

— Call for Papers —

A Symposium on

Advances in Multi-axis and Multi-tasking Machine Tools

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

2017 ASME International Manufacturing Science and Engineering Conference (MSEC)*

June 4-8, 2017

University of Southern California

Technical Focus

Many mechanical parts with complicated shapes or freeform surfaces have been manufactured in aerospace, automobile, energy and medical industries. In addition, the materials of those parts such as Titanium alloys, Inconel and Cobalt Chromium Molybdenum alloys have high mechanical strength, high heat resistance and/or high wear resistance. Currently, multi-axis and multi-tasking machine tools have been developed to manufacture those parts having a high additional value. The machining operations require high-end CAM systems, machining simulations, and specialized cutting tools for using the machine tools effectively. This symposium focuses on the research advances in the areas of the machining technologies on the multi-axis and multi-tasking machine tools. In order to achieve high cutting performance on the multi-axis and multi-tasking machine tools, the topics of the symposium include machine tool kinematics and control, machining process modeling with respect to multi-axis machining, advanced cutting tools, and the metrology for the machined part. Specific topics of interest include, but are not limited to:

- Advanced control and metrology for multi-axis and multi-tasking machine tools
- Modeling, simulation, and process planning in multi-axis and multi-tasking machining processes
- Advanced cutting tool design and coating technologies
- Advanced CAM systems for the multi-axis and the multi-tasking machining operations
- Monitoring technologies for multi-axis and multi-tasking machines
- Evaluation of machining performance in the multi-axis and the multi-tasking machining operations

Paper Submission

Authors are encouraged to submit an abstract and full manuscript for review by **November 03, 2016** via the conference website. Final revised manuscripts must be submitted by **March 08, 2017**. The [copyright transfer form](#) must be filled out and the presenting author must [pre-register](#) by April 06, 2017 or the paper will be withdrawn from the conference. Authors may also consult www.asme.org/divisions/med/call/ for updates. **No papers are to be submitted to the organizers; submissions will only be accepted via the conference website at www.asmeconferences.org/msec2017/.**

Additional Symposium Activities

- To highlight advancements in this technical area, symposium organizers plan to 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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* The conference is collocated with NAMRI/SME's 45th North American Manufacturing Research Conference (NAMRC45) and JSME's International Conference on Materials and Processing (ICMP 2017), both of which have a separate call-for-papers. Please note that submissions of the same paper to more than one conference are not permitted.