symmetry

IMPACT FACTOR 2.2

CITESCORE 5.4

an Open Access Journal by MDPI

Polynomials: Special Polynomials and Number-Theoretical Applications

Guest Editor:

Prof. Dr. Ákos Pintér
Institute of Mathematics, Faculty of Sciences and Technology, University of Debrecen, Debrecen, Hungary

Deadline for manuscript submissions:
closed (31 July 2020)

Message from the Guest Editor

Dear Colleagues,

The polynomials play an important role in mathematics and science. We aim to focus on two applications of these well-known mathematical objects in this Issue: special polynomials and number theory.

The special polynomials (including Bernoulli and Euler polynomials and their generalizations) possess several applications in many branches of pure and applied mathematics. On the other hand, the *n*th Bernoulli polynomial $B_n(X)$, for example, is a special bridge between certain mathematical topics; we refer here only to the classical formula by Jacob Bernoulli, $1^k+2^k+\ldots+(x-1)^k=1/(k+1)(B_{k+1}(x)-B_{k+1}(0))$

The application of polynomials in number theory, especially in the theory of diophantine equations, goes back to the famous result of LeVeque from 1964. Let $f(X)$ be a polynomial with rational coefficients, and let $r_1,\ldots,r_n$ denote the multiplicities of its zeros. LeVeque's theorem states that for given $m>1$, the superelliptic equation $f(x) = y^m$ in integers x, y has only finitely many solutions, unless {$m/(m, r_1),\ldots, m/(m, r_n)$} is a permutation of one of the *n*-tuples {t, 1,..., 1\}, t>0, and {2, 2, 1,..., 1\}.

symmetry

IMPACT FACTOR 2.2

CITESCORE 5.4

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)

Contact Us

Symmetry Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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

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