

# Special Issue

## Polynomial Sequences and Their Applications

### Message from the Guest Editors

Sequences of polynomials perform an important role in several branches of science: mathematics, physics, engineering, etc. A Special Issue that compiles the state of the art of current research will be very useful for the mathematical community. Potential topics 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

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### Guest Editors

Prof. Dr. Francesco Aldo Costabile

Prof. Maria I. Gualtieri

Dr. Anna Napoli

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### Deadline for manuscript submissions

closed (31 October 2022)



## Mathematics

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## 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.

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### Editor-in-Chief

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#### 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).