Special Issue

Recent Advances in Fractional Differential Equations and Their Applications, 3rd Edition

Message from the Guest Editors

Fractional differential equations describe the dynamic systems of complex and nonlocal systems with memory. They can be developed from stochastic dynamical systems driven by non-Gaussian Levy noise, which have long tails and bursting sample routes. They feature in a wide variety of scientific and engineering sectors, including physics, biology, economics, and chemical engineering. First volume publish **17** papers and second volume publish **13** papers. Potential topics for this Special Issue include (but are not limited to) the following:

- New numerical methods for time-fractional differential equations;
- New numerical methods for space-fractional (nonlocal) differential equations;
- The relationship between stochastic differential equations and nonlocal differential equations;
- Regularity estimates and homogenization for nonlocal differential equations;
- Application of stochastic dynamics and fractional models;
- **Machine learning methods for FDEs**;
- Inverse problems in nonlocal PDE / SDE;
- Effective dynamics and reduced-order models.

Guest Editors

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Deadline for manuscript submissions

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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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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).