

NEWSLETTER - 2024

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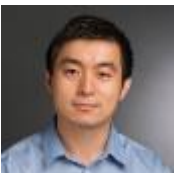
2023-2024 DIVISION OFFICERS



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MESSAGE FROM THE DIVISION CHAIR



Dear Colleagues and Friends,
 We are proud to announce this Fall 2023 issue of newsletter for the ASEE Manufacturing Division to disseminate current and future activities undertaken by our division and colleagues.

The Manufacturing Division currently has over 180 members who are educators involved in manufacturing education at public and/or private 2-year and 4-year programs, and representatives from manufacturing industries and organizations. We aim to support individual members’ interests related to manufacturing. Our Division strives to coordinate and advance the development of manufacturing education research through dialogues among our members.

We had a blast on the 2023 ASEE Annual Conference at Baltimore. You will see the highlights of our Division’s activities on the 2023 Conference. The 2024 Conference is to be held at Portland, Oregon. The 2024 Call for Papers in the next page. We invite you to submit and present your research. We look forward to meeting you all again on the 2024 ASEE Annual Conference. Thank you for your consistent support to the Manufacturing Division!

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For more information, scan the QR code or visit ASEEManufacturing.org

MANUFACTURING DIVISION – CALL FOR PAPERS 2024

The **Manufacturing Division** of the American Society for Engineering Education invites abstract submissions of full length and work-in-progress papers for the 2024 ASEE Annual Conference. Papers and presentations related to manufacturing education, practice, assessment, and promoting diverse learning and fostering inclusive environments in all areas of manufacturing, with particular attention to new and emerging topics of manufacturing education will be considered. Submissions must include content related to manufacturing and technology related education. Suggested topics include, but are not limited to

- ❑ Design and development of innovative learning materials and teaching strategies
- ❑ Advances in additive, hybrid, distributed and direct digital manufacturing education
- ❑ Four pillars of manufacturing engineering
- ❑ Implementation of new technology into manufacturing education, such as nano/micro-manufacturing, biomedical manufacturing, automation and robotics, additive manufacturing, energy manufacturing, and digital manufacturing
- ❑ Integration of current issues into manufacturing education, such as globalization, lean/green manufacturing, alternative energy resources, supply chain, smart manufacturing facilities, IOT, Industry 4.0
- ❑ Implementation of instructional technology such as simulation tools, virtual, remote labs and distance learning
- ❑ Implementation of sustainability into manufacturing education, such as materials, sustainable product/process design, energy efficiency, waste recycle, life cycle assessment, and emerging potentials
- ❑ Integration of research and development into manufacturing programs
- ❑ Industry-based projects and capstone experiences
- ❑ STEM integration in the classroom, laboratory, and projects from design to prototype and manufacturing
- ❑ Artificial Intelligence, Digital Twin, Data Analytics applications in Manufacturing
- ❑ P16 STEM projects and integration of manufacturing engineering into K- 12 curricula
- ❑ Entrepreneurship and engineering innovation.
- ❑ Manufacturing education for defense and aerospace industry
- ❑ Government policy and manufacturing education
- ❑ ABET and ATMAE Accreditation related topics
- ❑ Successful stories and best practices in Manufacturing Innovation
- ❑ Understanding academic and social barriers for entry and retention
- ❑ Inclusive teaching and culturally relevant pedagogy
- ❑ Addressing gender gap and disparities



Special Session: Make It!

Does your paper include something that you or your students made? If so, apply for the Make It Session! This hands-on session is organized by the Manufacturing Division and supported by other divisions of the ASEE. This session is open for faculty, students, and researchers. Accepted papers for the Make It session will be presented in form of posters. We encourage the authors to present their posters and accompany them along with 3D printed models, artistic works, fun projects, robotics, and unique materials. Abstracts to be considered for this session should begin with the word 'MAKER:' in upper case. This is an excellent venue for personal hobbies and student projects.

The ASEE Manufacturing Division is a publish-to-present division which selects an overall best division presentation and an overall best division paper. All full paper submissions to the division will be considered for the awards and will be announced at the division dinner. A certificate will be provided to awardees. Specific information about deadlines and guidelines will be available at <https://www.asee.org/events/Conferences-and-Meetings/2024-Annual-Conference/Paper-Management/2023-Authors>. The submission and review processes are blind. Do not include the names of institutions or authors anywhere in the abstract. Please refer to the ASEE Author's Kit for more information. Questions may be directed to the 2023-2024 ASEE Manufacturing Division Program Chair, Dr. Md Fashiar Rahman.

KEY DEADLINES FOR 2024 ASEE CONFERENCE



2023 MFG. DIVISION CONFERENCE HIGHLIGHTS



TECHNICAL SESSIONS

6 →

At the 2023 ASEE conference, the Manufacturing Division hosted 6 technical sessions in manufacturing education practices, technology integration, workforce development, AR/VR applications, project-based learning, technology integration, workforce development, and design experiences in manufacturing education.



PAPER PRESENTATION

27 →

At the 2023 ASEE conference, the Manufacturing Division had 27 paper presentations in the above-mentioned 6 technical sessions.



BEST PAPER AWARD



Paper title: "Taking an Experiential Learning Approach to Industrial IoT Implementation for Smart Manufacturing through Course Work and University-Industry Partnerships."
Authors: Lucas Wiese, Eunseob Kim, Hector Will, Alejandra J. Magana, and Martin Jun.



OUTSTANDING YOUNG FACULTY AWARD



Md Fashiar Rahman received the Outstanding Young Faculty award in 2023.



"DAVID WELLS" SERVICE AWARD



Satya Aditya Akundi was awarded for the 2023 "David Wells" service.



PANEL SESSIONS

2 →

- 1) Defense Manufacturing and DoD Support for Manufacturing Education, and
- 2) Four Pillars of Manufacturing Knowledge Revision.

2024 SOCIAL EVENT



The Manufacturing Division social event provides an informal way of networking with the committee and participants. Our social event in Portland is planned for 7:00-9:00 PM on June 25, 2024 (tentative). The awardee will receive their awards, followed by a delightful dinner.



2024 OTHERS

The advancement of manufacturing is dependent on overcoming the challenges of diversity, equity, and inclusion (DEI). The DEI panel session will spark the dialogue needed to achieve this goal. Join us as we foster awareness of diverse perspectives and backgrounds in the manufacturing community.

PANEL SESSION

The Manufacturing Division wrap-up the event, followed by a business meeting. The committee will provide a briefing on the division, elect the 2024-2025 committee members, and set a plan. You are welcome to join our business meeting.

BUSINESS MEETING



We welcome you to join the Manufacturing Division. See you in the ASEE 2024 Annual Conference, Oregon Convention Center, Portland, Oregon, USA June 23th to 26th, 2024

 **ASEE** MANUFACTURING
DIVISION
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