Special Issue

Advanced Computational Intelligence and Machine Learning Methods in Marine Renewable Energy

Message from the Guest Editors

The integration of **computational intelligence** and **machine learning (ML)** is transforming **marine renewable energy (MRE)** by enhancing forecasting, optimization, and decision-making. This Special Issue highlights innovative research using advanced algorithms to address challenges in wave, tidal, and offshore wind energy systems. We invite high-quality contributions on novel applications, methodologies, and frameworks. Topics include, but are not limited to:

- **Energy Forecasting Models** for wave, tidal, and offshore wind resources using ML techniques.
- **Optimization Algorithms** for layout design, maintenance scheduling, and energy conversion efficiency.
- **Fault Detection and Condition Monitoring** using intelligent data-driven systems.
- **Autonomous Control Systems** for marine energy converters powered by deep learning.
- **Environmental Impact Assessment** using predictive analytics and AI-based modeling.
- **Hybrid Modeling Approaches** combining physics-based and data-driven techniques.
- **Big Data Analytics and Edge Computing** for real-time marine energy system management.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

The *Journal of Marine Science and Engineering* (*JMSE*; ISSN 2077-1312) is an international peer-reviewed open access journal which provides an advanced forum for studies related to marine science and engineering. The journal aims to provide scholarly research on a range of topics, including ocean engineering, chemical oceanography, physical oceanography, marine biology and marine geosciences. We invite you to publish in our journal sharing your important research findings with the global ocean community.

Editor-in-Chief

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