Scientific curriculum of LUCA MARTINELLI

Luca Martinelli (LM) received his Ms. Degree in Civil Engineering in June 1995 from the University of Ferrara.
In February 1999 LM defended his Ph.D. thesis "Risk analysis of caisson breakwaters subjected to breaking waves: the case of Genoa Voltri" in Hydraulic Engineering at the Technical University of Milan, tutored by Prof. A. Lamberti (Bologna University).

From 1999 to 2002 he worked in the yard for a private contractor (Impresa di Costruzioni Giuseppe Maltauro S.p.A.), as supervisor of the building of a navigation lock in Pontelagoscuro (FE), between the Po river (longest in Italy) and the Boicelli canal (10.5 Mil Euro). During this time, LM continued his scientific collaboration with the Research group of Prof. Lamberti.
LM then resumed his scientific activity at the hydraulic Department of Bologna University as research fellow, from 2002 to 2010.

Since 2010, LM worked the University of Padova, ICEA Department, first as Assistant professor and, since 2018, as Associate Professor.
LM teaching activity includes:
- Nearshore Hydrodynamics and Coastal Protection (in English), since 2010, for Civil Engineers, in Padova University.
- Coastal Risk Hazard (in English), since 2016, for Mathematical Engineers, in Padova University.

LM main qualification is related to physical model testing (including test design, data analysis and interpretation possibly through numerical modelling). LM carried out both tests in situ, e.g. the dynamic response of the vertical breakwaters in Genoa Voltri and Brindisi, where the breakwaters were hit by tug boats to induce some oscillation of the large structures (up to 30'000 tons), and in the laboratory, e.g. at the LSF of HR Wallingford (UK), at the deepwater wave basin of Aalborg University (DK), where he was involved in the R&D of a wave energy converter named Wave Dragon, at the large wave basin of the LIC (Technical University of Bari) and at the GrossenWeller Canal FZK (Hannover), where he studied the load induced by wave impacts on jetties and the wave load applied on the pile supporting off-shore wind turbines.
In Padova University, he conducted over 30 tests on the facilities there available: a wave basin (20 m long x 18 m wide, 0.8 m high), and a wave flume (36 m long x 1.0 m wide, 1.3 m high). He worked for the R&D of WECs (OE buoy, Seabreath, SDWED, EP4, WaveAbsorber), studied the stability of rubble mound breakwaters, coastal protection structures, nourishment, evaluated the wave forces on vertical breakwaters, the performance and loads on floating breakwaters of different dimensions, shape (box, Π-Type, catamaran), and mooring system (piles, tethered, chain-moored).
Having visited or worked in many European laboratories, being having published with approximately 100 co-authors, LM is well known by the scientific community working in the field of model testing in maritime constructions.

LM is author of over 130 scientific publications, 25 of which being peer reviewed journal papers. His h-index is 12 (Scopus).
The main areas of research are:
- R&D of wave energy converters, including their mooring system.
- Wave structure interaction, with particular focus on the impulsive loads applied by breaking waves.
- Performance of vertical and floating breakwaters.
- Coastal flooding hazard, coastal erosion and the relative mitigation measures.

LM is member of the ICEA PhD Council since 2016/2017, vice-chair of the International Coastal Engineering Commettee for ISOPE (2019-2020), member of the scientific committee for EWTEC 2019 and ICCE 2022.
LM participated to several EU projects, is reviewer of the most important journals in the field of Coastal engineering, and participated as speaker, invited speaker and/or moderator to several conferences worldwide since 1998, and is therefore well known in the sector of coastal engineering. He is Guest Editor of two Special Issues of the MDPI Journal Water (Impact Factor 2.069) on wave-structure interactions and on coastal flooding.
LM has been an expert evaluator for the EC FP7, and is now expert Evaluator for H2020 in the panel Excellent Science/European Research Infrastructures.

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