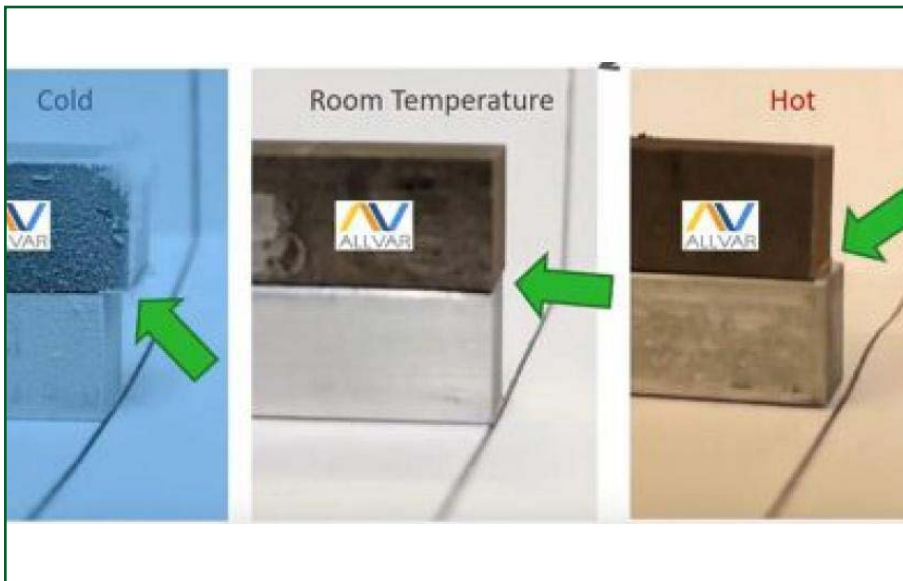


# Defense Systems

## DIGEST

26 MARCH 2019 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



### NOTABLE TECHNICAL INQUIRY

*In what ways would a metal having a negative coefficient of thermal expansion (NCTE) have beneficial applications for defense systems?*

DSIAC received an inquiry asking if a metal with a negative coefficient of thermal expansion would be of interest for designing of defense-related applications. A secondary question was also posed: what major U.S. government (USG) laboratory groups, contractors, academic... [Read More](#)

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

### FEATURED NEWS



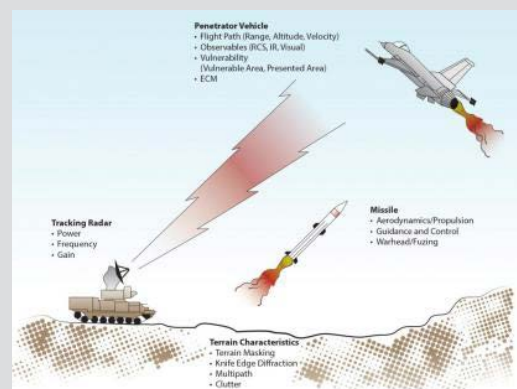
### Fantastic 5: These 5 Reasons Prove Nothing Can Stop the U.S. Army

These were once the stuff of science fiction. But the fact that the U.S. Army has a program called Optionally Manned Fighting Vehicle attests to the rise of the machine. The Army already has a robot test vehicle: an armed, remote-controlled M113 armored personnel carrier, and is vigorously pursuing autonomous trucks that can haul supplies without a driver. The U.S. Army already fields an impressive array of weapons. But as the U.S. Army prepares itself for potential conflicts against high-tech Russian and Chinese armies, the Army is working... [Read More](#)

### MODEL OF THE MONTH

**ESAMS** – Enhanced Surface-to-Air Missile Simulation (ESAMS) is a computer program used to model the interaction between an airborne target and a surface-to-air missile (SAM) air defense system. This simulation provides a one-on-one framework used to evaluate air vehicle survivability, estimate effectiveness, set requirements, and develop tactics.

**Get this model!**



**VOICE FROM THE COMMUNITY**



**Jorge Asiain Sastre, CEng MIMechE, Founder and Director AlterEvo Ltd.**

I am the founder and director at AlterEvo Ltd., an engineering consulting firm that inherited the know-how and expertise of our long experience in oil and gas. Our mission is to improve the profitability of all types of companies by applying the latest advances and developments to optimize process and products. To achieve this goal, we are based in value creation, innovation, and collaboration with the customer. We are results-focused and flexible, giving our customers what they really need.

Our services portfolio includes consulting and training related to Asset Management ISO 55001, RAMS Engineering: life data analysis and reliability and risks assessments, forensic engineering and FRACAS, reliability centered maintenance programs, lean manufacturing and TPM, design for reliability: finite elements and 3-D printing, and tribology and lubrication programs.

Our latest research and works are related to blockchain and machine learning applied to maintenance and asset management.

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

**UPCOMING EVENTS**

**2019 Cyber-Augmented Operations Division Spring Conference**

26 March 2019 to 27 March 2019

**2019 AUSA ILW Global Force Symposium & Exposition**

26 March 2019 to 28 March 2019

**PEO-Maritime Combatant Craft Heavy Mark 2 (CCH Mk 2) Capability Collaboration Event**

27 March 2019 to 28 March 2019

**Munitions Executive Summit**

1 April 2019 to 3 April 2019

► Want your event listed here? Let us know!

**BULLETIN BOARD**

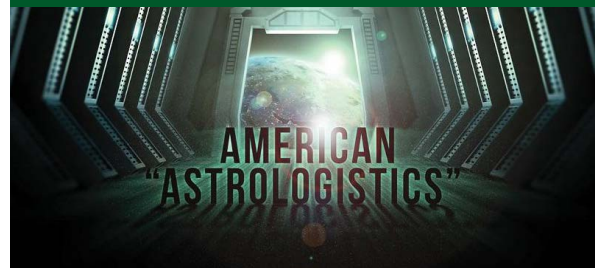
**Enhanced Surface-to-Air Missile Simulation (ESAMS) Training**

**2019 Aircraft Combat Survivability Short Course**

**Webinar 3/27: Purpose-Built UAS Powerplants for Today's Mission Objectives**

► Add your item to our board by contacting us.

**DSIAC JOURNAL WINTER 2019**



**American "Astrologistics"**

**Also in This Issue:**

- Sustainable Mobile Electrical Infrastructure
- Active Electronically Steered Array (AESA) Antenna Testing
- Measuring Combustion Products in Small Arms Blowback Gases



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

RECENT NEWS



ADVANCED MATERIALS

**U.S. Army Develops Ultra-Strong 3-D Printed Steel Parts to Revolutionize Battlefield Logistics**



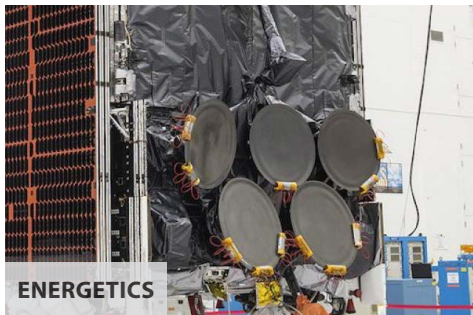
AUTONOMOUS SYSTEMS

**U.S. Army Clarifies Rules on Autonomous Armed Robots**



DIRECTED ENERGY

**The Pentagon Wants to Test a Space-Based "Particle Beam" by 2023**



ENERGETICS

**Delta 4 Rocket Launches Air Force's 10<sup>th</sup> WGS Broadband Satellite**



MILITARY SENSING

**Artillery Marines' New Radar Brings the Distance on the Battlefield**



NON-LETHAL WEAPONS

**Nonlethal Weapons Offer Victory, De-escalation**



RMQSI

**U.S. Defense Strategy: "Contain and Engage" Beats "Deter and Defeat"**



SURVIVABILITY AND VULNERABILITY

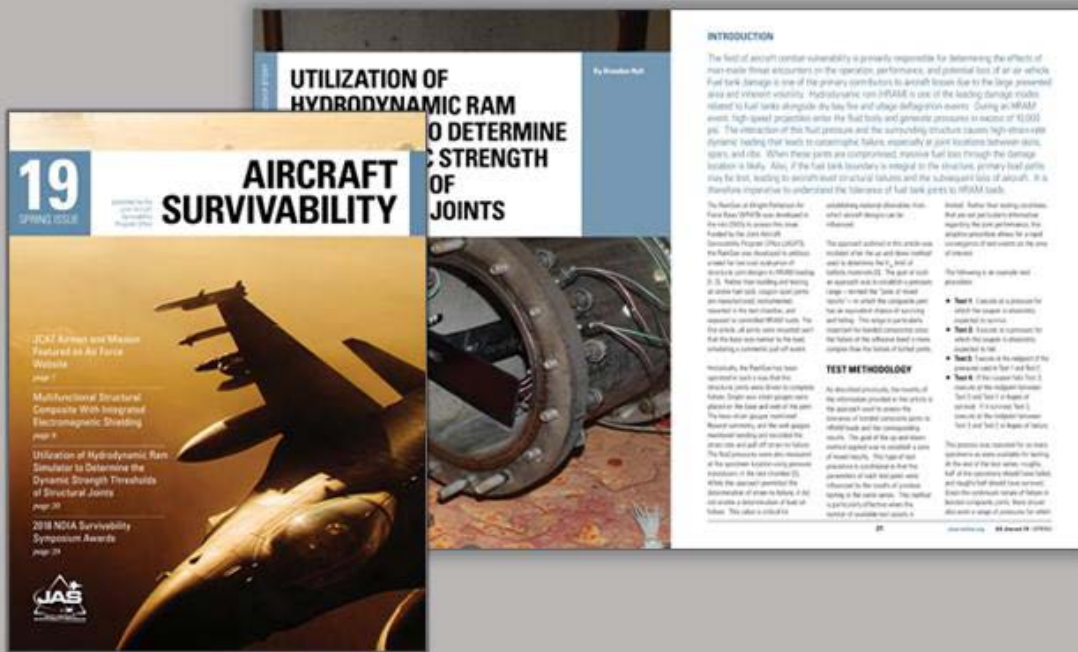
**U.S. Army to Re-purpose Legacy Body Armor Into Modular Scalable Vest Configuration**



WEAPON SYSTEMS

**The Army's New Rifle Will Fire Bullets at a "Pressure Equivalent to What a Tank Would Fire"**

SPRING 2019 AIRCRAFT SURVIVABILITY JOURNAL



The 2019 Spring Issue of the Aircraft Survivability Journal has been released. The journal is available for electronic download at <https://www.dsiac.org/resources/journals/legacy/jasp/aircraft-survivability-spring-2019>. The journal is also available for online reading on the Joint Aircraft Survivability Program website, <http://jasp-online.org/>.

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