

L-UNIVERSITÀ TA' MALTA

L-Università ta' Malta traces its origins to the founding of the Collegium Melitense which was set up in 1592. Today, it hosts over 11,000 students following full-time and part-time degree and diploma courses. The University of Malta is the highest teaching institution in Malta. It is publicly funded, and its structures are in line with the Bologna Process and the European Higher Education Area. It strives to provide courses that are relevant to contemporary needs of the industry and employers.

UNIVERSITY OF STRATHCLYDE GLASGOW

The University of Strathclyde was established in 1796 by Professor John Anderson for 'the good of mankind' and with the purpose of being 'the place of useful learning'. The Department of Naval Architecture, Ocean, and Marine Engineering (NAOME) at the University of Strathclyde is a world-leading academic institution dedicated to the pursuit of maritime engineering research excellence to maximize its research profile and reputation in the marine community with an illustrious history stretching back to 1882.

UNIVERSITÀ DI GENOVA

Università di Genova (UNIGE) was founded in 1933, with history tracing back to the 14th century. UNIGE is a public institution with scientific, educational, organisational, and financial autonomy for research and advanced professional training. The Naval Architecture and Marine Engineering branch was established in 1870 from the former Royal School of Naval Engineering. The School was one of the oldest in Europe, inducing a scientific approach to ship design and construction. Nowadays the naval architecture and marine engineering activities are undertaken by the DITEN department of the Polytechnic School.

NAVAL ARCHITECTURAL SERVICES

Naval Architectural Services was founded in 2011 providing specialist marine technical services to a diverse range of local and international clients. Its background in naval architecture, marine engineering, ship regulations and survey provide an optimal blend of knowledge in-house. The company has rapidly evolved to offer services in various specialist areas and has positioned itself at the forefront of the maritime sector by ensuring constant investment in human and technical resources where development and innovation are a key to success.



VENTURE
Physical - Virtual



VENTURE
a Virtual and physical ExperimentAl Towing centre
for the design of eneRgy Efficient sea-faring vessels

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SUMMARY

VENTuRE is a three-year EU-funded project seeking to strengthen the maritime engineering field in Malta, specifically in the field of design and characterisation of energy-efficient seafaring vessels via experimental and numerical means. L-Università ta' Malta is collaborating with longstanding academic institutions in the maritime engineering academic field, namely the University of Strathclyde and Università degli Studi di Genova, together with the professional contribution of a local SME, Naval Architectural Services Ltd (NAS), Malta.

The project will enable intensive knowledge exchange and aims to develop numerical and experimental expertise in Malta. This is integral in establishing the skills required to design, build, and operate a state-of-the-art experimental maritime towing test facility to be located within the Sustainable Living Centre which is currently under construction at the University of Malta.

ABOUT

The Maltese maritime industry has been experiencing rapid technical development over the past decade, sustaining compliance with international standards and regulations, whilst concurrently endeavouring to adopt the latest, novel, state-of-the-art engineering techniques being adopted worldwide. Yet, albeit the effort, the maritime industry in Malta has untapped potential, and is seeking knowledge-exchange to enhance its capability in the long-term.

To establish this capacity, L-Università ta' Malta is forging ahead with plans to set up experimental and virtual towing tank test facilities, which are deemed fundamental and invaluable for the design of energy-efficient sea-faring vessels. Although the infrastructure development is already underway, the appropriate long-term use of such high-end facilities may solely be secured via expertise exchange and networking opportunities with institutions that have already established a strong track record in the field. This twinning action will enable the transfer of essential knowledge to Malta from two leading research institutions in the maritime industry, namely the University of Strathclyde (Scotland, United Kingdom) and Università degli Studi di Genova (Italy). Local companies active in the local maritime industry, such as Naval Architecture Services Ltd., are set to benefit from this framework. They are acknowledged as key partners in ensuring that the knowledge being transferred is used in industrial maritime engineering applications.

KNOWLEDGE EXCHANGE

Knowledge transfer is being carried out through a variety of planned tasks: short specialist courses to enhance scientific and technological capacity, providing an e-platform for training, short term visits to the partners, actions to build tomorrow's maritime professionals and academic innovators, short term expert visits, technician/lab staff visits, research conferences, student exchanges, student mentoring and joint supervision, winter and summer schools, and secondments in industry.



Kelvin Hydrodynamics Laboratory,
University of Strathclyde, Glasgow

The project will enhance the research profile of L-Università ta' Malta and the Maltese Maritime Industry through research groups and networking activities, directed towards the design of energy-efficient vessels. Three distinct research groups directed towards the design of energy-efficient vessels were established: Resistance and Propulsion; Seakeeping and Manoeuvring; and Combined Computational Fluid Dynamics (CFD)/Experimental Fluid Dynamics (EFD). The research groups were formed to further develop the research-related outputs of the universities, together with setting the foundation for future collaborative efforts, specifically in relation to maritime engineering. An online virtual conference was also launched between the member universities, where the invited partner-student speakers presented their research projects in the field of maritime engineering. Additionally, a workshop was held to discuss the design, installation, and operation of wave tanks, with a focus on tow testing of model vessels.