

Special Issue

Mathematical Modeling for Fluid Mechanics

Message from the Guest Editor

This Special Issue aims to present current research in fluid modeling, attracting researchers and serving as a placeholder to concentrate new ideas for the future development of fluid modeling. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following: Energy formulation of fluids; Variational approaches theory and numerics; Biofluids modeling; Flows in porous media; Combustion theory; Flame propagation modeling; Perturbation approaches; Travelling waves and soliton solutions; Regularity, uniqueness and smoothness of fluid solutions; Higher order parabolic operators in fluid modeling; p-Laplacian, poly-Laplacian and other bizarre operators in fluid modeling; Navier–Stokes equations; Laminar and turbulent flow modeling; Finite element analysis, finite difference method, and finite volume method; Boundary layer theory; Vortex methods; Large eddy simulation; Particle image velocimetry in fluid modeling; Smoothed particle hydrodynamics; Scaling laws and dimensional analysis; Wind tunnel testing and fluid modeling; Wavelet methods for turbulence.

Guest Editor

Prof. Dr. José Luis Díaz

Department of Applied Mathematics and Didactics, Universidad a Distancia de Madrid (Madrid Open University), 28400 Madrid, Spain

Deadline for manuscript submissions

closed (28 March 2025)



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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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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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