Geometry and Symmetry in Mathematical Physics

Guest Editor:

Dr. Thomas Bruun Madsen
School of Computing and Engineering, University of West London, London W5 5RF, UK

Deadline for manuscript submissions:
31 March 2025

Message from the Guest Editor

Dear Colleagues,

Many phenomena in physics are described in terms of differential equations. Imposing symmetry to such problems often leads to drastic simplifications. For example, when considering problems where the underlying space is a Lie group, many questions turn into linear algebra problems. In other situations, symmetry assumptions reduce complicated partial differential equations to ordinary differential equations. As a main consequence, it is often possible to provide explicit solutions.

This Special Issue invites contributions that use symmetry techniques to address problems directly or indirectly related to problems arising in physics. Of particular interest are problems related to Riemannian and/or pseudo-Riemannian geometry as well as Lie theory.

We welcome contributions that add new theoretical knowledge, provide particular insights into computational techniques, or add a new perspective to otherwise known results in the field.

Special Issue

Editor-in-Chief

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

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.

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), RePEc, and other databases.
Journal Rank: JCR - Q1 (Mathematics) / CiteScore - Q1 (General Mathematics)

Contact Us