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Recent Advances in Aerodynamics of Wind Turbines

Guest Editor:

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Deadline for manuscript submissions:
closed (15 January 2020)

Message from the Guest Editor

Dear Colleagues,

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 diffusor 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.

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Message from the Editor-in-Chief

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