

SWAP Forum 2026

Space Electronics for Commercial and Government Systems

Shaping the Future of Space Technologies Through Strategic Partnerships and Coordinated Stakeholder Investments

Link: <https://na.eventscloud.com/ereg/newreg.php?eventid=890043&>

October 22–23, 2026

Texas A&M University – Bush School DC

1620 L Street NW

Washington, DC 20036

The **Microelectronics Commons Southwest Advanced Prototyping (SWAP) Hub** invites leaders from government, industry, academia, and the national laboratory community to participate in the **2026 SWAP Forum: Space Electronics for Commercial and Government Systems**. This two-day forum will bring together stakeholders across the space electronics ecosystem to examine the opportunities and challenges associated with developing next-generation microelectronics for both commercial and government space missions.

The Challenge

The rapid evolution of the commercial space industry is transforming the way advanced electronic technologies are developed and deployed. Commercial systems are driven by large-scale markets where success depends on rapid innovation, low cost, scalability, and short product development cycles. Conversely, Department of War (DoW) and other space systems of national interest typically must satisfy fundamentally different requirements. These systems are expected to operate reliably in harsh radiation environments, survive contested operating conditions, maintain trusted and secure operation, and support mission lifetimes measured in decades rather than years.

Historically, many government space programs have relied upon commercial technologies as the starting point for specialized mission-specific solutions. While this approach has enabled the adoption of some advanced semiconductor technologies, it has also resulted in highly customized systems that often fail to capitalize on the continuous innovation occurring within the commercial marketplace. Consequently, many government space programs progress through isolated development efforts, with each new program creating unique solutions rather than benefiting from an evolving commercial technology ecosystem.

As semiconductor technologies continue to advance toward heterogeneous integration, advanced packaging, chiplet-based architectures, and increasingly sophisticated design methodologies, the opportunity exists to fundamentally rethink how resilient space electronics are developed, qualified, and transitioned into operational systems.

Forum Objectives

The 2026 SWAP Forum will provide a collaborative environment for open discussion among government agencies, commercial technology developers, system integrators, researchers, and end users. Participants will explore strategies for bridging the gap between commercial innovation and government mission requirements while accelerating the transition of emerging technologies into operational space systems.

Discussions will address questions including:

- How can commercial-off-the-shelf (COTS) technologies and custom radiation-hardened components be effectively integrated through chiplet-based heterogeneous architectures?
- How can advances in semiconductor technology, circuit architectures, and advanced packaging be leveraged while mitigating the risks associated with deployment in harsh space environments?
- How can stakeholders capitalize on emerging capabilities in radiation-aware modeling and design, rapid prototyping, advanced packaging, and qualification testing to accelerate technology transition?
- What ecosystem is needed to support continual technology refresh, modular upgrades, and resilient system architectures across future government and commercial space platforms?

The forum will also highlight the growing national capabilities being established through the [Microelectronics Commons](https://microelectronics.asu.edu/capabilities-and-tools/) program to enable rapid prototyping, qualification, manufacturing, and deployment of next-generation space electronics. (See, for example, <https://microelectronics.asu.edu/capabilities-and-tools/>)

Desired Outcomes

The SWAP Forum is intended to foster meaningful dialogue that leads to actionable outcomes. Specifically, participants will work toward:

1. **Identifying opportunities for strategic public-private partnerships** that strengthen the domestic space electronics ecosystem.
2. **Defining pathways for coordinated investments** that leverage government, industry, academic, and MEC Hub resources (e.g., [SWAP](#)) to deliver resilient, affordable, and rapidly deployable space systems.
3. **Advancing efficient design, prototyping, and qualification methodologies** that reduce development timelines while maintaining high levels of performance and reliability.
4. **Identifying technical, organizational, and policy barriers** that impede technology transition and developing recommendations to strengthen collaboration across stakeholders.

Who Should Attend

The forum is intended for representatives from:

- Department of Defense and other federal agencies (NRO, DOE/NNSA, DOC/NIST, etc.)
- NASA and civil space organizations
- Commercial space companies
- Semiconductor manufacturers and advanced packaging providers
- Prime contractors and system integrators
- National laboratories
- Universities and research institutions
- Microelectronics Commons participants
- Technology transition and acquisition organizations

Join the Conversation

The future of resilient space electronics depends upon coordinated investments, strategic partnerships, and an ecosystem capable of rapidly transitioning emerging technologies into mission-ready systems. The 2026 SWAP Forum

provides a unique opportunity to help define that future by bringing together the organizations shaping the next generation of commercial and government space capabilities.

We encourage your participation in this important discussion and look forward to your contributions.

2026 SWAP Forum Organizing Committee
Microelectronics Commons
Southwest Advanced Prototyping (SWAP) Hub
Tempe, Arizona

Contact

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SWAP Forum 2026 Space Electronics for Commercial and Government Systems Shaping the Future of Space Technologies Through Strategic Partnerships and Coordinated Stakeholder Investments	
Agenda (all times EDT)	
Day 0: Wednesday October 21, 2026 AGU - Advanced Earth and Space Sciences 2000 Florida Ave NW, Washington DC 20009	
4:30 – 7:00 pm	SWAP Hub Forum Early Registration and Reception
Day 1: Thursday October 22, 2026 Texas A&M University – Bush School DC 1620 L Street NW, Washington, DC 20036	
8:00 AM	<i>Continental Breakfast and Registration</i>
8:30 - 8:40 AM	Welcome and Day 1 Introduction: SWAP Hub Forum 2026 Hugh Barnaby, Professor, Arizona State University
8:40 - 9:30 AM	Keynote #1 Dan Wang, CTO Deputy, National Reconnaissance Office
Session 1: Opportunities for Win-Win Government-Industry Partnerships	
9:35 - 10:05 AM	Invited Talk #1 Steven Kosier, Institute of Space and Defense Electronics, Vanderbilt University
10:05 - 10:35 AM	Invited Talk #2 Jesse Mee, Senior Scientist, Radiation Hardening Technologies, United States Space Force
10:35 - 11:05 AM	Invited Talk #3 Chandra Raj, Deputy General Manager, Viasat
11:05 - 11:20 AM	Break
11:20 AM - 12:20 PM	Session 1 Panel Discussion: "The Current State and Future of Government-Commercial Space Partnerships" <i>Panel will discuss public-private partnership and coordinated investment opportunities that leverage government, industry, academic, national laboratory, and Microelectronics Commons capabilities, followed by Q&A.</i> Moderator: Kelli Kedis Ogborn, Commercial Space Federation
12:20 - 12:50 PM	Open Discussion
12:50 - 1:40 PM	LUNCH
Session 2: Leveraging New and Existing Technologies for Space	
1:40 - 2:10 PM	Invited Talk #4 Sean O'Neill, Deputy Director, Intel Government Technologies (IGT)
2:10 - 2:40 PM	Invited Talk #5 John Dickinson, RAD-TECH Research Campaign Manager, Sandia Laboratories
2:40 - 3:10 PM	Invited Talk #6 Matthew Marinella, Associate Professor, Arizona State University
3:10 - 3:30 PM	Break
3:30 - 4:30 PM	Session 2 Panel: "Present and future of technologies for space and strategic deployments" <i>The panel will discuss how electronics are developed, qualified, and transitioned into operational systems for space and strategic applications, follow by Q&A.</i> Moderator: Krishnendu Chakrabarty, Professor, Arizona State University
4:30 - 5:00 PM	Open Discussion
5:00 PM	ADJOURN (Day 1)

Agenda (all times EDT)	
Day 2: Friday October 23, 2026 Texas A&M University – Bush School DC 1620 L Street NW, Washington, DC 20036	
8:00 AM	Continental Breakfast and Registration
8:30 - 8:40 AM	Day 2 Introduction: SWAP Hub Forum 2026 Hugh Barnaby, Professor, Arizona State University
8:40 - 9:30 AM	Keynote #2 To be decided
Session 3: Test and Facilities: Ensuring reliable systems at the right cost	
9:35 - 10:05 AM	Invited Talk #7 Greg Allen, Co-Lead JPL Center for Space Radiation, Jet Propulsion Laboratory
10:05 - 10:35 AM	Invited Talk #8 Andrew Kelly, Senior Project Manager, BAE Systems
10:35 - 11:05 AM	Invited Talk #9 Adrian Idefonso, Assistant Professor, Indiana University
11:05 - 11:20 AM	Break
11:20 AM - 12:20 PM	Session 3 Panel: "Finding the right test facilities to meet the requirements" <i>Panel will discuss how to identify requirements for test and the facilities that get the job done at the right cost, followed by Q&A.</i> Moderator: Jennifer Taggart, Manager Microelectronics Radiation Effects Section, Aerospace Corporation
12:20 - 12:50 PM	Open Discussion
12:50 - 1:40 PM	LUNCH
Session 4: How to make modeling and AI work for next generation space systems Led by Reliable MicroSystems	
1:40 - 2:00 PM	Introduction to Modeling and Simulation for Next Generation Space Systems – Challenges, Ongoing R&D, Solutions Dr. Lloyd Massengill, CEO, Reliable MicroSystems LLC
2:00 - 2:30 PM	Invited Talk #11 Cadence Design Systems
2:30 - 3:00 PM	Invited Talk #12 Siemens Government Systems
3:00 - 3:30 PM	Invited Talk #13 Synopsys, Inc.
3:30 - 3:40 PM	Break
3:40 - 4:45 PM	Session 4 Panel: "Application of EDA and AI in space system design" <i>A panel of practitioners involved in circuit/system design for extreme environments will discuss their challenges and perspectives, followed by Q&A.</i> Moderator: Dr. Jeff Kauppila, Rel-Micro
4:45 - 5:00 PM	Closing Remarks
5:00 PM	ADJOURN (Day 2)