



Advanced Wind Energy Systems: Comprehensive Insights into Analysis, Design, Control, and Optimization

Guest Editor:

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Deadline for manuscript submissions:

28 February 2025

Message from the Guest Editor

The intention of this special issue is to curate and distribute the most contemporary breakthroughs concerning the design, optimization, application, control, and health monitoring of wind energy systems.

Areas that are particularly compelling for publication include, but are not limited to, the following:

- High-fidelity, efficient aerodynamic models for wind turbines;
- Socio-economic considerations in wind energy deployment and management;
- AI and machine learning in wind turbine design and predictive control;
- Digital twins for real-time turbine performance monitoring;
- Eco-design principles for sustainable wind turbine lifecycle;
- Additive manufacturing for turbine component enhancement;
- Topology optimization for peak turbine efficiency;
- Integrated design approaches emphasizing total turbine optimization;
- IoT in turbine design for real-time data and adaptive operation;
- Cloud-based tools for turbine modeling and optimization.





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Message from the Editor-in-Chief

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Journal Rank: CiteScore - Q1 (Control and Optimization)

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