

Special Issue: Call for papers: “AI & Advanced Technologies in Maritime Transport, Ports and Global Supply Chains”

Journal: Maritime Economics & Logistics (MEL)

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Background:

Technologies have always played a pivotal role in the advancement of the maritime sector, shaping the way we navigate, operate, and manage our seas and infrastructures. Over the last decades, in particular, the emergence of groundbreaking innovations has brought about an unprecedented transformation, such as Artificial Intelligence, big data analytics, digital twins, blockchain, autonomous systems, the Internet of Things (IoT), etc. These advancements are not only enhancing operational efficiency but also promoting sustainability and safety, marking a significant leap forward for the industry.

However, the adoption of innovation and technology present considerable challenges for maritime stakeholders, with regard not only to technical expertise but also integration complexity, data privacy, compliance and economic viability. Factors such as high implementation costs, the need for human skills, cybersecurity concerns, and resistance to change often impede the integration of these innovations. Adopting such technologies and taking advantage of their application requires a remarkable effort towards developing the proper strategies, frameworks, and policies that will facilitate a smoother transition toward a digitally empowered maritime ecosystem.

This Call for Papers invites scholars, researchers, and industry practitioners to submit original research papers that would make significant contribution to the maritime literature and industry related to the impact of emerging technologies in the maritime sector. Research topics might include (but not limited to) the following:

- Artificial Intelligence in maritime transport and logistics
- Digital twins of container terminals
- Intelligent maintenance in shipping and ports
- Advanced methods in port throughput forecasting
- Machine Learning models in terminal efficiency
- Big data analytics for autonomous ships
- Financing emerging technologies
- AI models in risk management
- ESG and emerging technologies
- Remote sensing and machine learning in pollution prevention

- New technologies and novel methodologies in emissions accounting and regulatory compliance
- Alternative fuels and supply chain implications
- Vessel behaviours detection using machine learning and advanced algorithms
- Weather routing using advanced algorithms

Practical Issues

Abstracts (200-300 words) should be submitted to MEL (haralambides@ese.eur.nl) by May 31, 2025. Following positive feedback on the abstract, full papers should be submitted to the above email by September 30, 2025. In case of difficulty in respecting the submission deadline, the guest editors would appreciate knowing in advance for purposes of production planning. Finally, non-native English authors should submit their typescript for linguistics review, preferably by a professional English editor. Submissions should respect closely MEL's 'instructions to authors' to be found on the journal's website. **IAME25 presenters:** Upon submission of your abstract to the conference, please indicate whether you would like your paper to be considered for this special issue. **Non-IAME25 researchers** are welcome to submit too, keeping in mind the following key dates.

Key Dates

- September 30, 2025: Deadline for full paper submission
- November 30, 2025: Referee reports to authors
- January 31, 2026: Revisions returned to editors
- February 28, 2026: Editorial decision or request of second revision.
- Publication: Prioritized, as soon as possible thereafter

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