Special Issue

Optimization in Engineering: Models and Algorithms

Message from the Guest Editors

Optimization plays a crucial role in the design, analysis, and operation of modern engineering systems. The development of mathematical models and efficient algorithms enables engineers to make informed decisions, reduce costs, improve performance, and ensure sustainability. This Special Issue seeks to highlight the latest developments in modelling approaches, algorithmic strategies, and practical applications of optimization in engineering.

We are particularly interested in contributions that address, but are not limited to, the following topics:

- Mathematical programming and numerical optimization methods;
- Heuristic and metaheuristic algorithms (e.g., genetic algorithms, particle swarm, ant colony);
- Multi-objective and multi-disciplinary optimization;
- Surrogate models and reduced-order modelling for optimization;
- Topology and shape optimization in structural and mechanical design;
- Optimization under uncertainty and robust design;
- Data-driven optimization and machine learning applications in engineering;
- Real-time optimization and control of engineering systems;
- Applications of optimization in energy systems, manufacturing, transportation, and robotics.

Guest Editors

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About the Journal

Message from the Editorial Board

We encourage you to contribute a research or comprehensive review article for consideration and publication in *Modelling* (ISSN 2673-3951), an international open access journal, which is published quarterly online by MDPI. The editorial board and staff of *Modelling* are dedicated to providing an advanced forum for studies related to the development and applications of modelling and simulation techniques. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications.

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