Special Issue

System Optimization of Unmanned Marine Vehicles

Message from the Guest Editors

Unmanned marine vehicles are revolutionizing ocean operations ranging from environmental monitoring to offshore infrastructure inspection, driving critical demand for advanced system optimization to ensure safer, and sustainable marine operations. Recent breakthroughs in optimization theory, artificial intelligence, and marine systems engineering provide critical tools for guidance, navigation and control, energy management, and communications in harsh ocean environments.

This special issue will investigate advanced optimization methodologies for enhancing the performance, autonomy, and operational efficiency of unmanned marine vehicles in complex ocean environments. Specifically, we invite studies focusing on innovative approaches to system optimization, including but not limited to reinforcement learning-based control, adaptive control strategies, multi-agent consensus control, and anti-saturation control. Research should demonstrate how these optimization techniques improve mission capabilities, endurance, or decision-making processes in real-world marine applications.

Guest Editors

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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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