

Special Issue

Mathematical Models and Numerical Simulation in Engineering

Message from the Guest Editors

Engineering is a multifaceted, foundational discipline with wide-ranging applications, from infrastructure development to cutting-edge technologies used in various sectors. In the digital age, mathematical modeling and numerical simulation have become indispensable tools for addressing complex engineering challenges. These methodologies enable engineers to design, analyze, and optimize systems with remarkable precision, fostering advancements in safety, efficiency, and sustainability. As simulation technologies evolve, their role in engineering promises to unlock even greater achievements in performance and innovation. This Special Issue explores the critical role of mathematical modeling and numerical simulation across various engineering fields. Contributions are welcome on topics including but not limited to the following:

- Computational mathematics;
- Engineering simulations;
- Structural and mechanical analysis;
- Fluid dynamics and thermal simulations;
- Algorithms and optimization techniques;
- Artificial intelligence applications in modeling;
- Numerical analysis and its industrial relevance.

Guest Editors

Prof. Dr. Carlos Gervasio Rodríguez

School of Specialties of the Graña Naval Station, Xunta de Galicia,
15590 Ferrol, Spain

Prof. Dr. María Isabel Lamas Galdo

Escola Politécnica de Enxeñaría de Ferrol, Campus Industrial de Ferrol,
University of Coruña, 15403 Ferrol, Spain

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

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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.

Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.3 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the second half of 2024).