Special Issue

Marine Cable Technology: Cutting-Edge Research and Development Trends

Message from the Guest Editors

With the accelerating exploitation of marine resources and the rapid expansion of offshore renewable energy systems, marine cables (including submarine power cables, umbilicals, and communication cables) have emerged as critical infrastructures for energy transmission, data transfer, and subsea control operations. These cables are engineered to withstand harsh marine environments, such as extreme pressures, dynamic currents, and corrosive conditions, while ensuring reliability and longevity. As global demands for offshore wind farms, ocean observatories, and deep-sea mining escalate, the design, installation, and maintenance of marine cables are faced with unprecedented technical challenges and opportunities. This Special Issue aims to gather cutting-edge research on marine cable technologies, addressing advancements in multi-physics coupling design methodologies, extreme-condition dynamic reliability, deep-sea environmental compatibility, intelligent health monitoring systems, and sustainable material development. The Special Issue will serve as a platform to advance the frontier of marine cable engineering and support the sustainable development of ocean resources.

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Deadline for manuscript submissions

10 September 2025

Journal of Marine Science and Engineering

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.0

mdpi.com/si/236193

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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.

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