

Special Issue

Data-Driven Approaches for Big Data Analysis of Intelligent Systems

Message from the Guest Editor

The rapid evolution of intelligent systems has generated vast, heterogeneous datasets, demanding advanced mathematical frameworks to unlock actionable insights. This Special Issue, "Data-Driven Approaches for Big Data Analysis of Intelligent Systems," focuses on rigorous computational methodologies, including statistical learning models, optimization algorithms, and stochastic processes, to address scalability, efficiency, and robustness in intelligent systems. Key topics encompass machine learning architectures (e.g., deep neural networks and reinforcement learning), distributed computing paradigms (e.g., MapReduce and Spark), and mathematical techniques for high-dimensional data (e.g., tensor decomposition and sparse linear algebra). Computational analysis of time-series forecasting, nonlinear dynamics, and graph-based algorithms for network-structured data will be explored. Submissions should emphasize mathematical innovations, such as differential equations for predictive modeling, convex/non-convex optimization for parameter tuning, or probabilistic graphical models for uncertainty quantification.

Guest Editor

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Deadline for manuscript submissions

31 January 2026



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



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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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