# Special Issue

# Knots, Electrodynamics and Gravity in Mathematical Physics

## Message from the Guest Editors

"Knots, Electrodynamics and Gravity in Mathematical Physics" is a comprehensive exploration of the latest developments in the field of mathematical physics. It delves into the intricate relationship between knot theory, electrodynamics and gravity, particularly focusing on mathematical aspects of knots in electrodynamics and general relativity; Hopfion, knots, and other topologically non-trivial electromagnetic and gravitational fields: methods of knotted electromagnetic and gravitational fields; space-time geometry and gravitational knots and so on. The Special Issue provides a detailed understanding of Hopfions and other knots and their applications to electromagnetism and weak gravity. It also covers the latest research, innovations, and advancements in these areas, offering readers an updated perspective on the subject. We would like to encourage researchers and professionals with expertise in knot theory, electrodynamics, quantum field theory, string theory, quantum gravity and general relativity in Mathematical Physics to submit their work to this Special Issue. We welcome all relevant contributions and will consider them for publication.

## **Guest Editors**

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## Deadline for manuscript submissions

closed (28 September 2024)



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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

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