IEEE/ASME TRANSACTIONS ON MECHATRONICS

Call for Papers

Focused Section on

Sensing and Perception Systems for Intelligent Manufacturing (SPIM)

Next generation of industrial revolution will be featured with broad applications of various autonomous technologies which would enable intelligent manufacturing in industries. Among all the challenges facing the intelligent manufacturing processes is the smart sensing and perception technology which plays a critical role in facilitating various autonomous operations. Such sensing and perception technology will evolve with more and more 'smart functioning modules' to transform the manufacturing process from independently structured operations into sensing/perception-based self-governed collaborative networked operations. This Focused Section is dedicated to new advances in modeling, design, control and optimization, communication, and implementation of the sensing and perception system for intelligent manufacturing processes, and intends to provide the state-of-the-art update of research fronts in the areas specified below that include but are not limited to:

- Modeling of physical fields for machine perception;
- Machine vision for manufacturing;
- Sensing network and fusion optimization for manufacturing;
- Real time field reconstruction;
- Embedded device, adaptive algorithm, and autonomous control method;
- Method for data-driven real time optimization of field sensor network;
- Distributed field sensing for manufacturing;
- Advanced vision and perception system and 2D/3D optical sensing method.

Manuscript preparation

Papers must contain original contributions and be prepared in accordance with the journal standards. Instructions for authors are available online at: http://www.ieee-asme-mechatronics.org/

Manuscript submission

Manuscripts should be submitted online at: https://mc.manuscriptcentral.com/tmech-ieee. The cover letter should report the following statement: "This paper is submitted for possible publication in the focused section on Sensing and Perception for Intelligent Manufacturing(SPIM)". All manuscripts will be subjected to the peer review process. If you have any questions relating to this focused section, please email one of the Guest Editors.

Important dates

Paper submission:	March 1, 2017
Completion of first review:	June 1, 2017
Submission of revised papers:	August 1, 2017
Completion of final review:	October 1, 2017
Submission of final manuscripts and copyright forms:	December 1, 2017
Publication:	February 2018

Guest Editors

XIANG CHEN
Dept of Electrical and Computer Eng.
University of Windsor
Windsor, Ontario, Canada N9B 3P4
xchen@uwindsor.ca

SONG ZHANG
School of Mechanical Eng.
Purdue University
West Lafayette, IN 47907, USA
szhang15@purdue.edu

J. M. P. GERAEDTS (JO)
Industrial Design Engineering
Delft University of Technology
NL-2628 CE 15 Delft, the Netherlands
J.M.P.Geraedts@tudelft.nl