

## Special Issue

# Advances in the Decision-Making and Control of Autonomous Marine Vehicles

### Message from the Guest Editors

Recently, autonomous marine vehicles (AMVs) have become key enablers in many maritime applications. Despite notable progress, numerous technical challenges remain. This Special Issue presents recent advances and pioneering research on the design, development, and implementation of decision-making, planning, and control systems for AMVs. The scope includes autonomous underwater vehicles (AUVs), autonomous surface vehicles (ASVs), and hybrid or multi-domain marine robots operating across surface, underwater, or aerial environments. We invite high-quality original research articles and review papers in, but not limited to, the following areas:

- Autonomous mission planning and dynamic replanning;
- Multi-vehicle task assignment and coordination;
- Guidance, path planning, and trajectory optimization;
- Motion planning and robust/adaptive control under uncertainty;
- AI/ML-based decision-making frameworks;
- Fault detection, resilience, and safe operation in harsh environments;
- Human-in-the-loop autonomy and shared control architectures;
- Real-time situational awareness and perception-driven control.

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### Guest Editors

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### Deadline for manuscript submissions

1 December 2026



## Journal of Marine Science and Engineering

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## About the Journal

### 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.

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### Editor-in-Chief

Prof. Dr. Charitha Pattiaratchi

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#### Journal Rank:

JCR - Q2 (Engineering, Marine) / CiteScore - Q2 (Ocean Engineering)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.5 days after submission; acceptance to publication is undertaken in 2.5 days (median values for papers published in this journal in the second half of 2025).