



## Fractional Evolutionary Equations and Modeling of Dissipative Processes

Guest Editors:

**Prof. Dr. Arsen V. Pskhu**

Institute of Applied Mathematics and Automation, Kabardino-Balkarian Scientific Center of Russian Academy of Sciences, 89-A Shortanov Street, 360000 Nalchik, Russia

**Dr. Roman Parovik**

Physical Processes Modeling Laboratory, Institute of Cosmophysical Research and Radio Wave Propagation, Far Eastern Branch of the Russian Academy of Sciences, Kamchatskiy Kray, 684034 Paratunka, Russia

Deadline for manuscript submissions:  
**closed (1 March 2023)**

### Message from the Guest Editors

Dear Colleagues,

The Special Issue is devoted to the application of fractional-order evolutionary differential equations to the description of dissipative systems and processes. Generally, a dissipative system is understood as any open (non-conservative) system located far from the state of thermodynamic equilibrium. Dissipative processes include various irreversible thermodynamic processes, mass, electrical and heat transfer, mechanical motion of damped systems, chemical reactions, radiation and absorption of electromagnetic waves, etc. Particular attention will be paid to the study of initial and boundary value problems for partial differential equations of fractional order, which are the basis for mathematical models of dissipative systems and processes.

Prof. Dr. Arsen V. Pskhu  
Prof. Dr. Roman Parovik  
*Guest Editors*





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Carlo Cattani**  
Engineering School (DEIM),  
University of Tuscia, Largo  
dell'Università, 01100 Viterbo,  
Italy

## 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.

## Author Benefits

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [Inspec](#), and [other databases](#).

**Journal Rank:** JCR - Q1 (Mathematics, Interdisciplinary Applications) / CiteScore - Q1 (Analysis)

## Contact Us

---

*Fractal and Fractional* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/fractalfract](http://mdpi.com/journal/fractalfract)  
[fractalfract@mdpi.com](mailto:fractalfract@mdpi.com)  
[X@Fractal\\_Fract](https://twitter.com/Fractal_Fract)