

Special Issue

Symmetry and Polynomial Approximations of Differential Equations

Message from the Guest Editor

Differential equations are used in the modeling of many model problems in science and engineering. Finding the analytical solution for many of these equations is difficult. Therefore, approximation techniques are needed to solve them. It is also of great importance that the methods presented be effective and practical. On the other hand, polynomials with symmetry properties provide convenience as well as the ability to be used in various fields of science and engineering. Further, special polynomials have an important place in the investigation of solutions of differential equations—for example, Chebyshev polynomial, Taylor polynomials, Bernstein polynomials, Laguerre polynomials, Legendre polynomials, Euler polynomials, Lucas polynomials, Bell polynomials, Pell-Lucas polynomials, Muntz–Legendre polynomials, and exponential polynomials. Moreover, symmetric and orthogonal polynomials can also provide convenience in polynomial approximations of differential equations. Thus, in this Special Issue, we aim at the development and analysis of new polynomial approximations for the solutions of differential equations.

Guest Editor

Dr. Şuayip Yüzbaşı

Department of Mathematics, Faculty of Science, Akdeniz University,
Antalya 07058, Turkey

Deadline for manuscript submissions

closed (15 May 2022)



Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.3



mdpi.com/si/97681

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

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





Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.3



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



About the Journal

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.

Editor-in-Chief

Prof. Dr. Sergei Odintsov

1. ICREA, 08010 Barcelona, Spain

2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)