

— Call for Papers —

A Symposium on

Integrative Manufacturing Systems for Advanced Composites and Multi-Material Hybrids

Sponsored by the ASME Manufacturing Engineering Division's
Advanced Materials 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

Advanced composites and multi-material structures are known for their superior characteristics due to the synergy of different materials. However, the multi-stage and high cost of their manufacturing processes are the main drawbacks in expanding their application in cost-effective industries such as automotive. To counter these challenges, manufacturing firms must target innovation in production processes and technologies that allow the mass manufacturing of advanced composites and hybrids through highly efficient and flexible processes. Integrated manufacturing processes remain standout examples in this regard, for they consist of technological developments that exhibit a way to overcome limitations associated with earlier technologies, while adapting themselves to incorporate new materials and features. Moreover, integrative production systems increases the complexity and technical requirements of the system, thereby making product imitation difficult. Integrated manufacturing technologies often involve the combination of multiple, diverse materials and/or structures.

The aim of this special call is to provide a forum for researchers and practitioners to review the recent developments in the area of integrative manufacturing systems developed for composites and hybrid multi-material structures. It is also aimed to attract industrial partners interested in application development of such technologies. This symposium invites papers that deal with the theoretical, implementation, and/or applied aspects of one or more of the following topic areas, but not limited to:

- Innovative combination of normally separated plastics and composites processes
- Innovations in insert-, outsert and two- or multi-shot composites fabrication technologies
- Integration of different mechanisms of action to assist advanced composites production
- Equipment development for integrative manufacturing systems
- Multi-material design based on integrated manufacturing processes
- Combination of non-traditional and traditional processes
- Sustainability and energy savings considering integrative systems
- Integrated processes for meso, micro and nano manufacturing
- Customized production based on integrative manufacturing approaches

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 promote high-quality submissions
- Organize a special issue in the ASME Journal of Manufacturing Science and Engineering

Organizers:

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