symmetry

an Open Access Journal by MDPI

IMPACT FACTOR 2.7

CITESCORE 4.9

Bifurcation and Chaos in Fractional-Order Systems

Guest Editors:

Prof. Dr. Marius-F. Danca
Romanian Instituite of Science and Technology, 400487 Cluj-Napoca, Romania

Prof. Dr. Guanrong (Ron) Chen
Department of Electrical Engineering, City University of Hong Kong, Hong Kong, China

Deadline for manuscript submissions:
closed (30 November 2020)

Message from the Guest Editors

The concept of fractional differentiation first emerged in 1965 in a historical correspondence between the Marquise de L'Hospital and mathematician Leibnitz. In the sequel, mathematicians such as Euler, Laplace, Abel, Liouville, and Riemann further developed essential technical details. It was realized recently that many scientific phenomena with complex dynamics cannot be well modeled by differential equations using integer-order derivatives. As a result, there has been an increasing interest to merge the mathematical fundamentals of fractional calculus into scientific and engineering applications. Till now, many theoretical and technical problems remain to be further explored, including particularly fractional-order chaotic systems. On the other hand, finding hidden attractors in continuous-time and discrete-time fractional-order chaotic systems represents a new trend of research. Of particular interest are those systems with symmetry. Therefore, this research direction of bifurcation and chaos in fractional-order dynamical systems opens up a corpus of opportunities with great promises in such scientific fields as complex dynamics, systems and networks, to name a few.

mdpi.com/si/39048

Special Issue

symmetry

IMPACT FACTOR 2.7

CITESCORE 4.9

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Sergei D. Odintsov
1. Institució Catalana de Recerca i Estudis Avançats (ICREA), Passeig Luis Companys, 23, 08010 Barcelona, Spain
2. Institute of Space Sciences (ICE-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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), CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.
Journal Rank: JCR - Q2 (*Multidisciplinary Sciences*) / CiteScore - Q1 (*General Mathematics*); Q1 (*Physics and Astronomy*); Q1 (*Computer Science*)

Contact Us

Symmetry Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/symmetry
symmetry@mdpi.com
X @Symmetry_MDPI