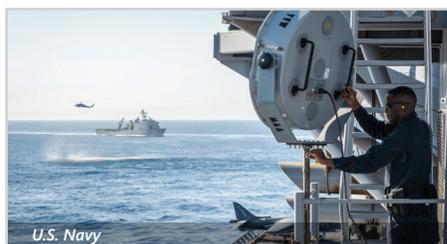
USAF Non-Lethal Weapons Program: A Primer for Defense Professionals De-escalating Geopolitical Tensions...

August 23, 2023 12:00 PM – 1:00 PM

Presenter: Aaron Hodges   *Host:* DSIAC

This webinar provides insight into the U.S. Air Force's (USAF's) non-lethal weapons program. It consists of two parts. The first part is a primer on non-lethal weapons (NLWs)/intermediate force capabilities (IFCs), and the second part focuses on peer-to-peer and near-peer conflict and the use of... **READ MORE**

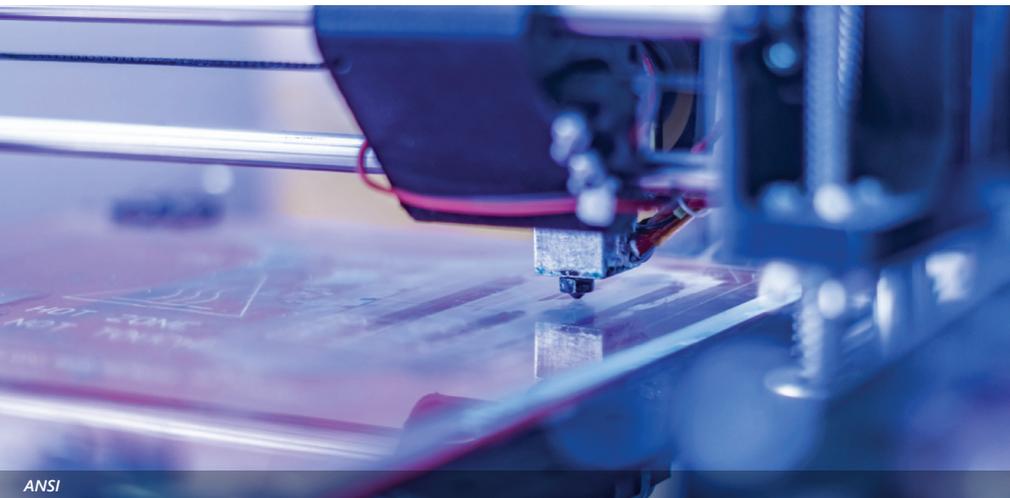## FUTURE WEBINARS

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

September 20, 2023 12:00 PM – 1:00 PM

Emerging Applications of Machine Learning and Predictive Analytics in...

October 4, 2023 12:00 PM – 1:00 PM

ANSI

HIGHLIGHT

America Makes and ANSI Publish Standardization Roadmap for Additive Manufacturing Version 3.0

America Makes and the American National Standards Institute (ANSI) announced the publication of the Standardization Roadmap for Additive Manufacturing, Version 3.0, developed by the America Makes and ANSI Additive Manufacturing Standardization Collaborative (AMSC). The roadmap describes the current and desired future standardization landscape for additive manufacturing (AM) and focuses on industrial market sectors... **LEARN MORE**

EVENTS

Space and Missile Defense Symposium
August 8–10, 2023
Hunstville, AL

Cyber-Physical Sensing Working Group Meeting
August 9–10, 2023
Pittsburgh, PA

15th Annual Ground Vehicle Systems Engineering & Technology Symposium (GVSETS)
August 15–17, 2023
Novi, MI

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

2023 Operational Energy & Logistics Summit
August 22–24, 2023
Honolulu, HI

The Aircraft Airworthiness & Sustainment Conference
August 28–31, 2023
San Antonio, TX

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

VOICE FROM THE COMMUNITY

Kevin Garrison
Research Staff Member, Institute for Defense Analyses, IT Studies Division

Kevin Garrison serves as a research staff member conducting research and analysis on a wide range of IT issues, including system analysis, IT cost modeling, cybersecurity, machine learning, and natural language processing. As the former Chief of Analytics in the Office of the Department of Defense Chief Information Officer, he has more than 40 years of federal service and defense contractor experience. He is a retired U.S. Army officer and Air Force Academy graduate.

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U.S. Army

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RECENT DSIAC TIs

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

- What thermal and radiative material property databases are publicly available near standard temperature and pressure (STP) conditions?

- What is the impact of ARO funding on novel, free-standing, 2-D crystalline materials and other emerging technologies?

RECENT CSIAC & HDIAC TIs

- How fast do artificial intelligence (AI)/machine-learning (ML) technologies transition from paper to fielded capability for the People's Republic of China (PRC)?

- Is there an overarching Wi-Fi program for the U.S. Air Force?

- In working dogs, what modifications need to be considered for the current deployable force packages/Defense CBRN Response Force military working dog component?

FEATURED NEWS

CAMRE Helps Marines Take 3-D Printing to New Heights

The Consortium for Additive Manufacturing Research and Education (CAMRE) at the Naval Postgraduate School (NPS) achieved the first successful demonstration of in-flight 3-D printing aboard a U.S. Marine Corps MV-22 Osprey tiltrotor aircraft on June 21 in Southern California. **READ MORE**
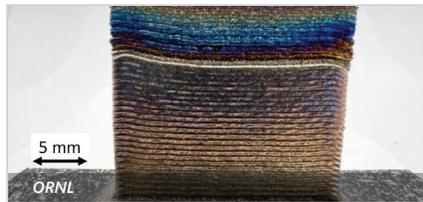
RECENT NEWS

U.S. Army

I Promise It's Not a Test

U.S. Army

ORNL
5 mm

"Secret Sauce" Enables New Way to Fabricate Compositionally Graded Alloys

ORNL

U.S. Army

Armor for the Artic

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SNL

Stunning Discovery: Metals Can Heal Themselves

Sandia National Laboratories

laser 2
polymer film
microprojectile
camera
ablation target
NIST
laser 1
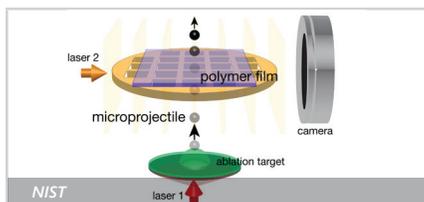
New Laser-Based Method Could Help Scientists Discover New Puncture-Resistant Materials

NIST

SNL

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

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