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## Data-Driven Intelligent Modeling and Optimization Algorithms for Industrial Processes

**Edited by: Li Jin , Sheng Du , Zixin Huang and Xiongbo Wan**

The aim of this Special Issue is to explore the multifaceted aspects of data-driven intelligent modeling and optimization algorithms for industrial processes. The main goals are to harness the power of data to improve control, decision making, and parameter optimization and to drive industrial systems to unprecedented levels of efficiency, reliability, and adaptability. Research areas within this scope include data-driven modeling, intelligent data representation, integrated/hybrid modeling, machine learning and optimization, advanced machine learning algorithms, hybrid models with optimization algorithms, adaptive learning algorithms, intelligent process monitoring, real-time data monitoring and analysis, soft sensing technologies, operation mode perception and recognition, decision support systems, intelligent decision support systems, the integration of optimization algorithms, and human-machine collaboration for improved decision making. These powerful intelligent algorithms use data for control, decision making, and parameter optimization, driving industrial systems to unprecedented levels of efficiency, reliability, and adaptability. By sharing their practice and insights in the development and application of these new technologies, the authors of the articles in this Reprint have demonstrated the value of data-driven intelligent modeling and optimization algorithms for industrial processes, providing readers with valuable ideological inspiration in the field.

