Special Issue

Advances in Combinatorics, Discrete Mathematics and Graph Theory

Message from the Guest Editors

Combinatorics and graph theory are areas of mathematics that deal with the study of discrete objects and their combinatorial structures. In recent decades, there have been significant advances in these areas, driven by a combination of new theoretical approaches, advanced computational tools, and applications in various fields. Regarding graph theory, significant progress has been made in areas such as random araph theory, complex network theory, araph coloring theory, graph flow theory, and structural graph theory. For example, in random graph theory, profound results have been obtained on the asymptotic properties of random graphs, leading to a better understanding of random phenomena in complex real-world networks, such as social networks, communication networks, and biological networks. In addition to these theoretical advances, combinatorics and graph theory have also experienced a surge in their application in various interdisciplinary areas, such as computer science, computational biology, information theory, game theory, and data science.

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Deadline for manuscript submissions

31 July 2025



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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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