

Defense Systems

DIGEST

25 SEPTEMBER 2018 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



NOTABLE TECHNICAL INQUIRY

What are good examples of applications of autonomy in the commercial sector relevant to the naval enterprise?

DSIAC was tasked with identifying applications of autonomy in the commercial sector (logistics, medicine, data/cyber, etc.) that would be good to implement in the naval enterprise. DSIAC worked with subject matter experts (SMEs) from the West Virginia University Innovation... [Read More](#)

► **SUBMIT YOUR TECHNICAL INQUIRY – 4 hours of research service for FREE**

FEATURED NEWS



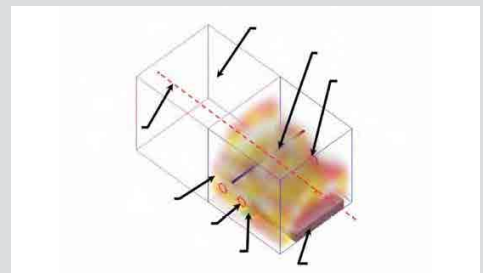
Doctors Reveal Details of Neuro-Weapon Attacks in Havana

Directed energy weapons intended to disrupt or damage their victims' brains were the most likely source of a series of mysterious attacks singling out U.S. personnel assigned to the U.S. Embassy in Cuba in 2017, three doctors involved in the investigation have told National Defense in exclusive interviews. The three experts were contacted by the State Department to investigate 25 cases of government employees working in Cuba who complained of suddenly hearing noises, pressure in their ears, followed by symptoms such as headaches, vertigo, dizziness and loss of cognitive functions... [Read More](#)

MODEL OF THE MONTH

WINFIRE – WINFIRE with the Fire Prediction Model (FPM v3.8.2) integrated simulates events that accompany a single threat penetrating through a vehicle and impacting a container of flammable fluid (e.g., a fuel tank or pressurized line containing fuel or hydraulic fluid). The model predicts whether ignition would occur and continues modeling events through fire growth and spread.

[Get this model!](#)



VOICE FROM THE COMMUNITY



John Geringer, P.E., USACE Protective Design Center (PDC)

The PDC is the Army's center of expertise for force protection and protective design engineering services. We support Army permanent and expedient applications and DoD and other USG agencies to protect assets against criminal, terrorist, conventional, nuclear and special weapon threats. PDC manages the DoD Anti-Ram Vehicle Barrier list, commission vehicle barriers, reviews SCIF and blast designs, conducts blast analyses, and vulnerability assessments. I enjoy working on shock isolating equipment in bunkers, conducting finite element analyses of bridges, and overhead cover design projects. I am currently working on updates to the single degree of freedom structural dynamic response limits document PDC-TR 06-08, including new response limits and guidance based on research from the precast and cross-laminated timber industries.

► Apply to be part of our network of over 1,000 subject matter experts.

UPCOMING EVENTS

21st Annual Systems Engineering Conference

22 October 2018 to 25 October 2018

HELMOT XVIII – Vertical Lift Transformational Technologies

24 October 2018 to 25 October 2018

The 2018 OSA Laser Congress

4 November 2018 to 8 November 2018

Aircraft Survivability Symposium 2018

6 November 2018 to 8 November 2018

► Want your event listed here? Let us know!

BULLETIN BOARD

Be a Subject Matter Expert – Help the Warfighter; Submit to Voice from the Community – Inform the Defense Community

Interested in Aircraft Survivability? Subscribe to the Joint Aircraft Survivability Program (JASP) Aircraft Survivability Journal (download digital copies)

Involved in Additive Manufacturing? Join the America Makes Ecosystem for Opportunities in Collaboration and Private-Public Partnerships

SOFWERX – Aviation Maintenance Modernization Capability Assessment Event

► Add your item to our board by contacting us.

DSIAC JOURNAL SUMMER 2018



Manufacturing at the Point of Need Using Recycled, Reclaimed, and/or Indigenous Materials

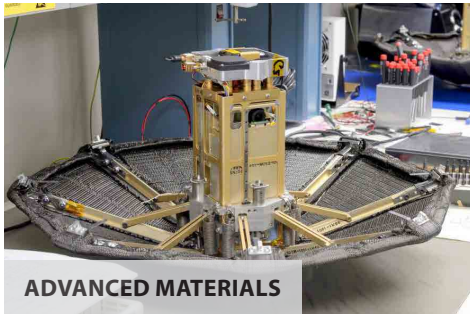
Also in This Issue:

- Testing Gas-Turbine Aircraft Engines
- Detecting Bullets Through Electric Fields
- Characterizing Cyber Intelligence as an All-Source Intelligence Product
- To Use or Not to Use Mobile Robots



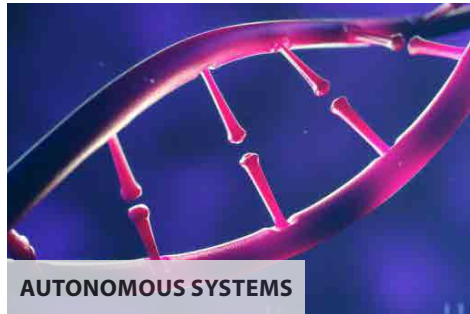
► Have an idea for a topic? Please contact us to write an article!

RECENT NEWS



ADVANCED MATERIALS

Exploring the Solar System? You May Need to Pack an Umbrella



AUTONOMOUS SYSTEMS

Breakthrough in Controlling DNA-Based Robots



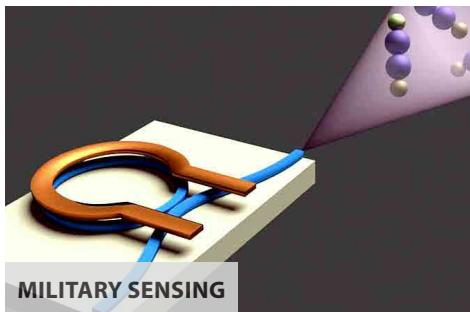
DIRECTED ENERGY

NAVY Solicits Interest for High-Power Microwave (HPM) Vessel Stopping Prototype



ENERGETICS

Space Race: A Look at NASA's New Kilowatt Fission Reactor



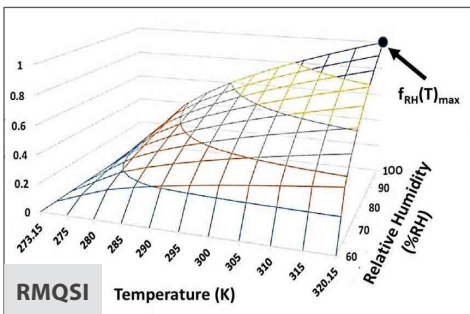
MILITARY SENSING

Dual Frequency Comb Generated on a Single Chip Using a Single Laser



NON-LETHAL WEAPONS

Marine Corps Seeks Wireless Non-Lethal HEMI Bullet via SBIR Solicitation



RMQSI

Dynamic Multivariate Accelerated Corrosion Test Protocol



SURVIVABILITY AND VULNERABILITY

UNH Researchers Find Seed Coats Could Lead to Strong, Tough, yet Flexible Materials



WEAPON SYSTEMS

Army Builds New Self-Propelled Howitzer – Cannon Will Hit 43.5 Miles

LONGTIME ARMY SCIENTIST PASSES AWAY



It is with great sadness that we received news about the sudden passing of Dr. Brad Forch. Brad served the U.S. Army Research Laboratory as a senior research scientist in ballistics, where we had the opportunity to work with him as DSIAC’s first Contracting Officer’s Representative. Brad maintained regular contact with DSIAC ever since its beginnings and has been a tremendous supporter and advocate. His dedicated work ethic and genuine concern for DoD research is a testament to him as a person and his passions as a scientist . He will most certainly be missed.

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