

# Special Issue

## Data-Driven Artificial Intelligence, Optimization and Applications

### Message from the Guest Editor

As a cornerstone of modern scientific and industrial innovation, data-driven artificial intelligence has fostered the evolution of large-scale models. The scope of this Special Issue encompasses a wide range of topics, including, but not limited to, the following:

- Machine learning, statistical learning and optimization;
- Theoretical foundations of deep learning;
- Advanced neural architecture: theory, modeling, and applications;
- Generative artificial intelligence and large-scale language models;
- Explainable artificial intelligence models;
- Transfer learning and continual learning algorithms;
- Few-shot learning and out-of-distribution generalization;
- Probabilistic models and Bayesian reasoning;
- Compression, distillation, and inference acceleration of large-scale models;
- Reinforcement learning and sequential decision-making;
- Completion, enhancement, and restoration of degraded data;
- Representation, fusion, and processing of high-dimensional multimodal data;
- Intelligent perception systems: object detection, classification, segmentation, and tracking;
- Agents, embodied intelligence, and intelligent robotics;
- Advanced machine learning applications.

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### Guest Editor

Dr. Yi Xu

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### Deadline for manuscript submissions

31 July 2026



## Mathematics

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## About the Journal

### 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.

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### Editor-in-Chief

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