

Special Issue

Variational Problems and Fractional Differential Equations

Message from the Guest Editors

Fractional differential equations are being frequently used in physics, chemistry, biology, probability and finance modelling problems, such as, the ultrarelativistic limits of quantum mechanics, flame propagation, water waves, chemical reactions of liquids and population dynamics, etc. The Calculus of Variations provides a range of tools for the study of fractional differential equations for both mathematical theory and practical applications. The aim of this Special Issue is to present some of the recent developments on the qualitative properties of solutions for variational problems and fractional differential equations. The potential topics concerned with qualitative properties of solutions include, but are not limited to, a priori estimate, existence, non-existence, uniqueness, regularity, symmetry, stability and asymptotic behavior.

- Variational problems;
- Fractional differential equations;
- Priori estimate;
- Existence, non-existence, and uniqueness;
- Regularity and symmetry;
- Stability;
- Asymptotic behavior.

Guest Editors

Prof. Dr. Zhisu Liu

School of Mathematics and Physics, China University of Geosciences, Wuhan 430074, China

Dr. Yu Su

School of Mathematics and Big Data, Anhui University of Science and Technology, Huainan 232001, China

Deadline for manuscript submissions

30 September 2025



Fractal and Fractional

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 6.0



mdpi.com/si/172829

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://fractalfract.com)





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).