



Ensemble Evolutionary Algorithms and Machine Learning for Solving Complex Optimization and Scheduling Problems

Guest Editors:

Dr. Kaizhou Gao

Department of Engineering
Science, Macau Institute of
Systems Engineering, Macau
University of Science and
Technology, Macau, China

Prof. Dr. Naiqi Wu

Macau Institute of Systems
Engineering, Macau University of
Science and Technology, Macau,
China

Prof. Dr. Yaping Fu

Department of Management
Science and Engineering,
Qingdao University, Qingdao,
China

Deadline for manuscript
submissions:

closed (31 July 2025)



Message from the Guest Editors

This Special Issue deals with modeling, optimizing and scheduling challenges of engineering problems by integrating swarm/evolutionary algorithms and machine learning, specifically aiming at their most recent developments and applications for various complex scheduling and optimization problems. Potential topics include (but are not limited to) the following:

- Multi-objective, multi-task, and multi-constraint optimization
- Large-scale global optimization
- Ensemble swarm and evolutionary algorithms with machine learning algorithms
- Learning-based meta-heuristics

Swarm and evolutionary algorithms for:

- Production scheduling problems
- Energy-efficiency scheduling problems
- Traffic signal control, optimization, and scheduling
- Vehicle routing problems
- Task assignment and routing planning
- Project scheduling
- Grid/cloud scheduling
- Scheduling and optimization in smart city, smart building and home, and sustainability systems
- New real-world and innovative applications of ensemble with machine learning algorithms



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and
Informatics, De Montfort
University, The Gateway,
Leicester LE1 9BH, UK

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

Journal Rank: JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Contact Us

Mathematics Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/mathematics
mathematics@mdpi.com
[X@MathematicsMDPI](https://twitter.com/MathematicsMDPI)