

Special Issue

Advances in Fluid Dynamics and Wind Power Systems

Message from the Guest Editors

Wind power is a critical source of renewable energy for the decarbonisation of electricity systems with the aim of reducing greenhouse gas emissions. The unsteady wind-wave conditions and the six degrees of freedom motions of floating structures all contribute to a highly complex unsteady flow around a wind turbine, which has a significant impact on the performance of wind power systems. Extensive investigations of unsteady flow behaviours and an accurate prediction of the aerodynamics of wind turbines become indispensable, and advanced techniques and knowledge in fluid dynamics play a vital role in optimising the power generation from wind energy systems. This Special Issue aims to bring together the most recent advances in fluid dynamics to tackle the challenges and issues faced by modern wind power systems. Original research and review articles are welcome.

- Fluid –structure interaction;
- Rotor aerodynamics;
- Blade aeroelasticity;
- Aeroelastic instabilities;
- Wake modelling;
- Wake interaction;

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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.

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