

— Call for Papers —

A Symposium on

Quality Assurance in Additive Manufacturing Systems: Integrated Sensing and Control

Sponsored by the ASME Manufacturing Engineering Division's
Manufacturing Systems Technical Committee
2017 ASME International Manufacturing Science and Engineering Conference (MSEC)*
June 4-8, 2017
University of Southern California

Technical Focus

Quality assurance remains the key impediment for broader adoption of additive manufacturing (AM) processes. Recent roadmap reports by multiple sources, including NSF, NIST, ASME, and GAO attest the burgeoning need to address the lack of process repeatability and reliability in AM. Novel integrated sensing, analytics, physical process modeling, part measurement, and materials testing strategies are consequential milestones that must be surpassed to overcome quality related impediments in AM. We seek papers on the recent advancement in these broadly defined areas, as well as transdisciplinary collaborative initiatives. The overarching aim of this symposium is to serve as a forum for professionals from academia and industry to discuss recent advancements towards quality assurance in AM. The goal is to foster communication and build the foundation for further transdisciplinary research in the area.

Specific topics of interest for this symposium include, but are not limited to the following:

- AdSensor fusion and data analytics
- Feedback, closed-loop control
- Functional integrity measurement and testing
- Non-destructive testing and evaluation
- Strategies for dimensional control
- Process-machine integration modeling and variability reduction
- Cause-effect analysis and defect mitigation strategies

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form](#) must be filled out and the presenting author must [pre-register](#) by April 06, 2017 or the paper will be withdrawn from the conference.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 will:

- Work to attract a high profile international keynote speaker(s) with honorarium
- Organize a special issue in peer reviewed journals, e.g., Materials Discovery Journal, ASME J. of Manufacturing Science and Engineering, International Journal of Rapid Manufacturing, SME Journal of Manufacturing Systems, Journal of Manufacturing Processes, Rapid Prototyping, etc.
- State-of-the-art review paper that will be the lead article in the special issue

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.