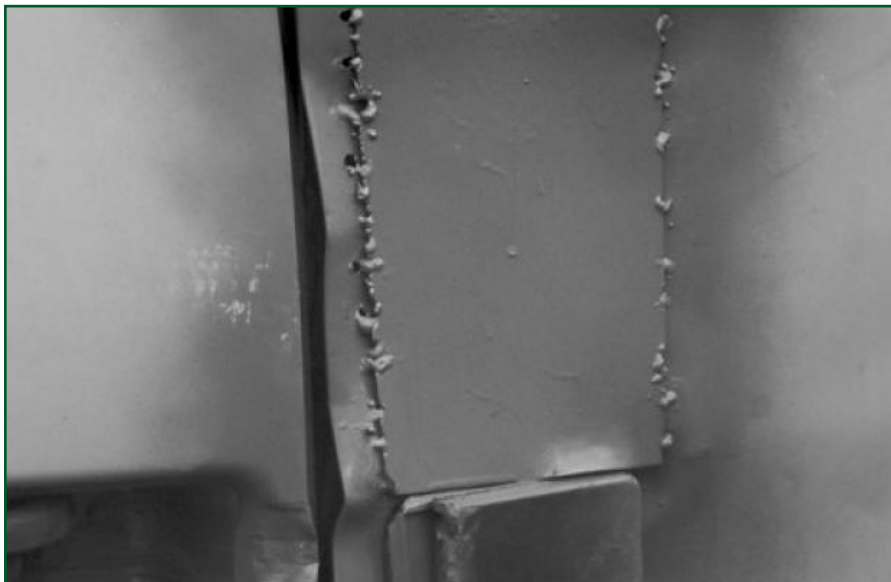


# Defense Systems

## DIGEST

30 JUNE 2020 – THE LATEST FROM DEFENSE SYSTEMS INFORMATION ANALYSIS CENTER



### NOTABLE TECHNICAL INQUIRY

*What information is available on metal stitching as a repair process?*

DSIAC was asked to find academic and peer-reviewed publications to assist in determining if cold metal stitching is a viable repair process for a cracked cast, steel pedestal. DSIAC enlisted the assistance of a subject matter expert to discuss the problem and perform literature searches in the DTIC Research and Engineering (R&E) Gateway and open sources for relevant publications. Academic and industrial... [Read More](#)

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

### FEATURED NEWS

#### Bunch Reflects on First Year in Command, Outlines AFMC Future

**WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFNS)** — When Gen. Arnold W. Bunch Jr. took command of the Air Force Materiel Command on May 31, 2019, his first goal was to get “regrounded” in the diverse missions and responsibilities spread across AFMC’s six centers and 87,000 Airmen.

“When I came here, I thought I understood the command since I was part of it when it was started in 1992, and I spent most of my career in it. What I learned is that there is so much more that goes on that I needed to understand more deeply,” Bunch said.



During a year that has included an Air Force-wide focus on modernization, lethality, and readiness through faster, more agile business processes, the ability of AFMC to successfully meet the needs of the National Defense Strategy was a major focus of Bunch’s first year as commander.

VOICE FROM THE COMMUNITY



**Corey Bergsrud, Ph.D., Project Lead and Engineer, Naval Surface Warfare Center (NSWC) Crane Division**

I work at the NSWC Crane Division, where I research tactics, strategies, and capabilities, generate and propose concepts/ideas, build collaborations, develop workforce, mentor, lead projects, and invent. My current research efforts focus on maritime gray zone operations, unmanned vehicle applications with non-kinetic and non-lethal payloads, and wireless power, including, utility applications, modeling and simulation assessment capabilities, and technology/capability maturations. I consistently work with other subject matter experts to help realize these aforementioned concepts. Moreover, these projects persistently incorporate interns and sponsor senior design projects to help further the objectives.

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

UPCOMING POSTPONED EVENTS

**2020 National Space & Missile Materials Symposium (NSMMS)**

22 June 2020 to 25 June 2020

**North American Manufacturing Research Conference 48**

22 June 2020 to 26 June 2020

**11<sup>th</sup> Advances in Cement-Based Materials**

24 June 2020 to 26 June 2020

**5<sup>th</sup> Directed Energy Summit**

24 June 2020 to 26 June 2020

► Want your event listed here? Let us know!

HIGHLIGHT

**Register Now for Full Access to DTIC's Tools and Resources**

Access to DTIC's secure website, the R&E Gateway, is restricted to authorized military, civilian personnel, and support contractors of the DoD or federal government with active CAC/PIV/ECA-issued credentials. [Read More](#)



DSIAC JOURNAL SPRING 2020



**Inorganic Optical Components Using Additive Manufacturing**

**Also in This Issue:**

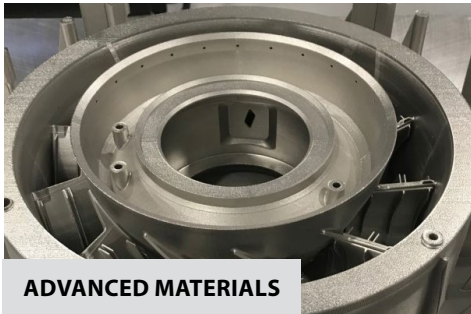
- Can Compressive Sensing Solve Your Sensor and Measurement Problems?
- Additive Manufacturing High-Performance Polymers for Space and Aerospace
- The Importance of Early Prototyping in Defense Research, Engineering, Acquisition, and Sustainment
- A Computational Approach to Understanding Advanced Thermal Barrier Coatings' Performance
- Composite Overwrapped Pipe Burst Test



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



RECENT NEWS



ADVANCED MATERIALS

**Army Uses Innovative Process to 3-D Print Parts for Aircraft**



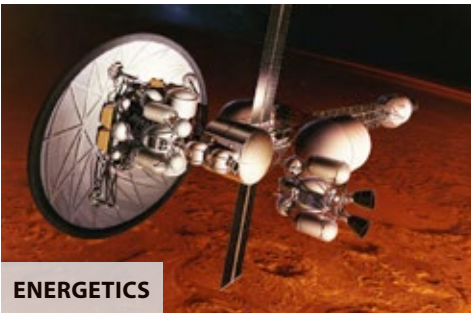
AUTONOMOUS SYSTEMS

**Army Researchers Find New Ways to Test Swarming Drones**



DIRECTED ENERGY

**Navy Orders Laser-Based Missile Warning System From Leonardo DRS for Electro-Optical Helicopter Defense**



ENERGETICS

**The U.S. Military Is Getting Serious About Nuclear Thermal Propulsion**



MILITARY SENSING

**Team Spy-6: Building the U.S. Navy's Most Advanced Radar**



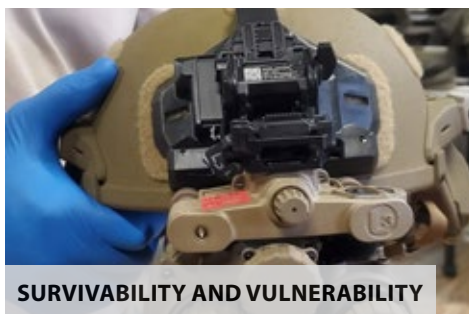
NON-LETHAL WEAPONS

**The Commandant's Guidance for the DoD Non-Lethal Weapons Program**



RMQSI

**ERDC's Patented Tool Designed to Save Millions, Speed Acquisitions**



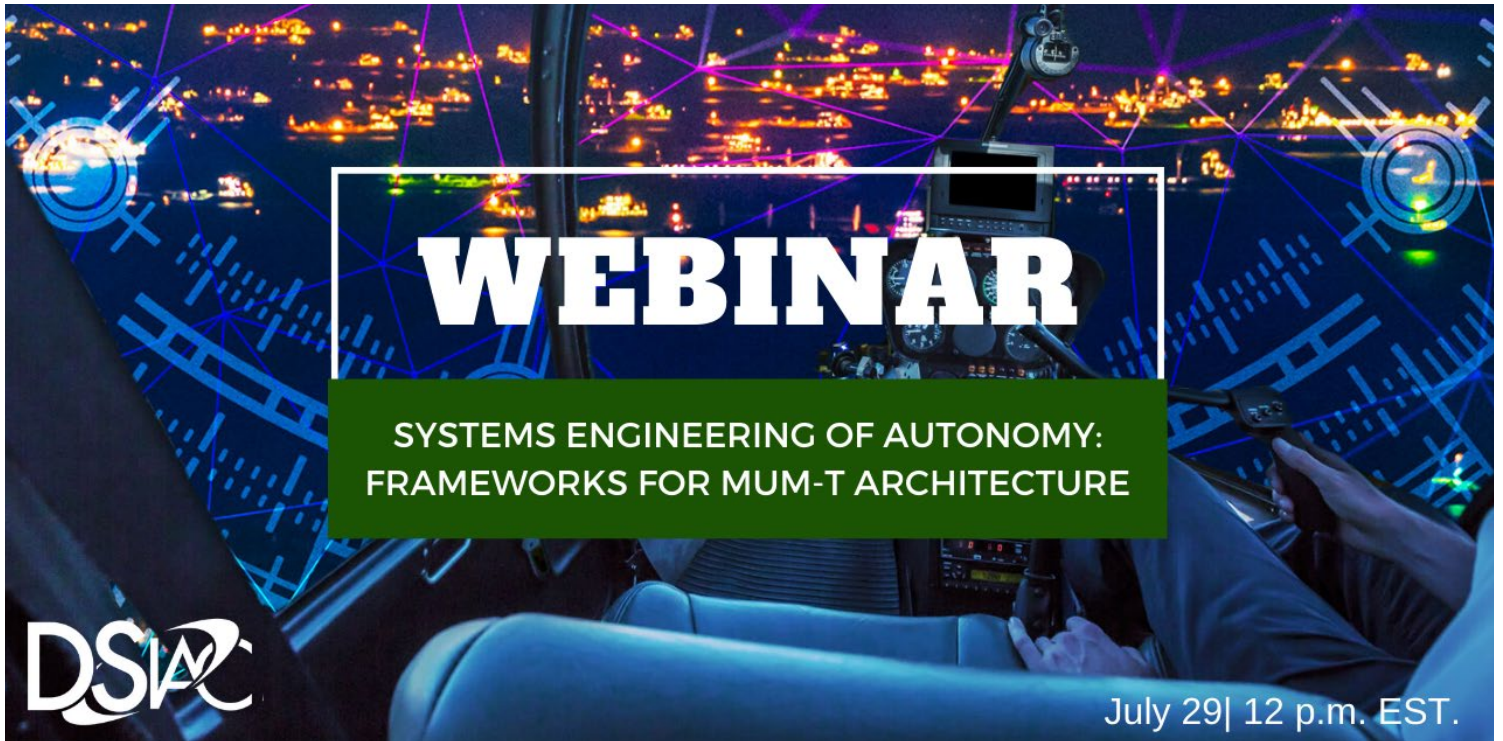
SURVIVABILITY AND VULNERABILITY

**3<sup>rd</sup> Squadron, 89<sup>th</sup> Cavalry Regiment Trains and Fields New Gear**



WEAPON SYSTEMS

**Hypersonics Testing Accelerates**



### Webinar: Systems Engineering of Autonomy: Frameworks for MUM-T Architecture

Wednesday 29 July 2020, 12:00 p.m. to 12:45 p.m. EST

Do we design autonomous systems or systems with autonomy? This question will be explored and developed by first understanding the perspective of autonomy, deconflicting the buzzwords from the reality, and applying a robust and simple framework. This will encapsulate and begin to decompose autonomy, autonomous behaviors, artificial intelligence, and collaborative Manned-Unmanned Teaming (MUM-T) systems for the U.S. Department of Defense customer.

This webinar will present an overview from conceptualizing autonomy, to introducing frameworks, to analyzing autonomy, and conclude with a synthesized approach to designing autonomy into a system-of-systems solution.

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