

## Special Issue

# Analysis and Numerical Computations of Nonlinear Fractional and Classical Differential Equations

### Message from the Guest Editors

Nonlinear and linear differential equations are used to deal with the real-world problems in natural sciences. There are still many unsolved problems in the dynamical systems theory of nonlinear PDEs of integer and fractional orders. The Special Issue invites submissions of original research articles, reviews, and perspectives on the latest developments in the analysis and numerical computations of nonlinear fractional and classical differential equations, including but are not limited to, the following: analysis, similarity solution for nonlinear PDEs;

analysis of general fractional PDEs;

analysis of fractional mathematical models;

integral transforms for nonlinear problems;

analysis, special functions, numerical methods, traveling wave solutions;

series expansion method, finite element method, finite difference method, traveling wave solutions, group analysis, reduced differential transform method, differential transform method, residual power series method, homotopy analysis method, decomposition method, homotopy perturbation method, asymptotic perturbation solution, variational iteration method and coupling methods for fractional PDEs.

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### Guest Editors

Prof. Dr. Xiao-Jun Yang

Prof. Dr. Wenxue Zhou

Dr. Sunil Dutt Purohit

Dr. Ali Turab

Dr. Ahmed Refaie Ali

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### Deadline for manuscript submissions

31 May 2026



## Fractal and Fractional

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

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

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### Author Benefits

#### High Visibility:

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#### Journal Rank:

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CiteScore - Q1 (Analysis)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).