ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

MARINE TRANSPORT TECHNOLOGIES AND INFRASTRUCTURES

Sustainable, safe and environmental friendly technologies and infrastructures for sea transportation of passengers and freight.

Research at the University of Bologna covers a wide range of issues:

- Naval Engineering including eco-development in engineering design process, shipbuilding, maintenance, and operation of marine vessels and structures
- Nautical design and drones based on innovative materials to reduce weight and improve performances
- Marine shipbuilding and manufacturing supporting the complex marine structures for the most challenging applications
- Assessment of safety and environmental aspects of alternative technologies for ship propulsion
- Safety of LNG supply chain for ship propulsion and port machinery fueling
- Design of port areas, focusing on innovative design of breakwaters docks, quays or harbor furnishings
- Environmental effects of ports and their activities, their habitability, and mitigation
- Development of novel eco-engineering designs and technologies for functional, aesthetic and recreational port infrastructures
- Water quality in marina modelling and assessment in the marinas, harbors and sea
- International, European and national legislation on environmental protection for port activities and maritime transport
- Analysis of the legal aspects related to the use of new eco-technologies and new energy efficiency solutions in the transport field

HIGHLIGHTS

The University of Bologna research, efficient networking and training has been funded at International and European level through different funding programs.

Interreg ADRION – V-B Adriatic Ionian - **SUPER-LNG** – *Sustainability Performance of LNG-based maritime mobility*.

Australian Research Council Linkage Projects - *Marine urban sprawl: Using ecology to design multifunctional artificial structures.*

FP7 – **MarUrbe** – *Sustainable Urban Development: solutions to promote the biological and conservation value of marine urban structures*.

LIFE **Marina Plan Plus** - *reliable and innovative technology for the realization of a sustainable marine and coastal seabed management plan.*