Special Issue on Smart Manufacturing in Energy Intense Process Industries

Abstracts are invited for papers to be submitted to the ASTM International journal *Smart and Sustainable Manufacturing Systems*, edited by Dr. Sudarsan Rachuri, Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, Department of Energy, Washington, DC, USA. The Guest Editors for this special issue are Prof. Yinlun Huang, Wayne State University, and Prof. Tom Edgar, The University of Texas at Austin.

SSMS fosters transdisciplinary research that crosses the boundaries of information science, systems engineering and engineering design, manufacturing, and product life cycle with a focus on how to make manufacturing systems smarter and sustainable. This special issue can address specific research and technology topics and bring various stakeholders to address call for action in research and technology issues, viewpoint on gaps, challenges, opportunities and disruptive technologies in transitioning research, to technology, to product, and to market place.

Suggested topics for papers include but are not limited to:
- Energy and resource productivity and sustainability
- Research and development challenges that identify knowledge gaps for Smart Manufacturing; identify major knowledge gaps in the process models (science based, empirical, data driven models) improvements, articulate the resulting R&D challenges, to improve processes for maximizing productivity and efficiency, and minimizing waste
- Smart manufacturing in energy intense process industries and composable unit processes and their characterizations, process intensification, and process integration
- Manufacturing operations technology (OT) with information, communication, and computation technologies (IT)–IoT platforms, standards, and protocols
- Smart data analytics in smart and sustainable manufacturing systems; use of machine learning in a smart-paradigm, computing infrastructure, cloud computing, edge computing, and smart sensors and networks, prediction and advanced process control
- Open standards and protocols for smart manufacturing platforms

**ABSTRACT SUBMITTAL**
A 250-word preliminary abstract should be submitted to ASTM (attention Alyssa Conaway) by **October 25, 2017** via email to Alyssa Conaway at aconaway@astm.org. The abstract must include a clear definition of the objective and approach of the work to be discussed, pointing out material that is new, and present sufficient details regarding results. It should be clearly indicated in the abstract if the paper is a review. The abstract must also include a title and the names and affiliations of all authors.

**PUBLICATION**
After the final selection of abstracts has been approved, the ASTM Editorial Office will invite authors by **November 15, 2017** to submit papers no later than **February 15, 2018**. All submissions will be uploaded to the special issue paper submission site (link to be sent via email). All submissions will be peer-reviewed according to the normal procedures for this journal. The papers must not be of a commercial nature nor can they have been previously published, although reviews of previously published technology will be considered. For each accepted manuscript, the corresponding author will receive a copy in portable document format (PDF). All published authors will have the opportunity to purchase reprints of their papers at a nominal cost. The papers comprising the special issue will be published together online. In addition, a print and online collection of the special issue will be published after all papers in the special issue have been published online.

**CONTACT INFORMATION**
Additional information about the paper content is available from the Guest Editors: **Prof. Yinlun Huang**, Wayne State University, College of Engineering, Detroit, MI 48202, Phone: 313-577-3771, Email: yhuang@wayne.edu; and **Prof. Tom Edgar**, The University of Texas at Austin, Department of Chemical Engineering, 1 University Station C0400, Austin, TX 78712-0231, Phone: 512-471-3080, Email: edgar@che.utexas.edu.