Special Issue

Dynamics of Composite Wind Turbine Rotor Blades

Message from the Guest Editor

Rotor blades are utilised in the design of horizontal- and vertical-axis wind turbines. In operational (service) and extreme (e.g., storm) conditions of dynamic loading, blades respond by vibrating in a combination of modes through time-dependent small and large deflections which generate dynamic strains and stresses. This Special Issue is concerned with dynamical investigation of wind turbine rotor blades. Scientifically sound and well-organised analytical and computational studies are welcome. Areas such as small and large amplitude blade vibration, damage mechanics of rotor blades, blade nonlinear dynamics and chaos, aeroelasticity of blades, modal analysis of rotor blades, transient response, steady-state vibration, flap-wise vibration, lead–lag vibration, flutter instability, torsional vibration, mixed-mode vibration, Fluid-Structure Interaction in blades, optimisation for vibration, probabilistic (indeterministic) analyses, and Fourier analysis are relevant.

Guest Editor

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Message from the Editor-in-Chief

Editor-in-Chief

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