

## Special Issue

# Fractional-Order Circuits and Systems

### Message from the Guest Editor

The field of fractional-order circuits and systems refers to a class of electronics that incorporate concepts from fractional calculus into their modeling and design. These concepts, focused on non-integer order differentiation and integration mathematical operations, are being explored across many fields of science and engineering. The focus of this Special Issue is to continue to advance research on topics relating to the theory, design, implementation, and application of fractional-order circuits and systems. Topics that are invited for submission include (but are not limited to):

- Fractional-order circuit theory;
- Fractional-order filter and oscillator designs and realizations;
- Fractional-order control systems and implementation;
- Digital and analog approximations for realization of fractional-order systems;
- Active and passive designs of fractional-order elements;
- Applications of fractional-order circuit models for biology and biomedicine;
- Applications of fractional-order circuit models for energy storage elements.

---

### Guest Editor

Dr. Todd Freeborn

Electrical and Computer Engineering, The University of Alabama, 3016  
SERC, Tuscaloosa, AL 35487, USA

---

### Deadline for manuscript submissions

closed (31 January 2021)



## Fractal and Fractional

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.6  
CiteScore 4.6



[mdpi.com/si/42506](https://mdpi.com/si/42506)

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

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





# Fractal and Fractional

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.6  
CiteScore 4.6



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



## About the Journal

### Message from the Editor-in-Chief

---

#### 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 23.7 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2024).