**Big Data Analytics in Operations Research for Intelligent Systems**

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**Abstract**

As one of the core technologies to improve decision-making automation and intelligence, operations research (OR) has been applied extensively in such diverse areas as manufacturing, transportation, construction, telecommunications, financial planning, health care, the military, and public services. However, with the deep integration of industrialization and informatization, most of these systems present complex, dynamic and large-scale characteristics. Thus, traditional OR models and algorithms are now facing some challenges such as the “Curse of Dimensionality”, high computational complexity and so on.

With the advent of “big data era” and current rapid development of machine intelligence including deep learning, swarm intelligence, cognitive science, etc., the use of big data analytics brings dawn to nowadays OR for the development of intelligent systems. In today’s data-driven world, big data analytics could effectively interpret mass data to help model those complex systems. And using machine learning algorithms could also help to effectively find the optimal or suboptimal solution of OR Models. The purpose of big data analytics in OR is to create knowledge from that data and to leverage that knowledge to develop intelligent systems and improve their performance, effectiveness and quality.

This special session is aiming to disseminate recent research developments and significant industrial applications about the big data analytics in operations research for intelligent systems.