

2023 ASEE Annual Conference & Exposition Portland, Oregon, June 23-26, 2024

Aerospace Division (AERO) Call for Papers

Abstracts due November 1, 2023

Draft Paper due February 1, 2024

The Aerospace Division (AERO) of ASEE invites full length and work-in-progress papers for the 131st Annual Conference and Exposition. Aerospace educators, engineers, and scientists in industry from across the world are invited to submit current papers on relevant topics in aeronautical/aerospace engineering and technology education.

Suggested topics include:

1. Engineering Epistemologies (research on what constitutes engineering thinking and knowledge within social contexts now and in the future)

- Professional development of aerospace engineers
- Integration of professional skills into an aerospace engineering course
- Aerospace systems engineering

2. Engineering Learning Mechanisms (research on engineering learners' developing knowledge and competencies in context)

- Aircraft and/or spacecraft design education
- Capstone and/or student industry experiences
- Hands-on experiences (which may include laboratory classes), including additive manufacturing
- Aerospace related educational activities conducted outside the classroom
- Integration of Uncrewed Aircraft Systems (remotely piloted or autonomous), CubeSats or Nanosats, or Rocketry in the curriculum

3. Engineering Learning Systems (research on the instructional culture, institutional infrastructure, and epistemology of engineering educators)

- Effective and innovative teaching and projects in aerospace courses

- Innovative pedagogical approaches, active learning, and hybrid in-person/online learning in aerospace education
- Interdisciplinary collaboration and industry-academic partnerships for aerospace education
- Student-centered learning, technology integration, and the role of emerging technology in aerospace education

4. Engineering Diversity, Equity and Inclusiveness (research on how diverse human talents contribute solutions to the social and global challenges and relevance of our profession)

- K-12 outreach
- Student persistence in aerospace engineering
- Women and other under-represented groups in aerospace engineering (academia and industry)
- Global perspectives on aerospace engineering education and assessment strategies.

5. Engineering Assessment (research on, and the development of, assessment methods, instruments, and metrics to inform engineering education practice and learning)

- Aerospace engineering curriculum development or assessment
- Innovative assessment methods in aerospace engineering and engineering technology education
- Assessment challenges and solutions in remote/online learning
- Accreditation-related assessment strategies in aerospace programs
- Inclusive assessment practices promoting diverse student success

6. Other topics of interest to the aerospace engineering education community

- Teaching strategies and lessons learned for effectively delivering courses and hands-on activities, or addressing any of the preceding topics, in remote/online settings
- Ethics, sustainability, social responsibility, and safety in aerospace education.
- Advanced materials, manufacturing, emerging technology, and industry trends in aerospace education

- Space exploration education, policy, regulation, ethics, and space law's impact on aerospace education
- Student research, outreach, communication, and strategies for enhancing success in aerospace programs

Young Investigator Award

Papers submitted to the Aerospace Division and presented at an ASEE Annual Conference and Exposition by a lead author in the first five years of their professional academic career can be considered for the ASEE Aerospace Division Young Investigator Award.

Student Papers

The Aerospace Division (AERO) invites you to tell us about your experiences in a student-authored paper in all areas related to aerospace engineering and technology education. Turn your thoughts and observations into reality! Help shape the future of how engineering or technology is perceived and taught!

Student Paper Attributes

- **AUTHORS:** Work is mainly conducted by undergraduate / graduate student(s) in collaboration with a faculty advisor. Please write “Student Paper” on top and do not list the names and affiliations of the authors on the draft. The final manuscript of each accepted paper will list a student as the lead author and faculty advisor as a co-author. Each student presenter must register for the annual conference.
- **FOCUS:** Paper has a significant educational component.
- **AWARDS:** Only the papers presented by the student authors / co-authors are eligible for student paper award certificates.

Submission Tips and Guidelines

Abstracts, with approximately 500 words, must be submitted electronically through the ASEE paper submission system by the deadline of November 1, 2023. The abstracts

should contain enough details on the topic of discussion, methodologies, preliminary results (if any) and expected outcomes to facilitate informed review of the abstract. Authors of each accepted abstract will have the opportunity to submit a full paper draft by the deadline of February 1, 2024. Abstracts and papers will be double-blind peer-reviewed and judged based on the level of innovation, technical merit, demonstrated outcomes, and relevance to advancing aeronautical and aerospace engineering and technology education as appropriate. Special sessions, such as panel discussions, are encouraged but should be discussed directly with the program chair prior to abstract submission. Please refer to the Author's Kit, available at the ASEE Annual Conference web site, for additional information.

Questions regarding the abstract or paper submission can be directed to the AERO Program Chair, Dr. Mary E. Johnson, Purdue University, by email: mejohanson@purdue.edu.

Further details on Paper Management, Conference, Travel, Program Schedule and Registration can be found at ASEE's 2024 Annual Conference and Exposition website: [2024 Annual Conference \(asee.org\)](https://www.asee.org/2024-annual-conference)

Notes:

- If the paper is a "Work-in-Progress", please include that in the title.
- Please remove all identifying information (author names, agencies, universities, etc.)
- If the paper is a Student Paper, please write "Student Paper" on top and do not list the names and affiliations of the authors on the draft.

Important Dates:

- Abstract Submission Open – October 1, 2023
- Abstract Submission Due – November 1, 2023
- Draft Paper Due – February 1, 2024
- Revised Paper Due – March 8, 2024
- Final Paper Due – May 1, 2024