Special Issue

Experimental and Computational Approaches for Fluid Mechanics and Heat Transfer

Message from the Guest Editors

This Special Issue invites original research articles and comprehensive reviews focused on fluid mechanics and heat transfer, employing experimental, computational, or hybrid approaches. Submissions exploring novel numerical techniques such as computational fluid dynamics (CFD), multiphysics simulations, and machine learning-enhanced modelling are particularly encouraged. Experimental investigations involving laboratory-scale validation, uncertainty quantification, and optimisation of thermal-fluid systems are also of high interest. Topics of interest include, but are not limited to, the following:

- Laminar and turbulent flow dynamics;
- Forced and natural convection;
- Conduction and radiation heat transfer:
- Multiphase and reactive flows:
- Heat transfer enhancement techniques;
- Phase-change and thermal energy storage systems;
- Flow and heat transfer in complex geometries;
- Micro- and nanoscale thermal-fluid transport;
- Data-driven modelling and optimisation;
- Validation and benchmarking of numerical models.

Guest Editors

Dr. Tehmina Ambreen

School of Physics, Engineering & Computer Science, University of Hertfordshire, Hatfield AL10 9AB, UK

Dr. Arslan Saleem

School of Engineering, Cardiff University, Queen's Buildings, The Parade, Cardiff CF24 3AA, UK

Deadline for manuscript submissions

13 February 2026



Energies

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Impact Factor 3.2 CiteScore 7.3



mdpi.com/si/251436

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

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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