

ABOUT MARHIS



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Locations:



Laboratori d'Enginyeria Marítima
UPC - BARCELONATECH

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Parque Científico y Tecnológico de Cantabria
C/ Isabel Torres, 15,
39011 Santander, Cantabria

MARHIS, Maritime Aggregated Research Hydraulic Infrastructures is a distributed research infrastructure of the Ministry of Economy and Competitiveness (MINECO) in Spain, unique in the hydraulic engineering field. It aims to increase the efficiency and capability of Spanish numerical, experimental and field facilities for applications to coastal, harbour, offshore engineering and the many interactions between structures and marine climatic factors.

The infrastructures aggregated in the ICTS and their associated technological services are offered in a coordinated platform to any public or private body.

The MARHIS-ICTS research infrastructure offers a unique combination of laboratory, numerical and field facilities supported by two of the leading Spanish institutions in this field (IH Cantabria and LIM/UPC).

The resulting expertise and equipment provide an unprecedented power to solve design, construction and exploitation aspects of maritime engineering.



Maritime Aggregated Research
Hydraulic Infrastructures



APPLICATIONS

HARBOUR ENGINEERING

- Stability of vertical and rubble mound breakwaters
- Dynamic interactions of fluids and structures
- Physical modelling of ports and coastal structures
- Prototype monitoring

COASTAL ENGINEERING

- Risk assessment and management
- Coastal processes
- Coastal morphology
- Maritime and coastal protection structures
- Tsunamis

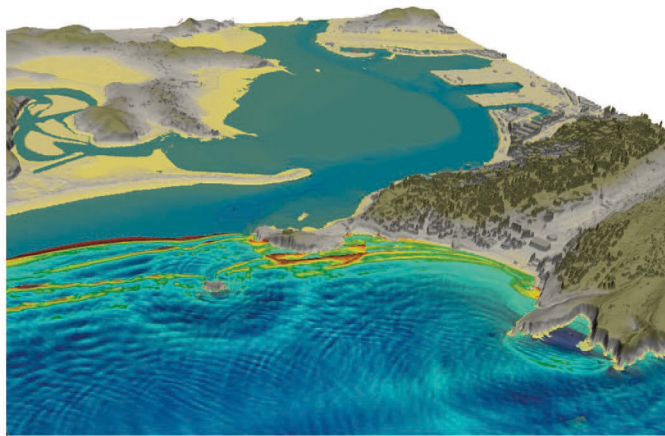
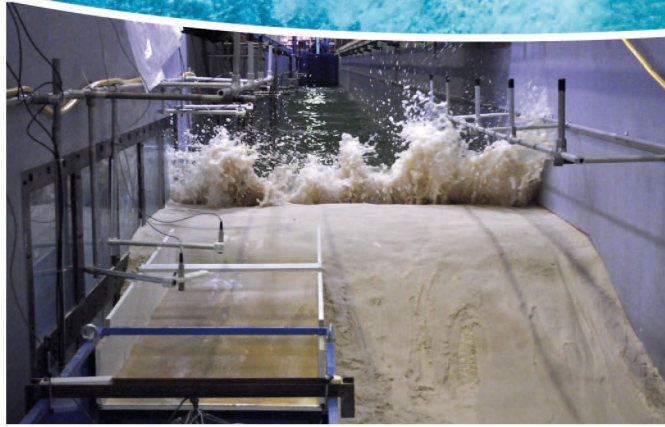
OFFSHORE ENGINEERING

- Offshore technology and platforms
- Marine hydrodynamics
- Oceanographic physics and engineering
- Marine renewable energies

CLIMATE CHANGE

- Wind, waves and currents modelization
- Sea level rise and storminess
- Climate and quality of the marine environment

FACILITIES



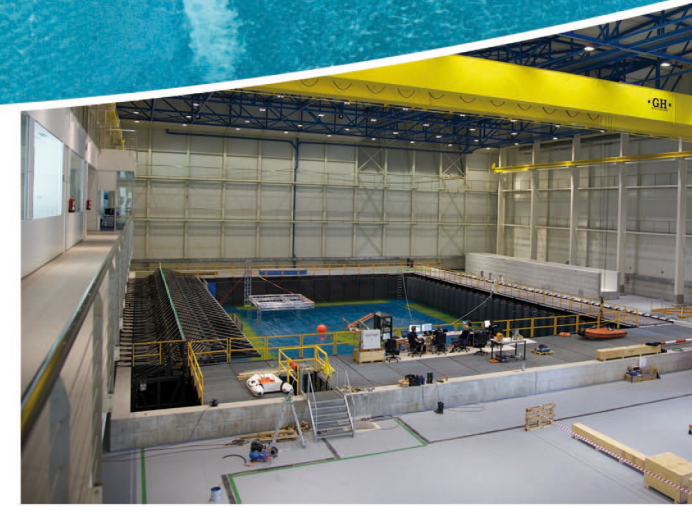
WAVE FLUMES

CIEM (100m x 3m x 5m)

COCOTsu (56m x 2m x 2.5m)

CIEMITO (18m x 0.4m x 0.6m)

NUMERICAL TOOLS



3D TANKS

CCOB (30m x 40m x 3.7m)

La Bassa (12m x 5m x 2.5m)

FIELD FACILITIES

Pont del Petroli (250m x 12m)