

Defense Systems

DIGEST

27 MARCH 2018 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



NOTABLE TECHNICAL INQUIRY

What compact drone systems are readily-available with video and navigation capabilities?

DSIAC staff searched open sources for commercial off-the-shelf (COTS) “backpackable” drone systems with both 4K video and advanced navigation capabilities. We found that two well-known COTS manufacturers produced small foldable drone systems that met the requirements and performed a detailed comparison of their capabilities. [Read More](#)

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

FEATURED NEWS

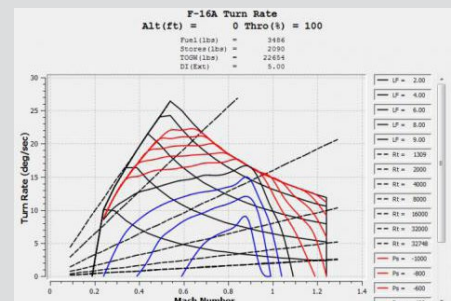


Bring Back the Nuclear Tomahawks

In response to continued Russian and North Korean aggressive nuclear posture activities, Admiral (ret) James A. “Sandy” Winnefeld, Distinguished Professor of International Affairs at Georgia Tech’s Sam Nunn School and former Vice Chairman of the Joint Chiefs of Staff and Commander of U.S. NORTHCOM and NORAD, and Dr. James N. Miller, senior fellow at Harvard Kennedy School’s Belfer Center for Science and International Affairs and former Under Secretary of Defense for Policy, discuss the role of nuclear-capable cruise missiles in modernizing our nuclear defense forces to ensure a safe, secure, and... [Read More](#)

MODEL OF THE MONTH

BlueMax6 – BlueMax6 provides high-fidelity air-vehicle dynamics and Time & Space Position Information (TSPI) for constructive and virtual modeling simulation and analysis. BlueMax6 output can feed directly into models such as ESAMS, ALARM, RADGUNS, SUPPRESSOR, JAAM, and can be interfaced to constructive non-real-time or virtual real-time environments. [Get this model!](#)



VOICE FROM THE COMMUNITY



Dr. Robert Cruise
Naval Surface Warfare Center, Crane Division

Dr. Cruise is currently working on collective decision-making in multi-AI-agent systems. This is part of efforts furthering the cyber-physical command-guided swarm (CGS) concept. CGS is a multisensor, multiweapon, multiplatform, single-human-operator system-of-systems. The swarm intelligence emerges from the complex interactions within the CGS multiagent population. These interactions may be designed using game theory. Each AI agent executes a gaming strategy. About two dozen simultaneous games within the CGS population converge upon solution concepts, or equilibria (such as the famous Nash equilibrium), and these equilibria constitute the emergent swarm intelligence.

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

UPCOMING EVENTS

Department of Defense (DoD)-Sponsored Chemical, Biological, Radiological, and Nuclear (CBRN) Survivability Conference
 April 4, 2018 to April 5, 2018

2018 Threat Weapons and Effects Training
 April 10, 2018 to April 12, 2018

Insensitive Munitions and Energetic Materials Technology Symposium
 April 23, 2018 to April 26, 2018

2018 Weapons Technologies Community of Interest Industry Independent Research and Development Technology Interchange Meetings
 April 23, 2018 to April 27, 2018

► Want your event listed here? Let us know!

BULLETIN BOARD

NASA RFI – Low Earth Orbit Flight Test – Inflatable Decelerator (LOFTID) Ancillary Gas Generator

SOFWERX Prize Challenge – Geo Hack-n-Hunt: Augmented Reality Navigation Assistance

SOFWERX Prize Challenge – Rugged Refuel Hose Storage and Deployment Solution

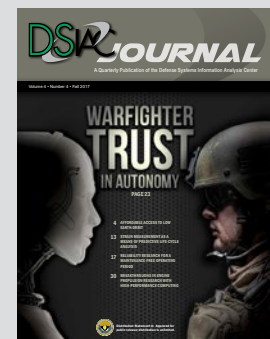
► Add your item to our board by contacting us.

DSIAC JOURNAL FALL 2017



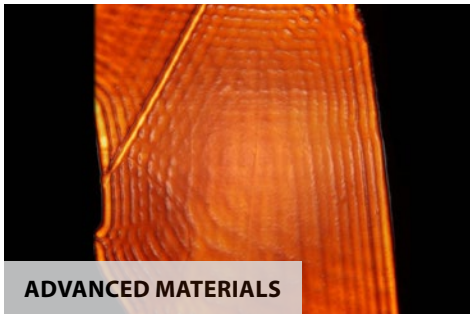
Warfighter Trust in Autonomy
Also in this issue:

- Affordable Access to Low Earth Orbit
- Strain Measurement as a Means of Predictive Life-Cycle Analysis
- Reliability Research for a Maintenance-Free Operation Period
- Breakthroughs in Engine Propulsion Research with High-Performance Computing



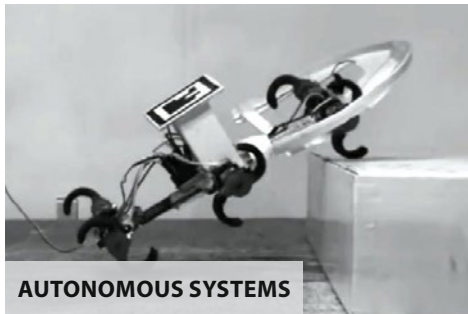
► Have an idea for a topic? Please contact us to write an article!

RECENT NEWS



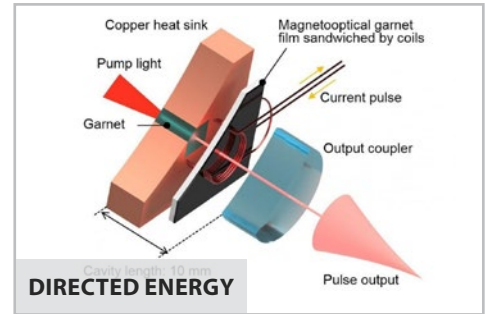
ADVANCED MATERIALS

NRL Improves Optical Efficiency in Nanophotonic Devices



AUTONOMOUS SYSTEMS

Studying Cockroach Locomotion: Scientists Learn How to Build Better, More Mobile Robots



DIRECTED ENERGY

Scientists Achieve High Power with New Smaller Laser



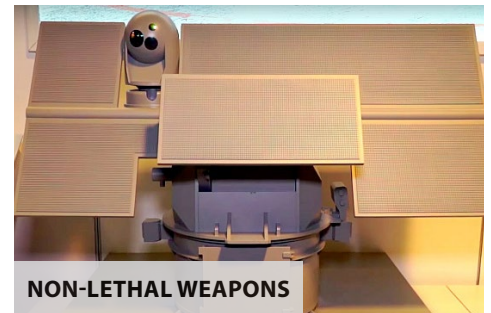
ENERGETICS launchchallenge.org

DARPA Planning Responsive Launch Competition



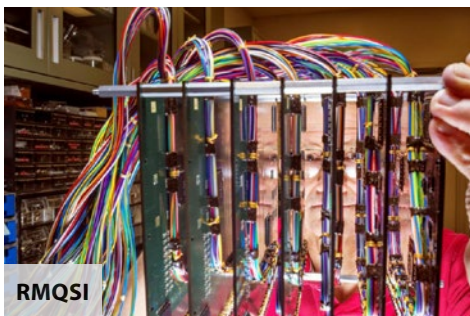
MILITARY SENSING

Army Introduces New Night Vision Goggles



NON-LETHAL WEAPONS

Microwave on Deck Could Down Drones



RMQSI

Sandia Computer Modeling Aids Solder Reliability in Nuclear Weapons



SURVIVABILITY AND VULNERABILITY

Humvees Retrofitted With New Safety Upgrades



WEAPON SYSTEMS

Small Missile, Big Mission

NEWLY AVAILABLE STI

Documents only available through DTIC to registered users.

Carbon Nanotubes Grown On Glass Fiber As A Strain Sensor For Real Time Structural Health Monitoring, 2012

Distro. A
Advanced Materials

Unmanned Air Systems Avionics Wiring Technical Manuals, 2016

Distro. B
Autonomous Systems

Development Of New Vulnerability Data For Multiple Integrated Laser Engagement System (miles) II, 2003

Distro. D
Directed Energy

Scientific And Technical Information (sti); Advanced Medium Mobile Power Source (ammgs) Patriot Application Kit (pak), 2017

Distro. D
Energetics

Scientific And Technical Information (sti); Patriot Simplified Survey System (sss) Technology Refresh, 2017

Distro. D
Military Sensing

Electromagnetic Interference Investigation And Mitigation Strategies, 2017

Distro. F
Non-Lethal Weapons

Central Nervous System Changes Induced By Underbody Blast-induced Hyperacceleration: An In Vivo Diffusion Tensor Imaging And Magnetic Resonance Spectroscopy Study, 2017

Distro. A
RMQSI

Software Survivability Assessment And Recommendations White Paper, 2003

Distro. F
Survivability and Vulnerability

Mk 46 Ammunition Lethality Program Plan For The United States Marine Corps Advanced Amphibious Assault Vehicle (aaav), 2001

Distro. F
Weapons Systems

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Defense Systems Information Analysis Center
4695 Millennium Drive, Belcamp, MD 21017
Phone: 443-360-4600
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