2023 ASEE Annual Conference Call for Papers
Multidisciplinary Engineering Division

The Multidisciplinary Engineering Division (MULTI) invites abstracts on subjects of interest to those involved with multidisciplinary engineering programs, engineering programs without disciplinary tags, and the promotion of multidisciplinary approaches in engineering education. Multidisciplinary is interpreted here in the broadest sense to include education-related scholarly work that integrates various engineering disciplines as well as the sciences and liberal arts. MULTI accepts abstracts from a wide breadth of researchers, educators, and practitioners. Authors should consider submitting technical papers for oral or poster presentations, as well as recommendations for interactive sessions and special panels.

Please note: The Division will not be accepting papers that list a generative Ai as a co-author (ex: ChatGPT, Bard, etc.). If generative Ai was used in any capacity please add it in the acknowledgements at the end of the paper.*

Technical papers can be a Complete Paper or Work-in-Progress Paper (WIP):

- **Complete Paper**: The criterion for a Complete Paper is that it represents, at the time of draft paper submission in early 2024, work for which available results can be analyzed to yield supported and significant conclusions. Complete Paper submissions may be reassigned to WIP if they are judged to fall under the WIP criteria.
- **Work-in-Progress (WIP) Paper**: Work-in-Progress papers report on work that is in the process of study and/or implementation for which results will not be available by the time of draft paper submission, for studies that are as yet inconclusive, and for studies at an early to intermediate state for which authors are seeking feedback from the community. A submission of this paper type **MUST** have a title that begins with "Work-in-Progress:" with the colon separating the WIP phrase from the remainder of the title. WIP papers may be assigned to a poster presentation session to allow authors to maximize the opportunity for extended conversations regarding their ongoing research. WIP papers are not eligible for the Division's Best Paper Award.

Subjects of particular interest include, but are not limited to, the following:
- Mechatronics and Robotics
  - Innovative courses and curricula
  - Capstone design
  - Hardware and software platforms and environments
  - Assessment, evaluation, and accreditation
  - Outreach, competitions, industry partnerships, and community-building
  - Ethics, societal impact, and the future of work
- Curricular designs that incorporate multidisciplinary aspects, particularly recent innovations that address the following:
  - Student learning related to ABET outcomes *and* to multidisciplinary teams

- o   Evaluation of on-line and non-traditional programs and courses
- o   Best practices for accreditation and assessment
- o   Digital and Hybrid Teaching in multidisciplinary education
- Ai in Education and Teaching (Pro and Anti views both welcome)
    - o   Generative Ai - Text
    - o   Generative Ai - Images and generative fill
- Multidisciplinary approaches for incorporating the National Academy of Engineering Grand Challenges into pedagogy.
- Multidisciplinary engineering course design, implementation, and assessment
    - o   Multidisciplinary capstone design experiences
    - o   Multidisciplinary service-learning courses and experiential learning approaches
    - o   Manufacturing emphases, particularly on additive manufacturing, that are multidisciplinary
- Industrial Partnerships across multiple branches of STEM
    - o   Project partnerships
    - o   Department partnerships
    - o   Industrial outreach
- Integration of engineering and the liberal arts
    - o   Best practices in fusing liberal arts and engineering in curricular and co-curricular activities
    - o   Assessment of current liberal arts and engineering curricular and co-curricular activities with emphasis on retention of students and ABET outcomes
    - o   Innovative approaches that intentionally promote development of professional, non-technical skills
    - o   Efforts on and studies of integrating engineering with general education

The Multidisciplinary Engineering Division has a best paper award that is presented at the business meeting at the annual conference. The division also participates in the conference best diversity paper award by the nomination of a paper submitted to the division. Submission deadlines will be announced on the ASEE website. Questions regarding abstract and paper submission may be directed to the Multidisciplinary Engineering Division Program Chair:

Dr. Duncan Davis (duncansdavis@gmail.com)
Northeastern University, Boston MA

*AI and AI-assisted tools do not qualify for authorship under Elsevier's authorship policy.
Authors who use AI or AI-assisted tools during the manuscript writing process are asked to disclose their use in an acknowledgements section at the end of the manuscript.