

— **Call for Papers** —  
A Symposium on  
**Advances in Modeling and Simulation of Additive Manufacturing Processes**

Sponsored by the ASME Manufacturing Engineering Division's  
*Additive Manufacturing Technical Committee*  
2020 ASME International Manufacturing Science and Engineering Conference (MSEC)  
June 22 – 26, 2020  
Cincinnati, Ohio  
Hosted by the University of Cincinnati, College of Engineering and Applied Science

### Technical Focus

This symposium will focus on the research advances in the areas of modeling and simulation of Additive Manufacturing (AM) processes. Although the AM field has advanced significantly in recent years, challenges in predictive theoretical and computational approaches still hinder its widespread adoption. The symposium is interested in receiving contributions in the following non-exclusive areas:

- Modeling and simulation of AM processes to understand the process-structure-property relationship
- Modeling of morphology evolution, phase transformation, and defect formation in AM parts
- Multiscale/multiphysics modeling strategies, including any or all of the scales associated with the spatial, temporal, and material domains
- Quantifying uncertainty in AM materials
- Machine learning and artificial intelligence-enabled AM modeling techniques
- CALPHAD (Calculation of Phase Diagrams)-based method for AM material informatics
- Efficient computational methods using reduced-order models or fast emulators for process control

### Paper Submission

Authors are encouraged to submit an abstract and full manuscript for review by **November 15, 2019**, via the conference website. Final revised manuscripts must be submitted by **March 26, 2020**. The [copyright transfer form](#) must be filled out by March 19, 2020, and the presenting author must [pre-register](#) by **April 15, 2020**, or the paper will be withdrawn from the conference. **No papers are to be submitted to the organizers; submissions will only be accepted via the conference website at <https://event.asme.org/MSEC/>.**

All papers accepted by MSEC2020 can be further submitted to any ASME journals, such as the highly prestigious Journal of Manufacturing Science and Engineering, for consideration of archival publication. In addition, high quality MSEC2020 papers will be automatically channeled to relevant ASME journals for fast-tracked publications.

### Additional Symposium Activities

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

- work to attract a high profile international keynote speakers
- organize a special issue in the ASME Journal of Manufacturing Science and Engineering or ASME Journal of Micro and Nano-Manufacturing

### Organizers:

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Dr. Athanasios Iliopoulos, Naval Research Lab, Washington, DC, USA.

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<sup>1</sup> The conference is collocated with NAMRI/SME's 48th North American Manufacturing Research Conference (NAMRC48) and LEM&P (Leading Edge Manufacturing / Materials and Processing) by The Japan Society of Mechanical Engineers (JSME), which will have a separate call-for-papers. Please note that submissions of the same paper to more than one conferences are not permitted.