

DEFENSE Systems Digest

The Latest From the Defense Systems Information Analysis Center // July 16, 2024

CALL FOR JOURNAL ABSTRACTS

We are accepting abstracts for the upcoming DSIAC Journal, Vol. 9, No. 1. The DSIAC Journal features exclusive, publicly releasable articles on new and emerging science, engineering, and technology within the defense community. Contributors will be notified if their submission is selected for publication by August 16, 2024. Selected articles will be due November 8, 2024, to ensure a January 2025 publication date.

WHAT TO INCLUDE IN ABSTRACT:

- 200 words
- All authors
- Prospective title
- Highlighted focus area(s)
- Your organization

SUBMIT IDEAS/ABSTRACT:

<https://dsiac.org/publish/> or email Aaron at journal@dsiac.org

DID YOU MISS OUR LAST WEBINAR?

“Applying the Autonomous Ground Vehicle Reference Architecture to MBSE”

 **WATCH NOW!**

or download the slides

NOTABLE TECHNICAL INQUIRY

What data or test data are available on the flammability of EGW coolant?

Without further details on the system, the ethylene-glycol water mixture is assumed to be mixed and used similarly to how it is used in automobiles:

- 50:50 mix, likely not greater than 70:30 due to potential limitations in corrosion inhibitors
- Operating temperature range: ~195–220 °F (90–104 °C). [READ MORE](#)

UPCOMING WEBINAR



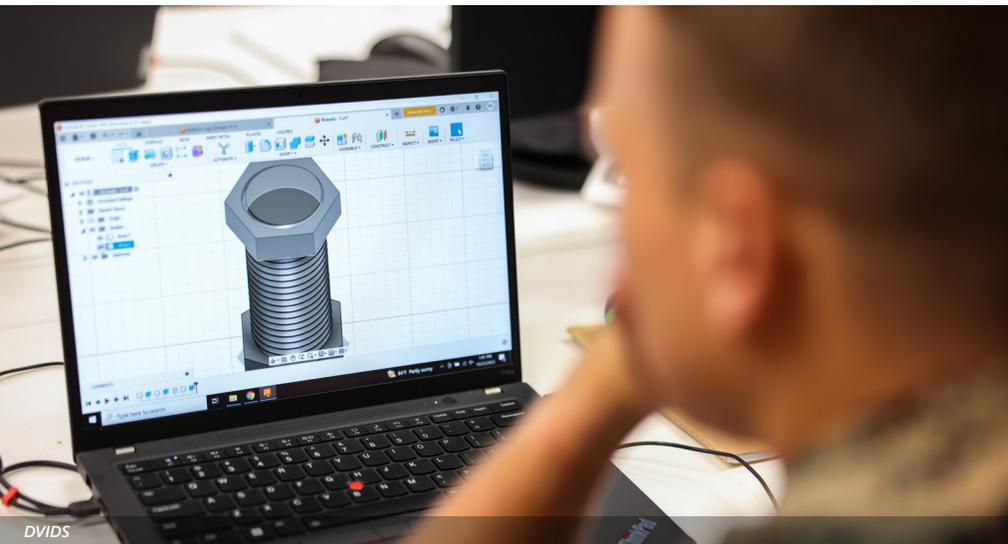
Rotating Detonation Engine Propulsion Integration...

July 24, 2024
12:00 PM – 1:00 PM

Presenter(s): Cody Butzer, Dr. Stuart Benton, Dr. Matthew Fotia *Host:* DSIAC

This webinar presentation contains CUI and is therefore limited to government and contractors only.

Rotating detonation engines (RDEs) have garnered substantial attention as an emerging technology with applications to aerospace propulsion and energy generation due to their high-power density. Significant research and development have improved the operability and performance of RDEs, but relatively few studies have investigated the problems associated with integrating the combustor into an airframe. [READ MORE](#)



HIGHLIGHT

DoD Producibility and Manufacturability Engineering Guide

Manufacturing is a major factor in fielding cutting-edge capabilities to the Warfighter. Producibility focuses on design considerations, while manufacturability focuses on improving manufacturing processes and factory floor operations. This guide is an educational tool for product teams to develop and produce parts, components, and systems that can be manufactured easily with significant benefit to the end user. [LEARN MORE](#)

EVENTS

The 2024 FAA Drone and Advanced Air Mobility Symposium

July 30–August 1, 2024
Baltimore, MD

2024 Joint Air Survivability Summit

July 31–August 1, 2024
National Harbor, MD

17th International Detonation Symposium

August 4–9, 2024
Kansas City, MO

2024 Aircraft Survivability Symposium

November 5–7, 2024
Monterey, CA

Fundamentals of Random Vibration and Shock Testing Training (Element Materials Technology – Tempe, AZ)

December 3–5, 2024
Tempe, AZ

Want your event listed here?

Email contact@dsiac.org to share your event.



VOICE FROM THE COMMUNITY

Dr. Joe Gaone

Modeling & Simulation Analyst, MITRE

Dr. Gaone is a modeling and simulation analyst at MITRE's National Security Engineering Center Federally Funded Research Development Center, where he uses the Advanced Framework for Simulation, Integration, and Modeling tool to answer questions related to operational analysis of national defense priorities for the U.S. Department of Defense and intelligence community.

ARE YOU A SME?

If you are a contributing member of the information systems community and are willing to help others with your expertise, you are a subject matter expert (SME).

Join our team today.

BECOME A SUBJECT MATTER EXPERT

ABOUT TECHNICAL INQUIRIES (TIs)

WHAT IS THE TI RESEARCH SERVICE?

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To submit a TI, go to <https://dsiac.org/technical-inquiries>



RECENT DSIAC TIs

- What unclassified pitch angle and vibrational/noise data exist for the AH-64 Apache's tail rotor?
- What counter-unmanned aerial system technologies exist against single drones and/or swarms?
- Which organometallic compounds in the semiconductor industry are most often used for depositing ruthenium, tungsten, or cobalt?

RECENT CSIAC & HDIAC TIs

- What integrated priority list needs have the combatant commands submitted for civilian harm mitigation and response capabilities?
- What multifunctional robotics platforms are used for first responder applications?
- What information is available on conversion efficiencies of chemical warfare agents V to G using silver fluoride conversion pads/tubes?

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FEATURED NEWS

AFRL Releases Video Footage of XQ-67A First Flight

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFRL) – The U.S. Air Force Research Laboratory successfully flew the first of a second generation of autonomous collaborative platforms known as the XQ-67A demonstrator, built and flown in the Off-Board Sensing Station, or OBSS,... [READ MORE](#)

RECENT NEWS



U.S. Navy

U.S. Navy Showcases Sea Hunter Unmanned Surface Vehicle at LA Fleet Week

Naval Sea Systems Command



Nathan Johnson | PNNL

Metal Alloys That Can Take the Heat

Pacific Northwest National Laboratory



Chris Rouleau/ORNL, U.S. Dept. of Energy

Researchers Harness AI for Autonomous Discovery and Optimization of Materials

Oak Ridge National Laboratory



U.S. Air Force

Space Test Course Integrates Satellite Operations Into Curriculum for First Time

U.S. Space Force



K. Palubicki/NIST

World's Most Accurate and Precise Atomic Clock Pushes New Frontiers in Physics

National Institute of Standards and Technology



Joseph Clark, DoD

Pentagon Exhibit Showcases Cutting-Edge Manufacturing Technologies

DoD ManTech



-  Advanced Materials
-  Autonomous Systems
-  C4ISR
-  Directed Energy
-  Energetics
-  Military Sensing
-  Non-Lethal Weapons
-  RMQSI
-  Survivability & Vulnerability
-  Weapons Systems

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4695 Millennium Drive, Belcamp, MD 21017
 443-360-4600 | contact@dsiac.org | dsiac.org
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