



Marine and Offshore Science,  
Technology and Engineering Centre  
**MOSTEC**



**Cyprus Marine and Maritime Institute**

**Dr Ashok Kumar Swaminathan**

GreenNet Pitching session  
May 2025



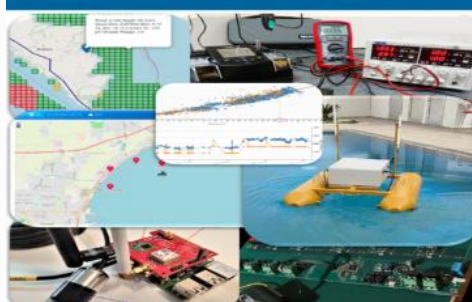
CMMI was established by the CMMI/MaRITeC-X project as a “Centre of Excellence in Marine and Maritime Research, Innovation and Technology Development” and has received funding from the European Union’s Horizon 2020 research and innovation Programme under Grant Agreement No. 857586 and matching funding from the Government of the Republic of Cyprus.

# Research and Innovation Centres

**Marine and Offshore Science, Technology, and Engineering Centre**



**Maritime Digitalisation Centre**

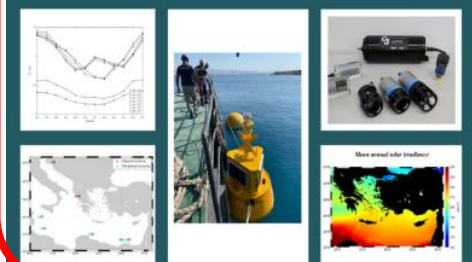


**Marine Robotics Innovation Centre**



**Marine Technology Division**

**Marine Observation Centre**



**Marine and Coastal Ecosystems Centre**



**Marine Biotechnology and Aquaculture Centre**



**Marine Sciences Division**

**Maritime Human Element Centre**



**Centre for Marine and Maritime Policy Research and Regional Cooperation**

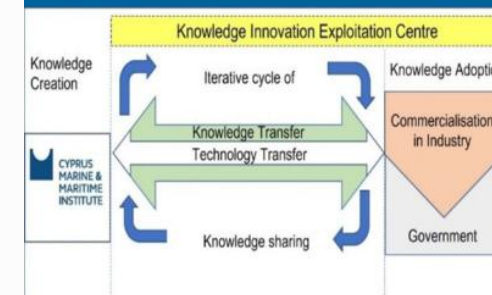


**Marine Cultural Heritage Centre**



**Marine Social Sciences Division**

**Knowledge, Innovation, and Entrepreneurship Centre**





# Marine and Offshore Science, Technology and Engineering Center (MOSTEC) team

Aiming to address engineering challenges and needs of the maritime sector by engaging in research and innovation activities

covering areas such as naval architecture and marine/mechanical engineering, investigations and solutions related to the overall efficiency of ships, renewable energy and green technologies to reduce the environmental footprint and the lifecycle cost

Expertise: CFD, FSI, Program development, AI tools, Retrofitting technologies, Dual Fuel engine assessment, Vessel design and development.



Dr. George Mallouppas  
Senior Associate Scientist  
Acting Head



Dr. Ashok Kumar  
Assistant Scientist



Pavlos Loizou  
Junior Scientist

# Interdisciplinary/ Cross Centre R&I Mission areas

## Inspired by the EU Mission: Restore our Ocean and Waters



To make the sustainable  
Blue Economy carbon-  
neutral



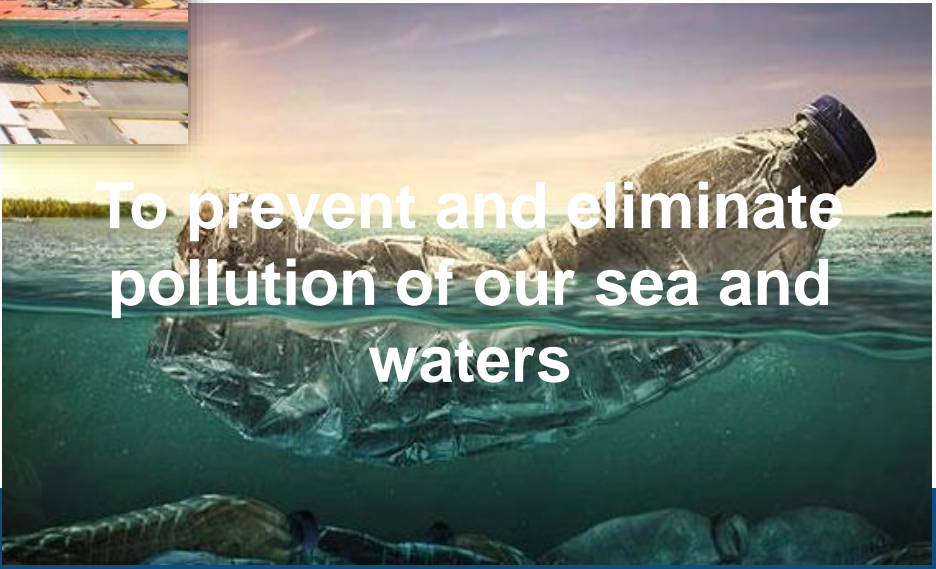
To protect and restore  
marine and coastal  
ecosystems and biodiversity



To attract, develop and  
retain the workforce of the  
Blue Economy



To build a digital  
knowledge system of our  
Sea



To prevent and eliminate  
pollution of our sea and  
waters

# Collaborations & Memberships



# Cluster 5 / Destination 5– prioritised calls of interest (1)

- HORIZON-CL5-2025-04-D5-15: Optimal integrated onboard renewable energy solutions, by considering Wind-Assisted Propulsion Systems (ZEWT Partnership)
- HORIZON-CL5-2025-04-D5-11: Demonstration of battery energy storage systems in existing and new vessels via novel energy storage and ship design concepts (ZEWT Partnership)
- HORIZON-CL5-2025-04-D5-13: Novel holistic intelligent tools for variable retrofit and decarbonised scenarios (ZEWT Partnership)
- HORIZON-CL5-2025-04-D5-10: Innovative solutions for energy conversion and safety of low and zero-carbon fuels in waterborne transport (ZEWT Partnership)



# Possible areas of contribution

Leverage results from National ZEST project – Zero Emission Sea Transporter for short sea shipping

Retrofitting experience through the GreenMarine project for CO2 emission reduction on existing vessel

Modelling and field studies (use of hydrophones) to improve the effectiveness, safety and cost-effectiveness of noise mitigation solutions

Leverage HE project LORELEI-X addressing Unmanned vessel development for numerous activities.

Demonstrators in Cyprus with/for industrial shipping partners

Can act as coordinator, partner, WP or task leader. Already coordinator of GreenMarine project (retrofitting solutions) and other HE projects

Expertise in environmental impact assessment and measurement of contaminants of emerging concerns (iMermaid HE project)

Capacity-building, Vocational training and Ocean literacy



Thank you  
for your attention

Visit [cmmi.blue](https://cmmi.blue) for more info

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