Special Issue

Advanced Filtering and Control Methods for Stochastic Systems

Message from the Guest Editors

This Special Issue on "Advanced Filtering and Control Methods for Stochastic Systems" calls for research that addresses emerging challenges in modeling, filtering, robust control, optimal estimation, fault detection, learning-based approaches, and real-time implementation for systems affected by stochastic disturbances. Topics of interest include, but are not limited to, the following:

- Kalman filtering and nonlinear filtering techniques;
- H-infinity and robust filtering under stochastic uncertainties;
- Data-driven filtering and estimation using machine learning;
- Distributed filtering and control in networked stochastic systems;
- Stochastic model predictive control and optimal control methods;
- Fault detection, isolation, and diagnosis for uncertain systems;
- Filtering and control of Markovian jump systems and time-delay systems;
- Applications in robotics, autonomous systems, aerospace, energy systems, financial engineering, and beyond.

We encourage submissions that combine rigorous mathematical analysis with practical relevance or demonstrate real-world implementations and simulations. Both theoretical and application-oriented contributions are welcome.

Guest Editors

Prof. Dr. Fan Wang

School of Automation, Nanjing University of Information Science and Technology, Nanjing 210044, China

Dr. Qiang Li

School of Information and Artificial Intelligence, Anhui Agricultural University, Hefei 230036, China

Deadline for manuscript submissions

30 January 2026

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.0

mdpi.com/si/239695

Mathematics
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
mathematics@mdpi.com

mdpi.com/journal/mathematics

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.0

mdpi.com/journal/mathematics

MDPI

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

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University, The Gateway, Leicester LE1 9BH, UK

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

Journal Rank:

JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.3 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2024).