Special Issue

Analysis, Prediction and Control of Epidemic Spreading through Networks

Message from the Guest Editors

The pandemic of severe acute respiratory syndrome coronavirus 2 has led to many lives lost and unprecedented restrictions on daily lives around the world. Interdisciplinary communities of scientists have been making enormous efforts to develop epidemic models to control public health crises. Contact networks representing individuals as nodes and social interactions as links are useful tools for studying epidemic spread. Despite recent advances, however, the pandemic has revealed that challenges exist regarding the accuracy of the current predictive tools and their practical role in epidemic control. The goal of this Special Issue is thus to seek original works and review papers focusing on epidemic spread. We hope for a broad range of topics to be covered, across theory, methodology, and application of empirical data to epidemic prediction and control. Topics of interest include but are not limited to the following areas:
Network epidemic models;
Epidemic prediction and control;
Interplay between human behavior factors and epidemic dynamics;
Artificial intelligence and machine learning approaches;
Complex systems;
Nonlinear dynamics;
Network science;
Evolutionary games.

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Deadline for manuscript submissions

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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.

Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).

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