

Special Issue

Advances in Maritime Decarbonization: Technologies and Operations Towards Zero-Emission Ports and Vessels

Message from the Guest Editor

Ports and ships are significant contributors to greenhouse gas emissions and local air pollution, prompting an urgent transition towards low-carbon and zero-emission solutions. This Special Issue aims to explore the most recent scientific, technical, and developments contributing to the decarbonization of maritime activities, with a special focus on the operational interfaces between ships and ports. We welcome original research articles, reviews, and case studies that address innovative propulsion systems, low- and zero-emission fuels (e.g., LNG, hydrogen, ammonia, advanced biofuels), electrification and hybridization, renewable energy integration in port infrastructure, digital optimization tools, emission inventories, regulatory frameworks, and the implications of decarbonization efforts. We will particularly focus on real-world applications and interdisciplinary approaches combining engineering, environmental science, and analysis, and aim to provide a platform for both established and emerging researchers to share findings that support the maritime sector's energy transition.

Guest Editor

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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

Prof. Dr. Charitha Pattiaratchi
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