



*mathematics*



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## New Trends in Numerics and Dynamics of Artificial Neural Networks: Theory and Applications

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Deadline for manuscript  
submissions:

**closed (31 December 2023)**

### Message from the Guest Editors

In this Special Issue, we aim at fostering the synergy between these two fields, by encouraging the analysis and design of numerical methods for, in, and from machine learning algorithms. We welcome contributions that highlight satisfactory learning results as soundly based on numerical foundations, as well as ground-breaking numerical methods that provide the basis for efficient practical algorithms, at least at the proof-of-concept stage.

The scope of the issue is deliberately broad, including but not limited to numerical techniques from linear algebra, dynamical systems, kernel methods, optimization, spectral methods, and stochastic formulations, as well as algorithms within neural networks, support vector machines, recurrent networks, and clustering methods.



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# Special Issue



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## 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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