

## Special Issue

# Application of Fractional-Calculus in Physical Systems

### Message from the Guest Editors

Dear Colleagues: It is well known that fractional calculus has numerous applications in engineering, science, and technology. The dynamics of challenging physical systems are closely connected to fractional calculus. Fractional calculus and its application for physical systems is a topic of extensive theoretical and analytical research around the world. Recent contributions to this essentially interdisciplinary field from theoretical, analytical, numerical, and computational perspectives are the focus of this Special Issue. This Special Issue collects original research work on recent developments in fractional calculus including:

- Fractional calculus in physical systems;
- Fractional differential equations;
- Modeling and simulation;
- Fractional dynamical system;
- Fractional control theory;
- Numerical methods;
- Fractional calculus and chaos;
- Non-locality and memory effects;
- Non-locality in physical systems;
- Modeling biological phenomena;
- Non-locality in epidemic models;
- Theoretical and computational analysis.

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### Guest Editors

Prof. Dr. Salah Mahmoud Boulaaras

Dr. Viet-Thanh Pham

Dr. Rashid Jan

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### Deadline for manuscript submissions

closed (10 April 2023)



## Fractal and Fractional

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## 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.

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### Editor-in-Chief

Prof. Dr. Carlo Cattani

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### 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).