Coastal Engineering, Bridges and Roads unit

// Website research infrastructure

www.ugent.be/ea/civil-engineering/en/research/coastal-bridges-roads/coastal-engineering/infrastructure-services

// Contact research infrastructure

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Sampling, observation & survey infrastructure

Experimental facilities & analysis capacity

Data & information management and computing infrastructure

Infrastructure Categories		Infrastructure
	Field instrumentation	• A Valeport MIDAS WTR Wave and Tide Recorder for measurements on beaches and near shore environments (<20 m depth) [2] • Two Argus ASM-IV probes (high resolution measurements at the bottom of moving water) [2] • An acoustic doppler velocimeter ADV (Nortek Vectrino) (3D water velocity measurements) [2] • Valeport Electromagnetic Current Meter [2]
	Overview	
	Marine land-based facilities for engineering	• Small physical wave flume (Dimensions: 15.0 x 0.35 x 0.60 m (L x W x H). Design water depth: 0.30 m. Maximum wave height: 0.20 m) [2] • Large physical wave flume (Dimensions 30.0 x 1.0 x 1.2 (L x W x H). Design water depth: 0.80 m. Maximum wave height: 0.35 m) [2] • Wave-Flume 30 m x 1 m x 1.2 m (L x W x H) [2] • Wave Flume 15 m x 0.35 m x 0.6 m (L x W x H) [2] • 9 Resistive Wave Gauges (0.3 m) [2] • 9 Resistive Wave Gauges (0.5 m) [2] • Particle Image Velocimetry system [2] • Laser Profiler [2] • Faro Freestyle 3D Laser Scanner [2] • Loadcells (3 kg, 5 kg, 10 kg, 50 kg) [2]
	Num. models, spec. software and comp. IR	• MILDwave (in-house developed mild-slope wave propagation model) [2] • ANASYS – GENESYS (tools for wave generation, absorption and analysis in combination with physical wave flumes) [2] • WaveLab - Wave Analysis software [2] • AwaSys - 2nd Order Wave Generation software [2] • OpenFOAM (Navier-Stokes equations based numerical model for wave-structure interactions) [2] • DualSPHysics - Smoothed Particle Hydrodynamics model [2]

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