



State of the Art of Wind Farm Optimization

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submissions:

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Message from the Guest Editor

Dear Colleagues,

The objective of this Special Issue is to find the combination of certain parameters—like turbine position for the design of a wind-farm layout or real-time torque applied to each turbine for wind-farm operation—so that it would maximize one or more variables (e.g., the wind-power generation of the farm over a certain time horizon) while minimizing others (e.g., wake losses induced by upstream turbines on downstream turbines), subject to a series of constraints (e.g., safety or environmental requirements).

Examples of topics are

- Algorithms for optimal turbine placement;
- Regular vs. irregular layouts;
- Non-traditional wind farms;
- Wake loss models;
- The effect of the wind-farm shape;
- Safety or visual or environmental constraints;
- Including interference from neighboring wind-farms in layout design;
- Layouts that minimize bird or bat fatalities;
- Yaw control;
- Torque control;
- Wake steering;
- Use of advanced, real-time observations for forecasting; and
- Optimal shut-down scheduling.





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Message from the Editor-in-Chief

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