Special Issue

Machine Learning and Artificial Intelligence in Modelling

Message from the Guest Editors

This Special Issue aims to gather original research articles and reviews focused on the application of modern ML and AI methods in the context of engineering modelling and simulation. We welcome contributions on hybrid approaches that integrate domain knowledge with learning algorithms, interpretable models, and physics-informed machine learning techniques. In addition, the Special Issue is open to a broad spectrum of topics, including but not limited to:

- Automated modelling and AutoML
- Modelling with limited data and transfer learning
- Explainable and trustworthy AI models
- Probabilistic and Bayesian modelling
- Spatio-temporal AI and time-dependent models
- Multimodal modelling (e.g., combining text, images, sensors)
- Neuro-symbolic and symbolic modelling approaches
- Meta-modelling and higher-order model composition
- AI-accelerated simulation and surrogate modelling
- Embedded models and edge AI for real-time systems

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Deadline for manuscript submissions

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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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Author Benefits

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.5 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).

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JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q2 (Mathematics (miscellaneous))