— Call for Papers —

A Symposium on

Smart Additive Manufacturing

Sponsored by the ASME Manufacturing Engineering Division's
Additive Manufacturing Technical Committee
Manufacturing Systems Technical Committee
Quality & Reliability 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
There is a lot of excitement about the potential of smart manufacturing (involving the use of information, automation, computation, software, sensing, and networking technologies) to revolutionize the manufacturing industry, e.g., by boosting manufacturing quality and productivity at low cost. An excellent application for such "smart" technologies is additive manufacturing (AM), another area of manufacturing that is gaining a lot of traction but is plagued by quality, productivity, and cost issues. This symposium will focus on research aimed at leveraging advances in sensing, automation, computation, software, networking, big data analytics, machine learning, control, etc., to reduce trial and error, and enhance the quality, productivity, scalability, cost-effectiveness and functionality of AM. Specific topics of interest include, but are not limited to:

- Data-driven predictive modeling of AM processes
- Physics and/or data-driven part design
- In-process and post-built defect detection, characterization, and analysis
- Digital twin of AM process and equipment
- New sensing modalities and data fusion techniques for AM process monitoring and control
- In-situ monitoring and control techniques for AM
- Applications of machine learning (e.g., physics-guided) in any phase of AM, including design and materials
- Use of cloud/edge and high-performance computing to advance AM
- Embedded sensors and integrated functionalities using AM
- Industrial Internet of Things (IIoT) applications in AM
- Novel applications of commercial software in AM

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 promote high-quality submissions

Organizers
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