Special Issue

System Optimization and Control 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

Prof. Dr. Liying Hao
Prof. Dr. Weidong Zhang
Dr. Yongpeng Weng

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Journal of Marine Science and Engineering
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
jmse@mdpi.com

mdpi.com/journal/jmse

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Message from the Editor-in-Chief

Journal of Marine Science and Engineering (*JMSE*, ISSN: 2077-1312) focuses on research in the fields of Ocean Engineering, Coastal Engineering, Physical Oceanography, Geological Oceanography, Marine Biology, and Marine Environmental Science. It publishes reviews, regular research papers, and short communications, as well as Special Issues on particular subjects. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the maximum length of the papers.

Editor-in-Chief

Prof. Dr. Charitha Pattiaratchi
School of Engineering, The UWA Oceans Institute, The University of Western Australia, Perth, WA 6009, Australia

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