

Special Issue

Recent Advances in Aerodynamics of Wind Turbines

Message from the Guest Editor

Since the levelized cost of electricity (LCOE) from wind energy is still decreasing, the number of installed turbines, as well as their size, will continue to grow. Additionally, active and passive aerodynamic control has become important to reduce fatigue and extreme loads from turbulent inflow. Further, more exotic means of increasing aerodynamic efficiency of wind turbines could be using winglets or even placing an entire diffuser around the rotor. A very important topic to be addressed is the advancement of numerical and experimental tools for determining the aerodynamic loads and the development of the turbulent boundary layer on the blade surface. Topics related to vertical axis wind turbines, airborne concepts, and small wind turbines to be used in urban environment will also be included. It is the intention of this Special Issue to address all the different advancements made to improve the understanding and modelling of wind turbine aerodynamics, with the purpose of supporting increasing aerodynamic efficiency and the upscaling of wind turbines in order to be able to further decrease the LCOE from wind energy.

Guest Editor

Dr. Martin Otto Laver Hansen

Department of Wind Energy, Technical University of Denmark, DK2800 Lyngby, Denmark

Deadline for manuscript submissions

closed (15 January 2020)



Energies

an Open Access Journal
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Impact Factor 3.2
CiteScore 7.3



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

Editor-in-Chief

Prof. Dr. Enrico Sciubba

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

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