

Special Issue

Modeling and Dynamic Analysis of Fractional-Order Systems

Message from the Guest Editors

The present Special Issue is dedicated to new research on the modeling and dynamic analysis of fractional-order systems. Fractional-order models have garnered extensive applications across varied scientific and engineering disciplines, including rheology, quantum mechanics, control theory and robotics, electrochemistry, electromagnetic fields, bio-medicine, transportation, and finance. Dynamic analysis is a pivotal method for investigating the dynamic behaviors of systems. In the context of fractional-order models, dynamic analysis encompasses stability analysis, response characteristic analysis, and studies of bifurcation and chaotic behavior. **This Special Issue primarily covers the following areas:**

- Fractional-order system modeling;
- Stability analysis of fractional-order systems;
- Reduction methods for fractional-order systems;
- Research on bifurcation and chaos in fractional-order systems;
- Numerical methods for fractional-order systems;
- Analysis of fractional-order neural networks;
- Analysis of discrete-time fractional-order systems;
- Other practical applications of fractional-order systems.

Guest Editors

Dr. Li Ma

School of Mathematics, Hefei University of Technology, Hefei 230601, China

Prof. Dr. Fanhai Zeng

School of Mathematics, Shandong University, Jinan 250100, China

Deadline for manuscript submissions

31 December 2025



Fractal and Fractional

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 6.0



mdpi.com/si/227691

Fractal and Fractional
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
fractalfract@mdpi.com

[mdpi.com/journal/
fractalfract](https://mdpi.com/journal/fractalfract)





Fractal and Fractional

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 6.0



[mdpi.com/journal/
fractalfract](https://mdpi.com/journal/fractalfract)



About the Journal

Message from the Editor-in-Chief

Fractal and Fractional (*Fractal Fract.*) is a scholarly online journal which provides a forum for discussion on new original models and methods in fractals and fractional calculus both from theory and applications. It is a peer-reviewed, open access journal that publishes high quality original research articles, review papers and short communications.

Editor-in-Chief

Prof. Dr. Carlo Cattani

Engineering School (DEIM), University of Tuscia, Largo dell'Università,
01100 Viterbo, Italy

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q1 (Mathematics, Interdisciplinary Applications) /
CiteScore - Q1 (Analysis)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).