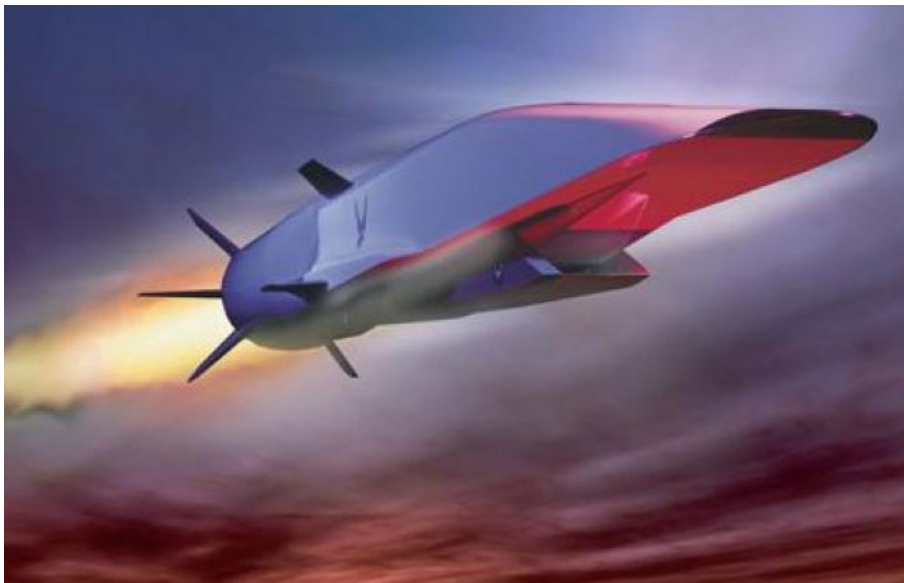


# Defense Systems

## DIGEST

17 JULY 2018 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



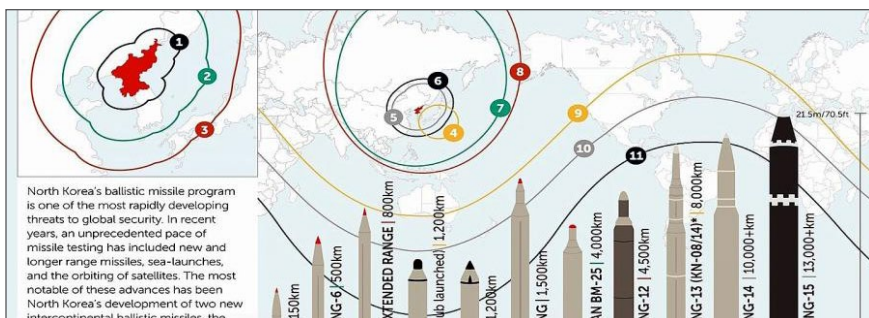
### NOTABLE TECHNICAL INQUIRY

*Who are the Government agencies and industry organizations involved in hypersonics vehicle and weapons research and development, and what are the associated programs?*

DSIAC staff searched our internal resources to provide information on reports and briefings related to overarching hypersonics technology development and defense concerns. We also reviewed our DSIAC Journal and DSIAC website... [Read More](#)

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

### FEATURED NEWS



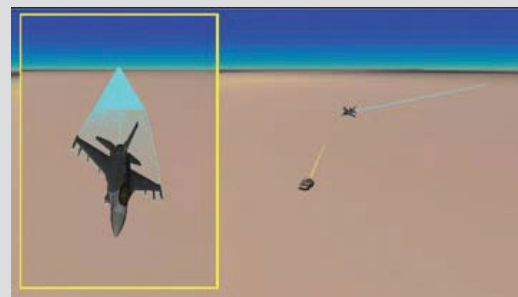
### Ballistic and Cruise Missiles and the Air and Missile Defense Systems Designed to Defeat Them

The Missile Threat website brings together authoritative and up-to-date open source information and analysis about ballistic and cruise missiles around the globe and the systems designed to defend against them. Missile Threat is a product of the Missile Defense Project at the Center for Strategic and International Studies (CSIS), which looks at a wide range of policy, program, and strategic issues related to missile defense. Technological and geopolitical factors have driven increased global supply and demand for high-velocity, unmanned, missile-based weapons and their corresponding counters. [Read More](#)

### MODEL OF THE MONTH

**RADGUNS** – Radar-Directed Gun System Simulation (RADGUNS) is used to evaluate effectiveness of Air Defense Artillery (ADA) gun systems against penetrating aerial targets and to evaluate the effectiveness of different airborne target characteristics (radar cross section, maneuvers, electronic countermeasures, etc.) against an ADA system.

[Get this model!](#)



**VOICE FROM THE COMMUNITY**



**John Tatum**, *Electrical/Electronic Systems Engineer, SURVICE Engineering*

I am an Electrical/Electronic Systems Engineer (EE) with 44 years of experience in Radar, Electronic Warfare (EW) and High-Power Radio Frequency/Microwave (HPM) Directed Energy Weapons (DEW), and their effects. I worked for the U.S. Army Research Laboratory (ARL) for 37 years where I led a team of engineers investigating the effects of EM/RF energy on electronic systems. Since retiring in 2011, I have been a consultant on EW and DEWs for SURVICE and have written articles on HPM DEWs, Counter DEW, and HPM models. I also enjoy being a volunteer for the Science Technology Engineering and Mathematics (STEM) program and teaching school children about Electricity and EE careers.

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

**UPCOMING EVENTS**

**Warheads and Ballistics Classified Symposium**

30 July 2018 to 2 August 2018

**Army Science & Technology Symposium & Showcase**

21 August 2018 to 23 August 2018

**Joint Aircraft Survivability (JAS) FY18 Program Review (JPR)**

18 September 2018 to 20 September 2018

**Directed Energy Systems Symposium**

24 September 2018 to 28 September 2018

► Want your event listed here? Let us know!

**BULLETIN BOARD**

**Help the Warfighter! — DSIAC is Looking for Solutions to GPS Challenges**

**2018 Mechanical Design Reliability Course**

**SOFWEREX TeamWERX Challenge: Amplifier-Repeater**

**Fact Sheet – High-Power Radio Frequency Microwave Directed Energy Weapons**

► Add your item to our board by contacting us.

**DSIAC JOURNAL SPRING 2018**



**DEW Countermeasures: A Notional Example of Hardening a System Against HPMs**

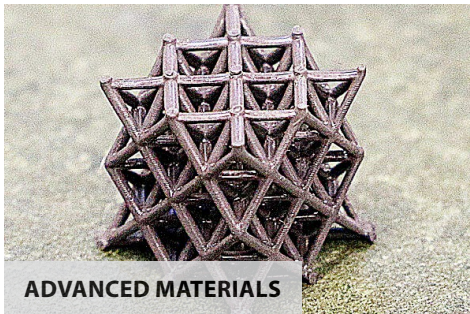
**Also in this issue:**

- How the Military UAV Community can Learn From the Commercial Drone World (and Vice Versa)
- Cyber-Physical Command-Guided Swarm
- Graphene: A Miracle Material With Promising Military Applications



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

RECENT NEWS



ADVANCED MATERIALS

3-D Printed Active Metamaterials for Sound and Vibration Control



AUTONOMOUS SYSTEMS

The Use of AI and Robotics in Weapon Systems



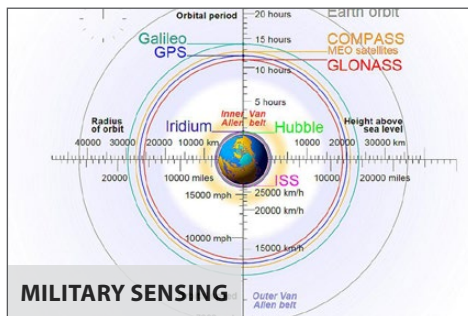
DIRECTED ENERGY

Army Moving Closer to Arming Systems With High-Energy Lasers



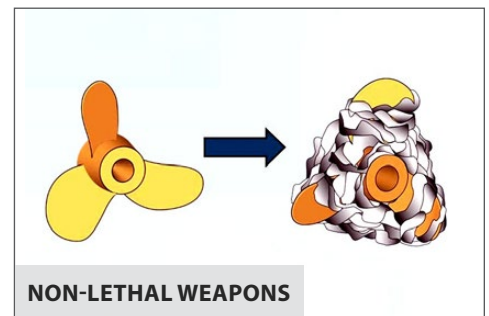
ENERGETICS

UK Centre of Excellence in Energetic Materials (CoEM)



MILITARY SENSING

DARPA Pursuing Global Positioning System Alternatives



NON-LETHAL WEAPONS

Utah State Spider Silk Lab Awarded Navy Grant Aimed at Maritime Defense



RMQSI

Advancing Squad-Level Mobility



SURVIVABILITY AND VULNERABILITY

New Technology for Use in Military Vehicles May Protect Troops From Blast-Induced Brain Injury



WEAPON SYSTEMS

Russian Tank Doctrine Evolves to Combat Modern Threats

NEWLY AVAILABLE STI

Documents only available through DTIC to registered users.

**Practical Bayesian Analysis for Failure Time Data Best Practice**

Distro. A

**Experimental Exploration of the Origin of Magnetostriction in Single Crystalline Iron**

Distro. A

**Fabrication of Two-dimensional Nanostructures on Glass Using Nanosphere Lithography**

Distro. A

**Lattice-dynamical Study of the Premartensitic State of the Cu-Al-Be Alloys**

Distro. A

**Novel Nanostructures and Processes for Enhanced Catalysis of Composite Solid Propellants**

Distro. A

**Physics of Nickel Oxide Hole Transport Layer for Organic Photovoltaics Application**

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**Scaling Normal Adhesion Force Capacity With a Generalized Parameter**

Distro. A

**An Investigation of Waste Glass-based Geopolymers Supplemented With Alumina**

Distro. A

**Study of Heterogeneous Gold and Gold Alloy Catalysts via Analytical Electron Microscopy**

Distro. A

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