Special Issue

Mathematical Modeling of Complex Entangled Structures

Message from the Guest Editors

Welcome to the Special Issue on "Mathematical modeling of complex entangled structures". This Issue aims to highlight the latest breakthroughs and ongoing research in the intricate fields of knot theory and the topology of entangled structures. The mathematical modeling of complex entangled structures is very important in many fields of science, such as physics (quantum entanglements), materials science (metamaterials, nanomaterials, textiles), and life science (DNA structure). We invite researchers to submit their research articles, reviews, and technical notes, fostering a deeper understanding of these fascinating topological phenomena. Submissions may address, but are not limited to, the following topics:

- Knot theory.
- Applications of low-dimensional topology.
- Mathematical modeling of knotted structures.
- Periodic entanglements.
- The geometry and topology of fabric-like materials.
- Topology in chemistry and biology.
- The topology of DNA.

We believe this Special Issue will provide a comprehensive understanding of knot theory and its applications, paving the way for innovative strategies and advancements across various academic and industrial domains.

Guest Editors

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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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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).