

# DEFENSE

## Systems Digest

The Latest From the Defense Systems Information Analysis Center // April 18, 2023



U.S. Army

## NOTABLE TECHNICAL INQUIRY

### What are the emerging technologies and ideal ballistic materials to maintain lightweight capabilities for rifle-rated helmets?

With the recent release of the Security Forces NextGen Helmet 2.0 by the Air Force Security Forces Center, the Defense Systems Information Analysis Center (DSIAC) was asked to determine if there are emerging materials/technologies for rifle-rated helmets. The currently available lightweight polyethylene (PE) ballistic shells are usually rated IIIA by the National Institute of Justice (NIJ) and are tested to stop up to 124-grain, 9-mm full metal jacket rounds at a nominal velocity of 1,400 ft/s (should also stop... [READ MORE](#))



## JOURNALS ARE BACK!

We are now accepting abstracts for our first revamped issue and need your help! This issue will be a DSIAC special edition focusing on research and innovations in the U.S. Navy.

Articles can fall in any domain relevant to DSIAC's 10 focus areas.

### WHAT TO INCLUDE IN ABSTRACT:

- 200 words
- All authors
- Prospective title
- Highlighted focus area(s)
- Your organization

### ARTICLE DEADLINE:

May 15, 2023

### SUBMIT IDEAS/ABSTRACT:

[journal@dsiac.org](mailto:journal@dsiac.org)

To view previous DSIAC journals, visit <https://dsiac.org/journals>.



## VOICE FROM THE COMMUNITY

### Joshua Gorfain

*Technical Lead, Applied Physical Sciences Corp.*

Joshua Gorfain is a manager and technical lead of several DoD applied research programs on weapons effects, survivability, and durability, with 20 years of experience in physics-based computational modeling to predict the structural and mechanical response of systems. He is the lead for a Defense Logistics Agency program that uses multiphysics modeling to improve the environmental durability and life of transparent armor in tactical vehicles. He also assesses Navy systems under combat environments produced by explosive and penetrator weapons.

## 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 an SME!

Join our team today!

**BECOME A SUBJECT MATTER EXPERT**



## HIGHLIGHT

### Critical Technologies Newsletter From the Office of the Deputy Chief Technology Officer for Critical Technologies

The Office of the Deputy Chief Technology Officer for Critical Technologies (DCTO(CT)) released its quarterly newsletter highlighting the latest news in software, autonomy, microelectronics, artificial intelligence capabilities, and more. [LEARN MORE](#)

## FEATURED NEWS

### MDA Test Successfully Intercepts Ballistic Missile Target

The U.S. Missile Defense Agency, in cooperation with the U.S. Navy, successfully conducted Flight Test Aegis Weapon System 31 Event 1a (FTM-31 E1a). The test demonstrated the capability of a ballistic missile defense (BMD)-configured Aegis ship to detect, track, engage, and intercept a medium-range ballistic missile (MRBM) target in the terminal phase of flight utilizing the Standard Missile-6 (SM-6) Dual II with Software... [READ MORE](#)



Image: U.S. Navy



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## WEBINARS

### Electromagnetic Shielding With Composite Materials

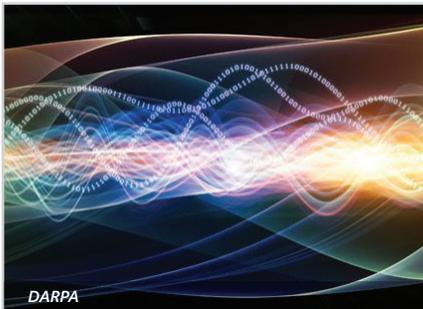
Presented: May 17, 2023 12:00 PM – 1:00 PM

Presenter: Harry R. Luzetsky

Host: DSIAC

Military and commercial vehicles operate in varied electromagnetic (EM) environments, which affect their onboard electrical/electronic systems. Lightning, electromagnetic pulse (EMP), and high-power microwave energy can cause detrimental effects.

Although circuit architecture is used to mitigate some of these effects, a sure way is to place the sensitive electronics within a... [LEARN MORE](#)



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

June 21, 2023 12:00 PM

## EVENTS

### Threat Weapons & Effects 2023

April 25–27, 2023

Eglin Air Force Base, FL



Image: U.S. Air Force

### NSMMS & CRASTE Joint Symposia

June 26–29, 2023

Tucson, AZ



Image: DVIDS

### Military Standard 810 (MIL-STD-810) Test Training (NTS Chicago, IL)

July 10–13, 2023

Chicago, IL



Image: Equipment Reliability Institute

### Want your event listed here?

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

## DID YOU MISS OUR LAST WEBINAR?

“State of Machine Learning for Optimization of Additive Manufacturing to Support Military Applications”

WATCH NOW!

\*This webinar presentation contains CUI and is therefore limited to government and contractors only.\*

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

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## RECENT NEWS



ONR

**ONR'S RoboBoat Competition Makes a Splash in Sarasota, Florida**

U.S. Navy



U.S. Navy

**The Navy's New Hearing Protection: Made-to-Measure for Every Sailor**

U.S. Navy



U.S. Marine Corps

**Quantico Hosts a Successful Tactical Resupply Unmanned Aircraft System Demonstration**

U.S. Marines Corps



U.S. Army

**HADES Modernizes Aerial Military Intelligence**

U.S. Army



AFRL

**AFRL Conducts First Flight Experiments for Communications in Terahertz Band**

U.S. Air Force



University of Wisconsin

**Using X-rays and Additive Manufacturing to Print Tough Materials**

Argonne National Laboratory

