— Call for Papers —
A Symposium on
Advances in Energy Efficient and Carbon Neutral Manufacturing

Sponsored by the ASME Manufacturing Engineering Division's
Life Cycle Engineering Technical Committee
2016 ASME International Manufacturing Science and Engineering Conference (MSEC)*
June 27 – July 1, 2016
Virginia Tech, Blacksburg, Virginia, USA

Technical Focus
In order to significantly reduce the environmental pollutant emissions of the manufacturing industry it is critical for manufacturers to engage in energy efficiency, energy recovery, renewable energy, and energy storage projects. In particular, the International Energy Agency (IEA) estimates that 50% of the reductions that are recommended in global CO₂ emissions must come from efficiency gains. However, the business environment for implementing energy efficiency in industry is challenging due to low energy prices, in particular in North America. The lack of financial incentive entails that researchers must strive to achieve order of magnitude efficiency improvements while simultaneously ensuring the solutions are exceptionally cost effective, or lead to other tangible industrial benefits e.g. productivity gains, ‘green’ product advantage, improved process reliability, precision etc. This symposium will focus on the research advances in the following areas:

- Energy efficiency in production machinery and machine tools
- Energy efficiency in production planning
- Energy efficiency in automation technology
- Energy efficiency in factory buildings (HVAC, lighting etc)
- Energy efficiency in compressed air and pneumatic systems
- Sensors, process monitoring, and decisions support systems for energy optimization
- On-site power generation, combined heat and power, tri-generation, and energy storage opportunities
- Energy procurement strategies
- Industrial energy management and international standard development

Specific topics of interest include, but are not limited to technical (design, control, novel applications, analytical or numerical simulation modelling, virtual optimization) and organizational innovations for energy optimization in manufacturing. Industrial partners are invited to present the energy or emission related challenges of their factories and processes, or case studies of successful impact reduction projects within complex machinery or plant. The scope of analysis/project can be at a unit process, production line, factory or building level. To promote industrial involvement and case studies, contributors from industry will have the opportunity for technical presentation without submitting a full paper. Industry authors are still required to submit an abstract.

Paper Submission
Authors are encouraged to submit an abstract and full manuscript for review by December 01, 2015 via the conference website. Final revised manuscripts must be submitted by March 31, 2016. The copyright transfer form must be filled out by March 28, 2016, and the presenting author must pre-register by April 25, 2016 or the paper will be withdrawn from the conference. Authors may also consult https://www.asme.org/events/msec/present-publish/call-for-papers.aspx for updates. No papers are to be submitted to the organizers; submissions will only be accepted via the conference website at: www.asmeconferences.org/msec2016/.

Organizers
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* The conference is collocated with NAMRI/SME’s 44th North American Manufacturing Research Conference (NAMRC44) that will have a separate call-for-papers.