

## Special Issue

# Numerical Solutions of Caputo-Type Fractional Differential Equations and Derivatives

### Message from the Guest Editors

This Special Issue focuses on numerical solutions to Caputo-type fractional differential equations and derivatives. We will accept papers that provide contributions that delve into developing, analyzing, and applying numerical methods to solve these equations. In the recent past, fractional calculus has witnessed remarkable growth and diversification, yielding an array of definitions and mathematical formulations of the fractional derivative. The practical relevance of fractional calculus has been increasingly evident as it finds applications in a variety of real-life scenarios modeled using fractional differential equations. Crucially, efficient numerical methods have become key to unveiling solutions to these fractional differential equations. As the field of fractional calculus evolves, there is a pressing need for the development of novel numerical methodologies and the refinement of existing techniques.

---

### Guest Editors

Dr. Phumlani Dlamini

Department of Mathematics and Applied Mathematics, University of Johannesburg, Johannesburg 2006, South Africa

Dr. Simphiwe Simelane

Department of Mathematics and Applied Mathematics, University of Johannesburg, Johannesburg 2006, South Africa

---

### 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/186817](https://mdpi.com/si/186817)

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

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