



Trends and Prospects in Mathematical and Scientific Machine Learning

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Message from the Guest Editor

Dear Colleagues,

This Special Issue invites research contributions in the realm of mathematical and scientific machine learning. We specifically encourage investigations focused on the development and mathematical analysis of machine learning or data-driven models aimed at addressing critical scientific computing challenges.

Contributions from diverse fields such as physics, chemistry, biology, and engineering are welcome, with a particular interest in multiscale applications and those involving heterogeneous properties. We are keen to present research that introduces algorithms and analyzes universal approximation and convergence. However, contributions involving pure analysis of network convergence or pure algorithm or network designs are also highly encouraged.

Keywords

- neural operators
- random feature neural network
- physics-informed learning
- data-driven model reduction
- multioperator learning
- neural network convergence analysis
- universal approximation of neural network
- large language model and scientific machine learning





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Message from the Editor-in-Chief

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