

— Call for Papers —

A Symposium on

Advances in Modeling, Analysis, and Simulation of Manufacturing Systems for Optimized Throughput and Performance

Sponsored by the ASME Manufacturing Engineering Division's
Manufacturing Systems Technical Committee

2020 ASME International Manufacturing Science & Engineering Conference (MSEC)*

June 22 – 26, 2020

Cincinnati, Ohio

Hosted by the University of Cincinnati, College of Engineering and Applied Science

Technical Focus

Manufacturing systems are complex systems, which comprise products, equipment, process, people, logistics, information, control and support functions. The operations throughput has been the main performance indicator for the manufacturing development and execution. Significant new advances, such as on the principles, methodology, computer simulation, and applications, have been made by industrial practitioners and academic researchers. This symposium will focus on the research, development, and application efforts addressing the advancement of development, operation, continuous improvement of manufacturing systems. Presentations in this session will portray the latest developments in the principles, practices, tools, processes, and applications. Specific topics of interest include, but are not limited to:

- Innovative visions and strategies on manufacturing system development and system throughput
- Innovations in algorithms and models of manufacturing operation throughput
- New concepts of total maintenance management and their impact on operations performance
- Buffer design, optimization, and analysis for complex manufacturing systems
- Process flow optimization for the throughput of manufacturing systems
- Automation control optimization for the throughput of manufacturing systems
- New approaches of data analysis of manufacturing operations status
- New model-based analysis complex manufacturing systems
- Discrete event simulation for the prediction of manufacturing systems performance
- Comprehensive approaches of bottleneck identification in manufacturing operations
- Production management and process flow conditioning for the throughput of manufacturing systems
- Production monitoring systems with integrated product and process information

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:

- organize a special issue in the ASME J. of Manufacturing Science and Engineering
- organize a state-of-the-art paper that will be the lead article in the special issue

Organizers:

Dr. Cary Zhang, Fiat Chrysler Automobiles, Auburn Hills, MI, USA. Ph: (248) 944-1341; cary.zhang@fcagroup.com

Dr. Herman Tang, Eastern Michigan University, Ypsilanti, MI, USA. Ph: (734) 487-2040; htang2@emich.edu

* The conference is collocated with NAMRI/SME's 48th North American Manufacturing Research Conference (NAMRC48) and LEM&P (title name under review) 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.