Special Issue

New Insights into Computational Fluid Dynamics Applied to Renewable Energy

Message from the Guest Editors

The global transition towards clean energy has driven the rapid advancement of accurate and efficient modeling approaches. Computational fluid dynamics (CFD) has emerged as a powerful tool for deepening our understanding of wind energy systems and enhancing their performance through high-fidelity simulation of complex flow dynamics. This Special Issue aims to showcase the latest state-of-the-art research that leverages CFD in order to address key challenges in the efficient utilization and operation of wind energy systems. In this Special Issue, original research articles and reviews are welcome. Topics of interest include, but are not limited to, the following:

- Wind resource assessment;
- Wind farm layout optimization;
- Wind turbine wake dynamics;
- Wind power forecasting;
- Intelligent cooperative control of wind farms;
- Aero-hydrodynamic effects on wind turbine structures;
- Interaction between atmospheric boundary layer, complex terrain, and wind turbine wakes.

We look forward to receiving your contributions.

Guest Editors

Dr. Tong Zhou

Prof. Dr. Zhenqing Liu

Dr. Guowei Qian

Deadline for manuscript submissions

31 March 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/247049

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

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, 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, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)