Special Issue

Non-associative Structures and Their Applications in Physics and Geometry

Message from the Guest Editors

The modern development of geometry, mathematical physics, biology and so on brings new non-associative algebraic structures, such as Poisson algebras, n-ary algebras, bialgebras, dialgebras, guandles, racks, and so on. These needs fall into two broad groups: purely technological needs, and theoretical needs associated with developments in both applied algebra and other branches of mathematics. There are many branches of algebra whose contributions solve problems posed by the scientific challenges arising from the advancement of technology. Two of them also stand out for their popularity in society: cryptography and coding theory. Additionally, axial algebras have been given a big push with the emergence of the connections with Moonshine theory. And the emergence of Hopf Algebras has made a huge impact on many branches of mathematics and physics. Additionally, of course, one cannot forget very active branches with immense applications at all times: module theory and quivers representation theory. Thus, we present this Special Issue of *Mathematics* as a tool to show recent and interesting results on the branches of non-associative algebra and related structures.

Guest Editors

Dr. Ivan Kaygorodov Centro de Matemática e Aplicações, Universidade da Beira Interior, 6200-001 Covilhã, Portugal

Prof. Dr. Yunhe Sheng Department of Mathematics, Jilin University, Jilin 130012, China

Deadline for manuscript submissions

31 December 2025



an Open Access Journal by MDPI

Impact Factor 2.2 CiteScore 4.6



mdpi.com/si/153706

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

mdpi.com/journal/ mathematics



Σ

Mathematics

an Open Access Journal by MDPI

Impact Factor 2.2 CiteScore 4.6



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 18.4 days after submission; acceptance to publication is undertaken in 2.4 days (median values for papers published in this journal in the first half of 2025).