

— Call for Papers —
A Symposium on

Advances in Manufacturing Processes of Biomedical Instruments

Sponsored by the ASME Manufacturing Engineering Division's
Biomanufacturing Technical Committee
2014 ASME Manufacturing Science and Engineering Conference (MSEC)*
June 9-13, 2014, Cobo Center, Detroit, MI
Hosted by the University of Michigan

Technical Focus

The next decade will see a tremendous growth in the need for innovative biomedical instruments to improve the quality of human life. Manufacturing science and engineering can immensely contribute to the rapid advancements of biomedical technology; leading to improvements in the safety, quality, cost, and speed of healthcare services. For example well-developed cutting models in machining of industrial materials can be extended to the study of medical instruments cutting soft tissues and bone. In addition to the continual improvement of generic medical instruments, there are emerging areas that have created a need for novel instrument development including: minimally invasive procedures requiring smaller instruments, disposable diagnostics, and scaffold guided tissue engineering biologics. This symposium intends to provide a forum for researchers from academia and industry to share ideas and solutions in applying manufacturing science to medical instrument challenges.

Original contributions are invited in, but not limited to the following areas:

- Manufacturing research applicable to future medical treatment design
- Biological tissue deformation upon medical instrument interaction
- Effects of workpiece compliance and fixturing in biological tissue machining
- Cutting and/or extraction of biological material inside the body
- Accuracy of small instrument placement inside the body
- Design of meso/micro/nano devices for biomedical applications
- Modeling, metrology, sensing and control of biomedical products
- Reviews of the state-of-the art technologies in medical instruments

Paper Submission

Authors are encouraged to submit an abstract and full manuscript for review by **November 03, 2013** via the conference website. Final revised manuscripts must be submitted by **March 09, 2014**. The copyright transfer form must be filled out and the presenting author must pre-register by April 06, 2014 or the paper will be withdrawn from the conference.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/msec2014/.*

Organizers

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* The conference is collocated with the 42nd North American Manufacturing Research Conference (NAMRC42) of SME and the International Conference on Materials and Processing (ICM&P 2014) of JSME which will have a separate call-for-papers.