

Call for Papers

The AIAA Materials, Structures, and Multidisciplinary Design Optimization (MDO) Technical Committees are sponsoring a Joint Special Session on

NASA Vision 2040

AIAA SciTech 2023
January 23-27, 2023
National Harbor, MD

The AIAA (American Institute of Aeronautics and Astronautics) Materials, Structures and MDO Technical Committees are soliciting papers with recent research, technological advancements, and systems-level perspectives that address the various gaps and actions identified in the 2040 Vision study within the AIAA SciTech conference. NASA's Vision 2040: A roadmap for Integrated, Multiscale Materials and System Modeling and Simulation, described in NASA CR 2018-219771, defines the potential 25-year future state required for integrated multiscale modeling of materials and systems (e.g., load-bearing structures) to accelerate the pace and reduce the expense of innovation in future aerospace and aeronautical systems. This roadmap is a *community consensus* document and is a result of over 450 professionals' input. Specifically, papers discussing activities within 5 of the 9 key element areas will be considered: 1) Models and Methodologies, 2) Multiscale Measurement, & Characterization Tools and Methods, 3) Optimization & Optimization Methodologies, 6) Data, Informatics, and Visualization, and 8) Education & Training. The goal is to provide a forum for discussion of academia, industrial, and government activities that are ongoing with respect to building the 2040 cyber-physical-social ecosystem that enable successful implementation of ICME best practices and culture.

The committee welcomes submissions from government, industry, academic, and small businesses. All abstracts are peer-reviewed.

Extended abstracts of no less than 1,000 words are due **June 1, 2023**
Author notification of paper acceptance on or about **August 31, 2023**
Final manuscript due **December 5, 2023**

Detailed deadline information, abstract preparation instructions, and policies can be found at:
<https://www.aiaa.org/SciTech/presentations-papers/call-for-papers>

Make sure to select the “NASA Vision 2040” topic option under “Materials” or “Structures” or “MDO” when prompted during submission.

For more information, contact one of the following organizers:

Steven M. Arnold (Materials TC)
NASA Glenn Research Center
Steven.M.Arnold@nasa.gov

Brett Bednarczyk (Structures TC)
NASA Glen Research Center
brett.a.bednarczyk@nasa.gov

H. Alicia Kim (MDO TC)
University of California San Diego (UCSD)
alicia@ucsd.edu

Marianna Maiaru (Materials TC)
University of Massachusetts Lowell
marianna_maiaru@uml.edu