

Special Issue

Polynomial Sequences and Their Applications, 2nd Edition

Message from the Guest Editors

Polynomials are incredibly useful mathematical tools, as they are simply defined and can be calculated quickly on computer systems. They can be differentiated and integrated easily and can be pieced together to form spline curves. Therefore, sequences of polynomials perform an important role in several branches of science: mathematics, physics, engineering, etc. Potential topics of this Special Issue include but are not limited to the following:

- Modern umbral calculus (binomial, Appell and Sheffer polynomial sequences)
- Orthogonal polynomials, matrix orthogonal polynomials, multiple orthogonal polynomials and orthogonal polynomials of several variables
- Operational methods and the monomiality principle
- Generating functions of special classes
- Matrix and determinant approach to special polynomial sequences
- Applications of special polynomial sequences in approximation theory, in boundary value problems and in quadrature formulas
- Number theory and special classes of polynomials
- Asymptotic methods in orthogonal polynomials
- Fractional calculus
- Bernstein basis
- Extrapolation methods

Guest Editors

Prof. Dr. Francesco Aldo Costabile

Prof. Maria I. Gualtieri

Dr. Anna Napoli

Deadline for manuscript submissions

closed (30 April 2026)



Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



mdpi.com/si/176229

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

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





Mathematics

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 4.6



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



About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

Editor-in-Chief

Prof. Dr. Francisco Chiclana
School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), RePEc, and other databases.

Journal Rank:

JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17.3 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).