IEEE Transactions on Industrial Informatics
CALL FOR PAPERS
for Special Section on
"Big Data Analytics in Intelligent Manufacturing "

Theme: An Intelligent manufacturing system is a manufacturing system that can automatically adapt to changing environments and varying process requirements with minimal supervision and assistance from operators. It is essentially a cyber-physical production system (CPPS) that has enhanced intelligence due to learning, reasoning, adaptation, and decision making. The success of intelligent manufacturing relies on the timely acquisition, distribution and utilization of various types of data both from machines, manufacturing process and products. These huge amounts of data, both numerical and structural, are fused and form the "Big Data" required for execution of Intelligent Manufacturing. The efficient use of big data can enhance the intelligence and automation of manufacturing process, provide high quality products and just-in-time production, and increase productivity and reduce costs. For example, by analyzing the factory floor data, equipment monitored data, and the enterprise manufacturing database, it could help to store, explore and make complex decisions for the manufacturing system. While these big data topics have been widely discussed in the public media and the theory has been rigorously treated by statistician and computer scientists from academia, little has been explored in the manufacturing research community from an engineering point of view. This special section aims to bridge this gap, and provides a platform for the communities to report recent findings and emerging research developments in this big data special issue in intelligent manufacturing, with a focus on the sensor-based information acquisition, process monitoring, operational decision-making and adaptive control techniques.

Topics include, but are not limited to, the following research topics and technologies:
- Distributed data acquisition and smart sensing
- Large-scale manufacturing data mining for productivity and decision making
- Machine learning applications to manufacturing automation
- Manufacturing process monitoring and adaptive control
- Condition based maintenance and health management
- Intelligent design and product life cycle management
- Cyber-physical system (CPS) modeling and simulation
- Deep fusion of production process data with product data information
- Online measurement, process control and optimization for additive manufacturing
- Tool condition monitoring and tool life prognostics

Manuscript Preparation and Submission
Follow the guidelines in "Information for Authors" in the IEEE- IES website: **http://www.ieee-ies.org/pubs/transactions-on-industrial-informatics** . Please submit your manuscript in electronic form through Manuscript Central web site: https://mc.manuscriptcentral.com/tii . On the submitting page #1 in popup menu of manuscript type, select: SS on **Big Data Analytics in Intelligent Manufacturing**.

Submissions to this Special Section must represent original material that has been neither submitted to, nor published in, any other journal. Regular manuscript length is 8 pages, additional 4 pages may be allowed for a fee.

Note: The recommended papers for the section are subject to final approval by the Editor-in-Chief. Some papers may be published outside the special section, at the EIC discretion.

Timetable:	Deadline for manuscript submissions	April 30, 2018
	Expected publication date (tentative)	December 2018

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