

Special Issue

Recent Advances in Graph and Hypergraph: Theories, Models and Applications

Message from the Guest Editor

Graph and hypergraph theory has become an essential component of artificial intelligence and deep learning, extending classical graph concepts to represent higher-order and complex relationships. Recent advances in spectral methods, algebraic and topological approaches, and dynamic graph analysis have deepened theoretical understanding, while the rise of graph neural networks, hypergraph neural networks, and adaptive structure learning has provided powerful data-driven modelling tools. These advances have enabled broad applications in computer vision, natural language processing, spatiotemporal data mining, and recommendation systems. The purpose of this Special Issue is to collect original contributions on both the theoretical foundations and practical applications of graph and hypergraph theory, with a broad scope that encourages diverse perspectives and interdisciplinary research.

Guest Editor

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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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