Special Issue

High Speed Flows, 2nd Edition

Message from the Guest Editors

High-speed gas flows occur during the movement of aircrafts, rockets, descent vehicles, as well as in combustion chambers, nozzles and in many other technological applications. High-speed flows are characterized by a complex shock-vortex structure and the presence of large gradients of gas parameters due to the emerging shock waves, areas of shear deformations and the possible development of gasdynamic instabilities. This Special Issue of Fluids is focused on the recent advances in the numerical and experimental modeling of high-speed flows. The planned topics include (but are not limited to) the following areas: supersonic/hypersonic flows, flow control, shock waves, turbulence, vortices and vortex structures, boundary layers, heat fluxes, gas-dynamic instabilities.

Guest Editors

Prof. Dr. Olga A. Azarova

Department of Mathematical Modeling of Computer-Aided Design Systems, Federal Research Center "Computer Science and Control" of the Russian Academy of Sciences, Vavilova st. 40, 119333 Moscow, Russia

Dr. Tatiana Lapushkina

Laboratory of Physical Gasdynamics, loffe Institute, 194021 Saint Petersburg, Russia

Deadline for manuscript submissions

closed (31 March 2025)



Fluids

an Open Access Journal by MDPI

Impact Factor 1.8 CiteScore 4.0



mdpi.com/si/167143

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

mdpi.com/journal/fluids





Fluids

an Open Access Journal by MDPI

Impact Factor 1.8 CiteScore 4.0



About the Journal

Message from the Editor-in-Chief

Fluids (ISSN 2311-5521) is an international journal on all aspects of fluids in open access format: research articles, reviews and other contents are released on the internet immediately after acceptance. You are invited to contribute a research article or a comprehensive review for consideration and publication in Fluids. The scientific community and the general public have unlimited free access to the content as soon as it is published. Please consider Fluids as an exceptional, exciting enterprise ready to reward your trust, attention, and active participation.

Editor-in-Chief

Prof. Dr. D. Andrew S. Rees

Department of Mechanical Engineering, University of Bath, Bath BA2 7AY, UK

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, ESCI (Web of Science), Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q2 (Mechanical Engineering)

