NAMRC 52 | MSEC 2024

June 17 – June 21, 2024
Knoxville, Tennessee, USA

https://utconferences.eventsair.com/2024-msec-namrc/

MSEC 2024 SYMPOSIUM LIST AND CALL FOR PAPERS

This final list of symposia is approved by the ASME MED Committee.

MSEC 2024 invites **ALL** high-quality advanced manufacturing research papers, even if they may not directly fit into one of these symposia. We ask authors to find the closest related symposium to place papers into. Technical Chairs and the Symposium Organizers will coordinate review of these submitted papers.

Technical Chairs:

Chinedum (Chi) Okwudire, University of Michigan (okwudire@umich.edu)

Guha Manogharan, Pennsylvania State University (gum53@psu.edu)

Key Dates

- Abstract submission (abstract must be submitted before uploading paper): October 23, 2023
- Abstract acceptance: October 26, 2023
- Full manuscript submission deadline: November 1, 2023
- Copyright transfer form submission deadline: March 19, 2024
- Final revised manuscript submission deadline: March 20, 2024
- Presenting author registration deadline: April 10, 2024

Submissions will only be accepted via the ASME website: https://event.asme.org/MSEC/. No papers may be submitted to the organizers by email.

MSEC 2024 Paper Types

The following paper types may be submitted to any symposium in response to this call:

Full Papers

Full papers undergo full peer review and are published in the conference proceedings. A full paper is 7-10 pages long. It reports technically original research that is of major and archival value to the manufacturing community. An accepted full paper is accompanied by a 25-minute oral presentation (including Q&A) at the conference. A full paper is eligible for the best paper award and, if deemed to be of journal quality, may be channeled to an appropriate ASME journal for fast-tracked review and publication.

Brief Papers (New to MSEC 2024!)

Brief papers undergo full peer review and are published in the conference proceedings, in the same manner as full papers. A brief paper is 4-5 pages long. It reports technically original research that is of significant and archival value to the engineering community. A brief paper may contain preliminary work that has not yet been fully developed. An accepted brief paper is accompanied by a 15-minute oral presentation (including Q&A) at the conference and a poster presentation during the poster session. The expectation is that the authors will use the oral and poster presentations of a brief paper as an opportunity to get feedback from the engineering community leading to a full-length conference or journal paper in the near future. A brief paper is NOT eligible for the best paper award nor can it be fast-tracked for journal publication. However, the accompanying poster is eligible for the best poster award.

Presentation-only Papers

Presentation-only papers require only an abstract submission. They do not undergo peer review and are not published in the proceedings. A journal paper published in the *ASME Journal of Manufacturing Science and Engineering* or the *ASME Journal of Micro and Nano Manufacturing* between March 2023 and February 2024 may be submitted as a presentation-only paper by its corresponding author. A presentation-only paper may also be submitted by industry participants, if all the co-authors of the paper are from industry. An accepted presentation-only paper is accompanied by a 15-minute oral presentation (including Q&A) and an optional poster presentation during the poster session. A presentation-only paper is NOT eligible for the best paper award nor can it be fast-tracked for journal publication. However, the accompanying poster (where applicable) is eligible for the best poster award.

Note that there are ***separate templates*** to submit full and brief papers, and posters. Visit https://msec.secure-platform.com/a/page/author_resources/information_and_templates for more information about the paper types and to download the appropriate templates.

— Call for Papers —

A Symposium on

Advances in Clean Energy and E-Mobility Manufacturing

Sponsored by the ASME Manufacturing Engineering Division's
Manufacturing Processes Technical Committee
2024 ASME International Manufacturing Science & Engineering Conference
(MSEC2024)
June 17 – June 21, 2024
Knoxville, Tennessee, USA
Hosted by the University of Tennessee - Knoxville

Technical Focus

Carbon neutrality is a major driving force for the development of renewable clean energy, e.g., batteries, fuel cells, solar cells, wind, hydropower, nuclear, etc., to replace the traditional fossil fuel and petroleum-based energy. Electro-mobility has become a world-wide recognized definition related to the use of electric energy to propel several types of vehicles: from motorcycles to cars, from scooters to buses. The introduction of clean energy (batteries and/or fuel cells) in modern vehicles has determined the rapid adoption of dedicated manufacturing processes that should be able to deal with massive production, low waste and high flexibility to face the continuous improvements characterizing this new disruptive industrial scenario. The manufacturing aspect for clean energy attracts increasing attention since the manufacturing cost, waste and carbon emissions play a significant role in the adoption of clean energy. This symposium focuses on research advances concerning manufacturing processes to produce clean energy and related components in electro-mobility and other decarbonization applications. Specific topics of interest include, but are not limited to:

- Novel manufacturing technologies and methods for clean energy.
- Joining, cutting, and texturing for production of battery electrodes, cells, and packs.
- Additive manufacturing processes for production of advanced housings and highly electro-conductive materials.
- Manufacturing process and system design and optimization.
- In-situ monitoring and sensing the manufacturing process for clean energy.
- Computational modeling and simulation for manufacturing process of clean energy.
- Artificial intelligence in clean energy manufacturing.
- Manufacturing equipment, facility, and infrastructure for clean energy.
- Sustainability and scalability of manufacturing technologies.

Paper Submission (Dates are subject to change.)

Authors are encouraged to submit an abstract and full manuscript for review by **Oct 23, 2023 and November 01, 2023 respectively**. ***Submissions will only be accepted via the conference website: https://event.asme.org/MSEC/***. No papers are to be submitted to the organizers. The copyright transfer form must be completed by **March 19, 2024**. Final revised manuscripts must be submitted by **March 20, 2024**. The presenting author must register by **April 10, 2024** or the paper will be withdrawn from the conference proceedings.

Additional Symposium Activities

To highlight advancements in this technical area, symposium organizers will:

- Work to attract a high-profile international keynote speaker.
- Work to attract the members in clean energy manufacturing to broaden the manufacturing community.

Organizers

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