

# Defense Systems

## DIGEST

10 APRIL 2018 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



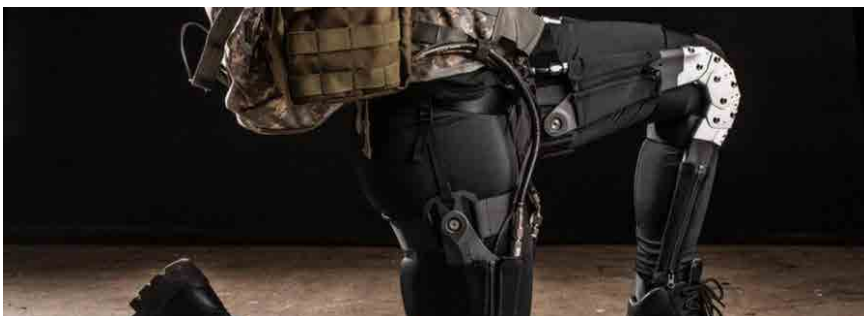
### NOTABLE TECHNICAL INQUIRY

*What is the efficacy of various instructional methods and technologies that can be used to enhance staff training and learning?*

DSIAC subject matter experts (SMEs) researched various instructional methodologies and technologies used to enhance staff training and learning. The response included information related to formal studies and technical reports identified from DTIC's R&E Gateway, National Technical Information Service (NTIS), and EBSCO databases and other sources concerning military adaptive training, human factors, staff training, training effectiveness... [Read More](#)

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

### FEATURED NEWS



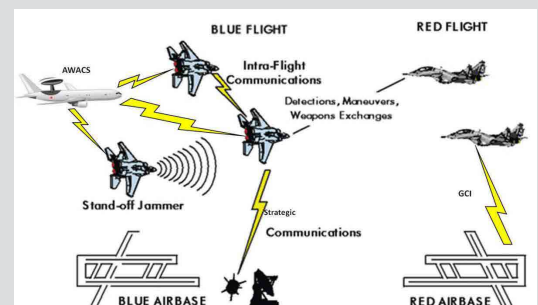
### Technologically Enhanced Humans – A Look Behind the Myth

What exactly do we mean by an “enhanced” human? When this possibility is brought up, what is generally being referred to is the addition of human and machine-based performances (expanding on the figure of the cyborg popularised by science fiction). But enhanced in relation to what? According to which reference values and criteria? How, for example, can happiness be measured? A good life? Sensations, like smells or touch which connect us to the world? How happy we feel when we are working? All these dimensions... [Read More](#)

### MODEL OF THE MONTH

**BRAWLER** – BRAWLER simulates air-to-air combat between multiple flights of aircraft in both the visual and beyond-visual-range (BVR) arenas. This simulation of flight-vs.-flight air combat is considered to render realistic behaviors for military trained fighter pilots.

[Get this model!](#)



**VOICE FROM THE COMMUNITY**



**Thirimachos Bourlai** Associate Professor, West Virginia University Lane Department of Computer Science and Engineering, Assistant Professor, WVU School of Medicine

My research focuses in the areas of image processing; hyper-spectral sensors, imaging and analysis; machine learning and pattern recognition; biometrics; forensics; computational physiology; and medical imaging. One of the areas that most interests me is designing and developing technology for supporting, confirming and determining human identity in challenging conditions using primarily face images, captured across the imaging spectrum (including ultraviolet, visible, near-infrared, short-wave IR, mid-wave IR and long-wave IR) and secondarily, other hard or soft biometrics including iris, fingerprints, ears and tattoos.

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

**UPCOMING EVENTS**

**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

**2018 IEEE Radar Conference**

April 23, 2018 to April 27, 2018

**USF Air Force Science and Technology 2030 Workshop**

April 26, 2018

► Want your event listed here? Let us know!

**BULLETIN BOARD**

**Enhanced Surface to Air Missile Simulation (ESAMS) Training**

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

**State-of-the-Art Report (SOAR) for Underbody Blast (UBB) Protection for Ground Combat Vehicles**

**DSIAC Core Analysis Task Program**

► Add your item to our board by contacting us.

**DSIAC JOURNAL WINTER 2018**



**Soft Coatings for Armor Enhancement**

**Also in this issue:**

- 3-D-Printed Weapons: Challenges and Opportunities in Advanced Manufacturing
- Two Arms are Better Than One: The Benefits of a Dual-Arm Robotic System
- A New Design for a Better Bunker Buster
- Grease is the Word: EcoFriendly Sailor-Safe Lubrication for Sea Systems



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

RECENT NEWS



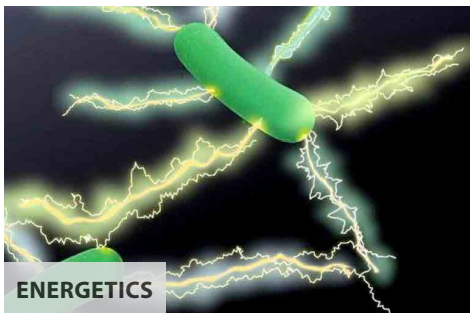
Physicists Take First Step Toward Cell-Sized Robots



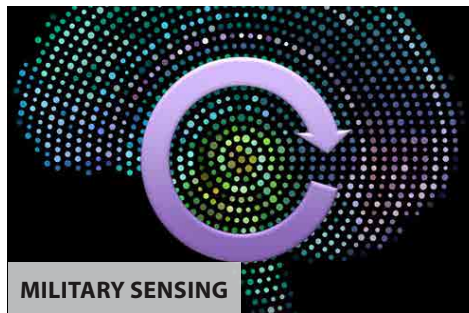
Skydio R1 Drone Autonomously Identifies/Tracks People and Objects, Navigates Any Environment



The US Military Is Making Lasers That Create Voices Out of Thin Air



Many More Bacteria Have Electrically Conducting Filaments



DARPA's New Brain Device Increases Learning Speed by 40%



Police's Sonic Weapon Could Cause Hearing Loss



Army Researchers Are After Cost-Effective Safer, Lighter Batteries



Personalizing Wearable Devices



New Report Predicts Small Drone Threats to Infantry Units, Urges Development of Countermeasures

NEWLY AVAILABLE STI

Documents only available through DTIC to registered users.

**Investigation Into the Effects of Wire Mesh on Tensile and Impact Properties of Fiber Metal Laminates, 2013**

Distro. A  
*Advanced Materials*

**Army Perspective on Defense Robotics, 2016**

*Submit Request for Accession No. DSIAC-2147111*  
Distro. A  
*Autonomous Systems*

**Electromagnetic Fields Exposure Limits, 2018**

Distro. A  
*Directed Energy*

**Ultra-high Thermal Effusivity Materials for Resonant Ambient Thermal Energy Harvesting, 2018**

Distro. A  
*Energetics*

**Analyzing Production Processes of Energetic Materials Using Ultrasound Sensing, 2016**

*Submit Request for Accession No. DSIAC-2147106*  
Distro. A  
*Military Sensing*

**3-D-Printed Weapons: Challenges and Opportunities in Advanced Manufacturing, 2018**

*Submit Request for Accession No. DSIAC-2147103*  
Distro. A  
*Non-Lethal Weapons*

**Modeling And Simulation Of Strain-induced Phase Transformations Under Compression And Torsion In A Rotational Diamond Anvil Cell, 2010**

Distro. A  
*RMQSI*

**Grease Is The Word: Ecofriendly, Sailor-safe Lubrication For Sea Systems, 2018**

*Submit Request for Accession No. DSIAC-2147114*  
Distro. A  
*Survivability and Vulnerability*

**A New Design For A Better Bunker Buster, 2018**

*Submit Request for Accession No. DSIAC-2147108*  
Distro. A  
*Weapons Systems*

**ABOUT THIS PUBLICATION:** The inclusion of hyperlinks does not constitute an endorsement by the DSIAC or United States Department of Defense (DoD) of the respective sites, nor the information, products, or services contained therein. The DSIAC is a DoD sponsored Information Analysis Center with policy oversight provided by the Office of Under Secretary of Defense for Research and Engineering (OUSD(R&E)) and is administratively managed by the Defense Technical Information Center (DTIC). Reference herein to any specific commercial products, process, or services by trade name, trademark, manufacturer, or other-wise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the DSIAC.

Defense Systems Information Analysis Center  
4695 Millennium Drive, Belcamp, MD 21017  
Phone: 443-360-4600  
Unsubscribe | DSIAC Journal | dsiac.org

