CALL FOR PAPERS

FLEXIBLE SERVICES AND MANUFACTURING

Special Issue on

Modeling and Data Analytics in Manufacturing and Supply Chain Operations

Extended Submission Deadline: January 31, 2020

In the past decades, mathematical modeling and optimization have played significant roles in solving hard operational and tactical problems emerging from manufacturing and supply chain. Successful examples include production planning, supply chain network design, intermodal transportation, just to name a few. However, many problems remain challenging because of their large problem scales, and/or stochasticity in nature. On the other hand, the rapid rise of data analytics provides exciting opportunities for the Operations Research and Control communities to re-examine these hard optimization problems, as well as newly emerging problems in manufacturing and supply chain.

This special issue invites researchers to contribute state-of-the-art research in the general area of using data analytics to improve the efficiency of optimization algorithms. The data analytics are broadly defined here to include quantitative methods in machine learning, data mining, predictive analytics, and simulation-based analytics. We also welcome newly emerging areas in operations. Both theoretical and applied research are welcome, as long as the improved efficiency is rigorously proved or computationally shown. Selected papers from the track with the same title at the 9th IFAC Conference on Manufacturing Modeling, Management, and Control (MIM 2019) (https://blog.hwr-berlin.de/mim2019/) are welcome to submit the extended version of the papers presented at the conference, provided that substantial new results are added.

The special issue includes, but not limited to, the following topics.

- Design of manufacturing system and supply chain
- Production planning and control
- Supply chain networks (e.g., using real-time data)
- Manufacturing and supply chain predictive tools
- Inventory control and management (e.g., using sensing data)
- Dynamic resource allocation
- Improving forecasting models using big data
- Machine learning techniques for process control
- Supply chain risk control
- Optimizing systems based on predictive information (e.g., predictive maintenance)

- Newly emerging areas in operations, such as service operations
- Combining optimization and machine learning algorithms
- Simulation-based modeling and optimization for stochastic systems

Submission Guideline

Papers must clearly use analytics to address problems in manufacturing and supply chain operations. Please submit your paper online via

http://www.editorialmanager.com/flex/

and use "Modeling and Data Analytics in Manufacturing and Supply Chain Operations" as article type. The target print publication date is Winter 2020.

The submitted papers must not have been previously published or be currently under consideration for publication elsewhere. All papers will be reviewed according to the standards of the FSM journal. We will adopt a rapid and fair review process in order to meet the target publication date. Please feel free to contact the editors with any questions.

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