Dynamics and Control with Applications to Ocean Renewables

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Ocean renewables include wave, tidal, and ocean thermal and salinity gradients, offshore winds, among others. Driven by the need for zero-carbon emissions, there is a significant growing interest in developing technologies to harness the vast available ocean renewable energies. However, ocean renewable technology is still cost-intensive in terms of the Levelized Cost of Energy (LCOE) and subject to a high level of uncertainty. Accordingly, outstanding efforts have been made by the research community to develop dynamics and control of ocean renewables with applications. This Special Issue will focus on new approaches for the modeling, simulation, and control of ocean renewable energy systems.

- Ocean renewable resource modeling and assessment;
- High-fidelity hydrodynamic and aerodynamic modeling;
- Model reduction for ocean renewable energy systems;
- Modeling from resource to wire, including simulation frameworks developed for blue economy applications;
- Array model, simulation, control, and optimization;
- Design of ocean renewable subsystems;
- Energy maximizing and fault tolerance control, including machine learning-based methods...

Special Issue

Editor-in-Chief

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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