

## Special Issue

# Recent Advances in Fractional-Order Equations and Their Applications in Modern Energy Systems

### Message from the Guest Editors

The purpose of this Special Issue is to continue to provide a platform to share the insights, findings, and experiences in utilizing fractional-order equations to address the challenges and opportunities in modern energy systems. Topics that are invited for submission may include, but are not limited to, the following: Fractional-order control theory in modern energy systems;

Theoretical frameworks and foundations of fractional-order equations in modern energy systems;

Fractional-order modeling and analysis of modern energy systems;

Fractional-order control systems and implementation of modern energy systems;

Applications of fractional-order equations in renewable energy sources;

Fractional-order control and optimization of energy systems;

Fractional-order dynamics in energy storage and energy conversion systems;

Case studies and implementations of fractional-order models in energy systems;

Energy storage systems, supercapacitors and batteries, and hybrid energy storage.

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### Guest Editors

Dr. Zhe Gao

Dr. Xiaoting Gao

Dr. Enchang Cui

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### Deadline for manuscript submissions

15 July 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:

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 19.3 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).