



Modelling and Simulation in Engineering

Special Issue on

Wind Turbine Simulations and Validation

CALL FOR PAPERS

Wind energy enjoys today favorable public support, since it offers a clean alternative to fossil fuel electricity production. Though not completely free of environmental impact, wind turbines are much less polluting than other forms of large-scale energy production. Wind energy can be harnessed using either onshore or offshore wind turbines. For design and development of more efficient and reliable wind turbines, accurate prediction of aerodynamic behavior, hydrodynamic behavior (offshore), and fluid-structure interactions are of critical significance. It also has a significant effect on the loads on bearings and gearbox, ultimately affecting the lifespan and reliability of the turbine.

We invite investigators to contribute review and original research papers that focus on latest progresses in development, implementation, and validation of new simulation tools for onshore and/or offshore wind turbine designs.

Potential topics include, but are not limited to:

- ▶ Modelling and simulation for aerodynamics
- ▶ Modelling and simulation for hydrodynamics
- ▶ Fluid-structure interactions
- ▶ Blade design and optimization
- ▶ Tower design and optimization
- ▶ Verification and validation using experimental measurements
- ▶ Controller design
- ▶ Fatigue analysis
- ▶ Noise prediction and/or measurements
- ▶ New modelling tools/approaches for single wind turbine design
- ▶ New modelling tools/approaches for wind farm design

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/mse/wtsv/>.

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