

## NEWSLETTER – 2023

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### MESSAGE FROM THE DIVISION CHAIR



Greetings to all the Manufacturing Division Members,

We are proud to announce the first-ever newsletter of the ASEE Manufacturing Division. The plan for this periodical newsletter is to disseminate current and future updates on the activities undertaken

by this division and its members.

The manufacturing division of ASEE strives to advance and coordinate the development of manufacturing engineering research through dialogue between industry and faculty. Our principal function is to support individual member interests related to manufacturing. We have over 170 members in our community who are educators involved in manufacturing education at public and private 2-year and 4-year programs and representatives from manufacturing industries and organizations.

For planning, we look forward to meeting you all again in Baltimore for the 2023 ASEE Annual Conference. We invite the community to submit and present their research. This year we are also accepting submissions from the community on Manufacturing education for the defense and aerospace industry.

I look forward to seeing you all in Baltimore for the 2023 ASEE Annual Conference.

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# MANUFACTURING DIVISION – CALL FOR PAPERS 2023

The **Manufacturing Division** of the American Society for Engineering Education invites abstract submissions of full-length and work-in-progress papers for the 2023 ASEE Annual Conference. Papers and presentations related to manufacturing education, practice, and assessment 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 for manufacturing education
- ❑ 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
- ❑ 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



## 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/2023-annual-conference> 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 2022-2023 ASEE Manufacturing Division Program Chair:

## KEY DEADLINES FOR 2023 ASEE CONFERENCE



## 2022 MFG. DIVISION CONFERENCE HIGHLIGHTS



### TECHNICAL SESSIONS

7 →

At the 2022 ASEE Conference, the Manufacturing Division hosted 7 technical sessions in Manufacturing education, AR/VR Applications in Manufacturing Curricula, Project-based learning, Technology Integration, Workforce Development, and Remote Pedagogy in Manufacturing Education.



### PAPER PRESENTATION

31 →

At the 2022 ASEE Conference, the Manufacturing Division had 31 paper presentations in the above-mentioned 7 technical sessions.



### BEST PAPER AWARD



Paper title: A holistic design approach for integrated learning in manufacturing education; Authors: Faisal Aqlan, Daniell DiFrancesca, Qi Dunsworth, Chetan Prabhakar Nikhare, Matthew Swinarski, Mohammad Rasouli



### OUTSTANDING YOUNG FACULTY AWARD



Dr. Sergio Luna, an Assistant Professor from The University of Texas at El Paso, received the outstanding young faculty award in 2022.



### "DAVID WELLS" SERVICE AWARD



Dr. Tzu-Liang (Bill) Tseng, professor and chair of the IMSE Department at The University of Texas at El Paso, received the "David Wells" service award in 2022



### INVITED SPEAKER



Dr. John Jackman from National Science Foundation (NSF) provided an invited talk on "Future Manufacturing and Federal Support of Manufacturing Education"

## SOCIAL EVENT



The Manufacturing Division social event provides an informal way of networking with the committee and participants. Our social event in Baltimore is planned for 7.00-9.00 PM on June 27, 2023. The awardee will receive their awards, followed by a delightful dinner.



## OTHERS

Dr. Cindy Walter, Program Manager for ONR Manufacturing Engineering Education Program (ONR-MEEP), is willing to provide a plenary talk

**PLENARY TALK**

The Manufacturing Division wrap-up the event, followed by a business meeting. The committee will provide a briefing on the division, elect the 2023-2024 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 2023 Annual Conference, Baltimore Convention Center, MD. June 25<sup>th</sup> to 28<sup>th</sup>, 2023

**ASEE** MANUFACTURING DIVISION

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