

Special Issue

Data-Driven Modeling and Applications for Flow, Heat Transfer, and Combustion

Message from the Guest Editors

Data-driven methodologies have become a crucial tool for understanding flow dynamics, heat transfer phenomena, and reacting flows across various domains of applications. This Special Issue explores computational approaches and experimental diagnoses combined with machine learning methods for single- and multi-phase flows, heat and mass transfer processes, and reacting flows, with applications pertinent to combustion engines, turbomachinery, and power generation systems. We invite original research articles, review articles, and technical notes that contribute to the advancement of knowledge in this interdisciplinary field. Topics include, but are not limited to, the following:

- Data-driven turbulence modeling and closures;
- Data-driven models for turbulence/chemistry interaction;
- Data-driven models for mass and heat transfer processes;
- Machine learning for combustion chemistry acceleration;
- Machine learning for fluid dynamics data analysis;
- Machine learning for flow control and detection.

Guest Editors

Dr. Songbai Yao

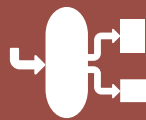
Prof. Dr. Ping Wang

Dr. Bosen Wang

Dr. Weijia Qian

Deadline for manuscript submissions

20 June 2026



Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



mdpi.com/si/201977

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

[mdpi.com/journal/
processes](https://mdpi.com/journal/processes)





Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



[mdpi.com/journal/
processes](https://mdpi.com/journal/processes)



About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto
Department of Drug Science and Technology, University of Turin, Via P.
Giuria 9, 10125 Turin, Italy

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, AGRIS, and other databases.

Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))