

— Call For Papers —

A Symposium on **Micro-Nano Assembly Systems and Applications**

Sponsored by the ASME Manufacturing Engineering Division's

Nano/Micro/Meso Manufacturing Technical Committee

Full Paper Deadline: December 1, 2010

Info: <http://www.asmeconferences.org/MSEC2011/>

2011 ASME Manufacturing Science and Engineering Conference (MSEC)
and 2011 International Conference of Materials and Processing (ICMP) of JSME*

June 13-17, 2011
Oregon State University
Corvallis, OR

Technical Focus

Micro and Nanotechnology has brought an unprecedented era of innovations and new developments across multiple disciplines and diverse applications. The main thrust of micro and nanotechnology is the ability to fabricate, measure and assemble micro-nano-scale devices, instruments and systems. The growing trend toward miniaturization has impacted technologies in virtually every field, from medical and biomedical (e.g.: pacemakers, micro drug delivery systems, in vivo monitoring and therapy), automotive (sensors for safety in cars), aerospace (lightweight distributed sensors for micro crack detection), IT (ink jet printers, reading caps for hard disk) and telecommunication (micro optical switches, etc.). This symposium invites papers that focus on new micro and nano handling system technology, micro and nano metrology research and applications. Topics of interest include, but are not limited to:

- Nanomanipulation using SEM and AFM
- Micromanipulation and microassembly cells
- MEMS and NEMS tools for micro/nano assembly - actuators, manipulators, end effectors, fixtures, and robots
- Precision motion control and precision robotics; and Mm-scale robotics
- Assembled MOEMS and applications
- Micro-Nano integration and Factories
- Heterogeneous (top-down/bottom-up) micro and nano handling
- Vision and force feedback for micro and nano handling
- Optical Micro-Nano Metrology
- New Aspects in Microtopography Measurements
- Inspection of MEMS/NEMS and Microoptics
- Precision Lasers in Micro-Nano Metrology
- Specialized Techniques and Sensors for Micro and Nanometrology
- Process Monitoring Systems for Micro and Nanometrology
- Nanometrology for MEMS & NEMS
- Other emerging applications

* The two conferences are also to be collocated with the 39th North American Manufacturing Research Conference (NAMRC) of SME which will have a separate call-for-papers.

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Format and Participation Level

We expect to receive as many as 15-20 research papers. We plan to have a total of twelve presentations in three sessions. These sessions will follow the traditional paper presentation format. These papers will be solicited through personal contacts and broader email invitations of academic as well as industrial research groups.