Special Issue

Numerical and Exact Methods for Nonlinear Differential Equations and Applications in Physics

Message from the Guest Editor

Nonlinear differential equations are generally used to create mathematical models of real-life problems and to obtain their solutions. Therefore, many researchers have achieved important results by developing new methods in terms of finding analytical, numerical and exact solutions to nonlinear differential equations. In these studies, the nonlinear differential equations generally discussed include integer and fractional derivatives. The aim of this Special Issue is to construct and apply analytical, numerical and exact methods for approaching nonlinear differential equations which have applications in the field of physics. In addition, this Special Issue will focus particularly on examining the physical behavior of the obtained results and analyzing them in detail. Researchers are encouraged to introduce and discuss their new original papers on the solutions to nonlinear differential equations in engineering and applied science.

Guest Editor

Dr. Yusuf Gürefe Department of Mathematics, Faculty of Science, Mersin University, 33110 Mersin, Turkey

Deadline for manuscript submissions

closed (25 July 2024)



an Open Access Journal by MDPI

Impact Factor 3.6 CiteScore 4.6



mdpi.com/si/150599

Fractal and Fractional MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 fractalfract@mdpi.com

mdpi.com/journal/ fractalfract





Fractal and Fractional

an Open Access Journal by MDPI

Impact Factor 3.6 CiteScore 4.6





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 20.9 days after submission; acceptance to publication is undertaken in 3.6 days (median values for papers published in this journal in the first half of 2024).

