

# — Call for Papers —

A Symposium on

## Advances in Analysis, Design, and Manufacturing of Biomedical Devices

Sponsored by the ASME Manufacturing Engineering Division's

*Biomanufacturing Technical Committee*

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

June 4-8, 2017

University of Southern California

### Technical Focus

Advancement in manufacturing science and technology has enabled the creation of many novel medical devices leading to improvements in the safety, quality, cost, and speed of healthcare services. In addition to the continual improvement of generic devices, there are also emerging areas, such as 3D printing and sensing, that have created new tools and novel ideas for research and development in biomedical devices and applications. These applications include manufacturing of soft materials, patient specific medical implants or assistive devices, novel surgical tools, intraoperative monitoring and feedback, and so on. This symposium intends to provide a forum for researchers from academia and industry to share ideas and solutions to biomedical problems and challenges with design and manufacturing of surgical devices. This symposium also focuses on state-of-the art research and development of analytical methods and practical applications for improving surgical operations. Biomedical manufacturing represents many challenges and is highly interdisciplinary in nature, so the topics of interest could include, but are not limited to:

- Manufacturing process of new or composite materials for biomedical applications, such as soft matter
- Additive manufacturing of custom medical devices, such as orthosis and prosthesis
- Analysis of tissue cutting, removal or joining processes
- Modeling and experimentation of surgical operations
- Surgical haptics rendering
- Design of advanced medical devices and tools
- Measurement and guidance of small instrument into the body
- Reviews of the state-of-the art technologies in instrumentation

### 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transfer form must be filled out and the presenting author must pre-register by April 06, 2017 or the paper will be withdrawn from the conference.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/](http://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/](http://www.asmeconferences.org/msec2017/).**

### Organizers:

Dr. Roland Chen, Washington State University, Pullman, WA, USA. Ph: (509) 335-0376; [roland.chen@wsu.edu](mailto:roland.chen@wsu.edu)

Dr. Carl McGill, Abbott, Abbott Park, IL, USA. Ph: (224) 668-1155, [Carl.McGill@abbott.com](mailto:Carl.McGill@abbott.com)

---

\* 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.