Special Issue

Multi-objective Optimization in Manufacturing: Planning, Scheduling and Reliability Perspectives

Message from the Guest Editors

In manufacturing, optimization problems in production planning, scheduling, and reliability involve conflicting objectives. Multi-objective optimization methods are vital for improving efficiency and quality while reducing costs. Complex constraints and high-dimension decision variables make the Pareto front challenging for traditional multi-objective evolutionary algorithms. Recently, machine learning methods have been integrated into evolutionary multi-objective algorithms to extract knowledge from search data, guiding search direction or speeding up convergence. This has shown promising results in designing multi-objective optimization algorithms for manufacturing. We invite articles on learning-based multi-objective optimization algorithms for practical problems, including:

- Multi-objective production planning
- Multi-objective production scheduling
- Multi-objective operation optimization
- Multi-objective maintenance optimization
- Learning-based multi-objective algorithms
- Applications of multi-objective algorithms in manufacturing

Submit your work to advance multi-objective optimization in manufacturing through innovative approaches.

Guest Editors

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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