



## Advances in Artificial Intelligence and Metaheuristics Methods for Planning and Scheduling

Guest Editors:

**Dr. Ana M. Madureira**

School of Engineering,  
Polytechnic of Porto (ISEP/IPP),  
4200-072 Porto, Portugal

**Dr. Joao Ferreira**

Department of Information  
Sciences, Technologies and  
Architecture, University Institute  
of Lisbon, 1649-026 Lisbon,  
Portugal

**Prof. Dr. André Santos**

School of Engineering,  
Polytechnic of Porto (ISEP/IPP),  
4200-072 Porto, Portugal

Deadline for manuscript  
submissions:

**30 August 2024**

### Message from the Guest Editors

This Special Issue will focus on recent theoretical and computational studies of the application of metaheuristics and nature-inspired optimization techniques to planning and scheduling in real-world problems. Topics include but are not limited to:

1. Intelligent optimization for production planning and scheduling.
2. Evolutionary computation and metaheuristics: theory and foundations.
3. Hybrid optimization techniques (swarm intelligence, evolutionary algorithms).
4. Computation using neural networks and fuzzy systems.
5. Dynamic production scheduling.
6. Metaheuristic parametrization and self-parametrization techniques.
7. Machine learning for planning and scheduling optimization.
8. AI for planning and scheduling.
9. Multi-criteria approach in planning and scheduling.
10. Applications in industry, transportation, services, and others.
11. Use case applications in Industry 4.0, transportation, health systems, and telecommunication (5G).

Advances in artificial intelligence and metaheuristics methods and their hybrids for planning and scheduling are particularly welcome in this Special Issue.

**Special Issue**





## 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, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

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