

Special Issue

Applications of Fractional Calculus in Modern Mathematical Modeling

Message from the Guest Editors

Fractional calculus extends the notion of derivatives and integrals of arbitrary order and gives rise to a variety of complex models and analyzes. This is due to its ability to capture the effects of memory and many other effects that other forms of calculus simply cannot capture.

Therefore, this Special Issue will aggregate the latest research that focuses on the most recent theoretical advances, computing methods, and wide applications of fractional calculus in the modern mathematical modeling of various fields such as physics, biology, engineering, and finance. It will be centered around the theory of fractional calculus, new analytical and numerical methods for solving fractional differential equations, fractional partial differential equations and their applications, the biological modeling of fractional calculus, control systems and engineering, the application of fractional differential calculus to financial and economic problems, the mathematics of fractional calculus methods, non-local operators in mathematical modeling, the epidemiology and treatment of infectious diseases, and the use of fractional operators and models of time-fractional derivatives.

Guest Editors

Prof. Dr. Feliz Manuel Minhós

Dr. Ali Raza

Dr. Muhammad Mohsin

Deadline for manuscript submissions

31 December 2025



Fractal and Fractional

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 4.6



mdpi.com/si/220884

Fractal and Fractional
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 3.6
CiteScore 4.6



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



About the Journal

Message from the Editor-in-Chief

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 23.7 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2024).