

Big Data Analytics in Smart Manufacturing Systems

Session Chairs:

- Prof. Dr. Jie Zhang, Donghua University, China
- Prof. Dr. Wenjun (Chris) Zhang, University of Saskatchewan, Canada
- Dr. Junliang Wang, Donghua University, China

Emerging technology breakthroughs in a number of fields, including robotics, artificial intelligence and quantum computing, etc., promote the development of different strategies (such as Industrial 4.0, Made in China 2025) and the fourth industrial revolution. The industrial big data (i.e. data of machine state, data of product quality and data of system bottleneck state, etc.) can be captured by using embedded ubiquitous sensors and multiple intelligent machines, which is featured by 3V-3M, i.e. volume, velocity, variety, multi-source, multi-noise, and multi-dimension. Enabled by the parallel computing, deep learning and other information science technologies, big data analytics has the potential to transform and advance manufacturing systems. It empowers a new paradigm for performance management and provides the predictive analytics to improve production quality, stability and efficiency. In recent years, the big data analytics has played a significant role in the production scheduling, equipment utilization enhancement, cycle time prediction and customer demand forecasting, as a new hotspot in the operation of manufacturing systems.

Track topics:

The session chairs invite researchers, scholars and decision-makers from academia, industry, and government to contribute theoretical and applied research papers in areas including but not limited to the following topics:

Predictive models for better forecasting, condition monitoring, manufacturing defects identification and remediation
Big data analytics for resilient engineering in manufacturing systems
Big data analytics for supply chain management in service or manufacturing sector
Big data analytics for smart logistics in service or manufacturing sector
Big data analytics for smart operations in service or manufacturing sector
Big data analytics for product design and development
Big data analytics for operations/service improvement using customer reviews
Open data analytics for consumer behaviour/preference elicitation and analysis
Big data analytics related to product tracking for efficiency improvements
How BDA can support SMEs to be competitive in local and/or global markets?
Big data analytics for product lifecycle management and innovation

Submission

For author guidelines, please refer to www.ifac-control.org. Manuscripts should be submitted electronically using Symposium Manuscript Management System (CMMS). All papers must be prepared in a two-column format in

accordance with the IFAC manuscript style. Please use the official IFAC instructions and template to prepare your contribution as full-length draft paper and submit it online by December 15, 2018. Submission details are available on the symposium website. All submissions must be written in English. All papers that conform to submission guidelines will be peer-reviewed by IPC members. The corresponding author submits the paper online (pdf format) as an invited session paper. Submission as an invited paper requires the invited session code ****. Several international journals are associated with the MIM 2019 for publication of special issues.

Important dates:

December 15, 2018 Deadline for the full paper submission

February 20, 2019 Notification of acceptance/rejection

March 15, 2019 Deadline for the final submission