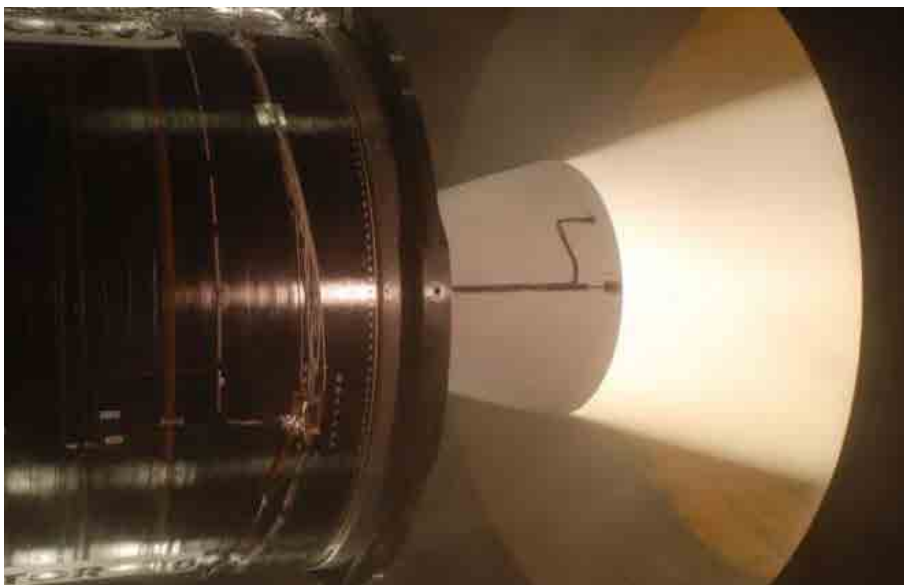


Defense Systems

DIGEST

6 NOVEMBER 2018 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



NOTABLE TECHNICAL INQUIRY

What are the testing requirements for solid rocket insensitive munitions and installation of the thrust vector control system?

A DSIAC subject matter expert (SME) responded to a major developer and manufacturer of missile and rocket systems to provide guidance on testing requirements and potential impacts for use of thrust vector control during slow cookoff (SCO), and fragment/bullet... [Read More](#)

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FEATURED NEWS



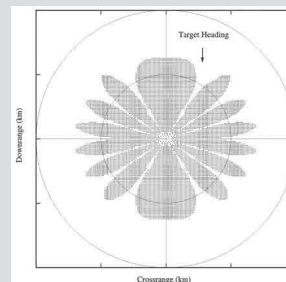
DARPA Starts Work On “Glide Breaker” Hypersonic Weapons Defense Project

As the threat of hypersonic weapons continues to grow, one of the Pentagon’s top research and development arms is moving ahead with a new project to explore ways to guard against them. The Defense Advanced Research Projects Agency’s (DARPA) Glide Breaker project will look into various “component technologies” needed for one or more defense systems, but will focus heavily on a hard-kill interceptor to knock the fast-flying weapons out of the sky. “The objective of the Glide Breaker program is to further the capability of the... [Read More](#)

MODEL OF THE MONTH

ALARM – The Advanced Low Altitude Radar Model, or ALARM, is a generic digital computer simulation designed to evaluate the performance of a ground-based radar system attempting to detect low-altitude aircraft. The purpose of ALARM is to provide a radar analyst with a software simulation tool to evaluate the detection performance of a ground-based radar system against the target of interest in a realistic environment.

[Get this model!](#)



VOICE FROM THE COMMUNITY



Professor Glenn Boreman, Chair, Dept. of Physics & Optical Science, University of North Carolina at Charlotte

I am Chair of the Department of Physics & Optical Science at the University of North Carolina at Charlotte. I received my BS in Optics from University of Rochester, and my PhD in Optics from University of Arizona. From 1984 to 2011, I was on the faculty of the University of Central Florida and supervised 25 PhD students to completion. I am coauthor of the graduate textbooks *Infrared Detectors and Systems* and *Infrared Antennas and Resonant Structures*, and author of *Modulation Transfer Function in Optical & Electro-Optical Systems* and *Basic Electro-Optics for Electrical Engineers*. I've published over 190 journal articles in the areas of infrared sensors and materials, optics of random media, and image-quality assessment. In 2017, I had the pleasure of serving as the President of SPIE, the International Society for Optics and Photonics, and am currently a fellow of SPIE, IEEE, OSA, and MSS. Read more about Professor Boreman at, <https://exchange.uncc.edu/chair-of-physics-optical-science-named-ieee-fellow/>

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UPCOMING EVENTS

Warfighter Systems Summit

27 November 2018 to 28 November 2018

Army Autonomy and Artificial Intelligence Symposium and Exposition

28 November 2018 to 29 November 2018

2018 Defense Manufacturing Conference

3 December 2018 to 6 December 2018

Joint Army-Navy-NASA-Air Force (JANNAF) Interagency Propulsion Committee Meeting

10 December 2018 to 14 December 2018

► Want your event listed here? Let us know!

BULLETIN BOARD

“Introduction to BRAWLER” Training – Dec. 11-14, 2018

The **JANNAF Digital Online Collection (JDOC)** contains the entire history of the unclassified JANNAF collection of more than 25,000 papers, reports, standards, and manuals.

AUVSI’s Unmanned Systems and Robotics Database

is the largest comprehensive and searchable database of all unmanned vehicles and robotic products operating in the air, ground, and maritime domains.

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DSIAC JOURNAL FALL 2018



Additive Manufacturing in the DoD

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- Overcoming the Barriers to Human-Machine Teams
- Fire Risks with Fiber-Reinforced Polymer (FRP) Composites
- Radio Frequency, Directed Energy Weapon Design Tool
- Optimizing Armament Systems with Artificial Intelligence and Machine Learning



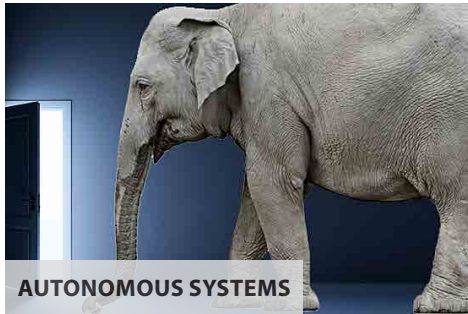
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RECENT NEWS



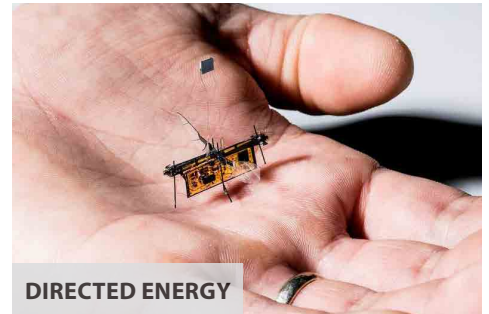
ADVANCED MATERIALS

3D Print Ceramics, Clay, Cookie Dough – or Solid Rocket Fuel



AUTONOMOUS SYSTEMS

Can Common Sense Be Built into AI?



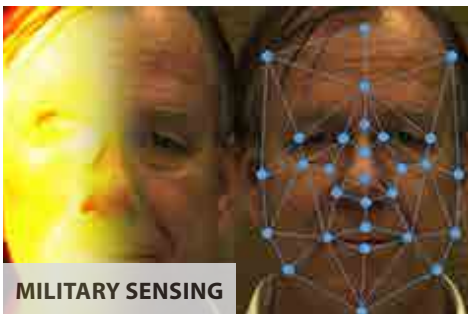
DIRECTED ENERGY

Laser-Powered Robot Insect Achieves Lift-Off



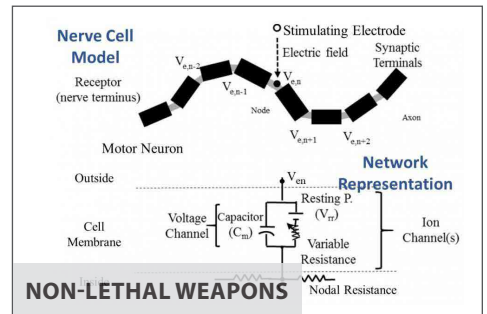
ENERGETICS

Army Makes Inroads Toward Tripling the Energy of Explosives



MILITARY SENSING

Army Develops Face Recognition Technology That Works in the Dark



NON-LETHAL WEAPONS

Final Report – Human Electro-Muscular Incapacitation (HEMI): Physiological Modeling Weapons



RMQSI

Operational Energy Data is the New Weapon of the U.S. Air Force



SURVIVABILITY AND VULNERABILITY

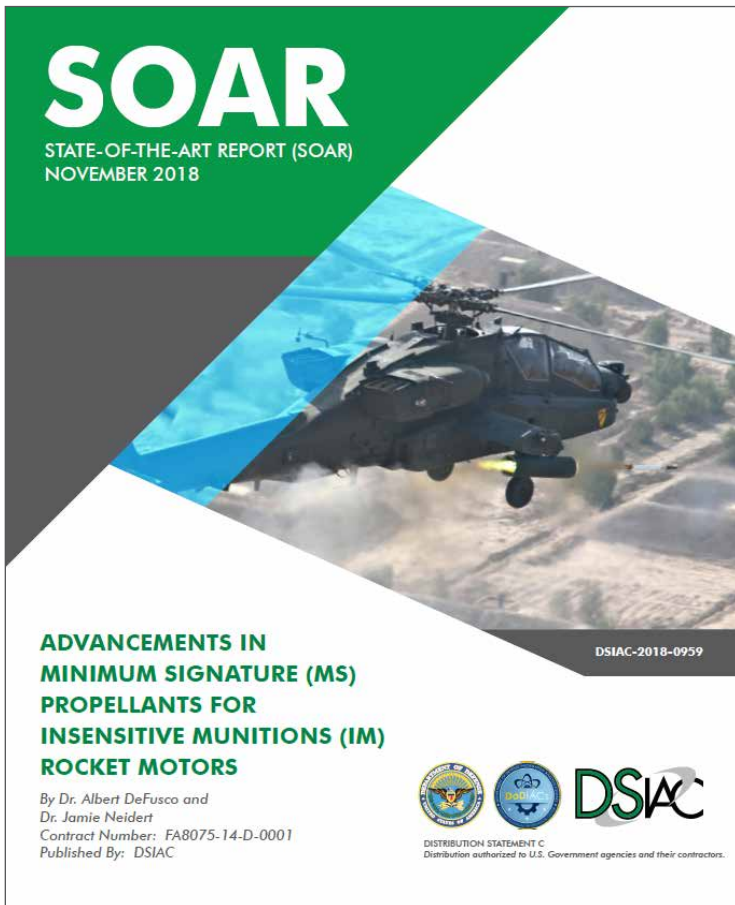
Graphene and Silk Show Potential as Armor of the Future



WEAPON SYSTEMS

U.S. Army Getting New Machine Gun Round, Special Ops Getting New Sniper Bullet

COMING SOON – NEW STATE OF THE ART REPORT (SOAR)



State of the Art Report on Advancements in Minimum Signature Propellants for Insensitive Munition Rocket Motors.

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- 05/18 | Unmanned Aerial Systems for Intelligence, Surveillance, Reconnaissance
- 12/17 | Qualifying Additive Manufacturing Parts
- 09/17 | Underbody Blast (UBB) Protection for Ground Combat Vehicles
- 12/16 | Protection for the Homemade Explosive (HME) Researcher: Laboratory Shielding and Personal Protective Equipment

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