



PROGRAM MANAGER(S): Dr. Thomas Kazior & Dr. Yogendra Joshi / MTO

DATE: Thursday, August 24, 2023	TIME: 12:30pm-3:30pm
ROOM NAME: Elwha B – 5 th Floor	

DESCRIPTION

Space poses a uniquely challenging thermal environment for microelectronic devices, with space-based platforms constrained in both size and available power for cooling capabilities. In this workshop, we will identify these challenges in the context of increasing demands for higher performance and functionality of space-based electronics for communication and sensing applications. In particular, we will explore thermal management solutions for managing the increasing heat load associated with high density electronics, specifically focusing on novel cooling techniques and materials. The workshop will provide an overview of DARPA initiatives (e.g., Minitherms 3D, ELGAR, seedlings, and future programs), perspectives from other government agencies such as USSF and AFRL on existing challenges and technological gaps, and insights from leading experts in academia and industry.

AGENDA

12:30pm-12:45pm	Welcome and Introductions Dr. Thomas Kazior and Dr. Yogendra Joshi / Program Managers / DARPA MTO
12:45pm-1:05pm	Future of Spacecraft Thermal Control: Air Force Research Laboratory Perspective Dr. Valerie Lawdensky / Spacecraft Thermal Engineer / AFRL Space Vehicles Directorate
1:05pm-1:25pm	Thermal Management Challenges for Space Missions: Aerospace Corporation Perspective Dr. John McHale / Director, Thermal Control Department / The Aerospace Corporation
1:25pm-1:45pm	Thermal Management Challenges for Space Missions: Northrop Grumman Perspective Mr. Russ Rioux / Division Technology Council, Advanced Packaging Lead & PE Section Manager / Northrop Grumman Space Systems (NGSP)
Afternoon Break: 1:45pm-2:15pm	
2:15pm-2:35pm	Advanced Thermal Mechanical Structures Embedded with Oscillating Heat Pipes Dr. Corey Wilson / Director of Research and Development / ThermAvant Technologies
2:35pm-3:30pm	Space Based Electronics Thermal Management Technology Gaps: A Panel Discussion DARPA, AFRL, The Aerospace Corporation, NGSP, and ThermAVANT Technologies
Workshop Concludes at 3:30pm	