Università di Genova | **DICCA** DIPARTIMENTO DI INGEGNERIA CIVILE, CHIMICA E AMBIENTALE

SEMINAR

Abstract: Machine Learning for Coastal Morphodynamics (and more)

Machine Learning (ML) is transforming how we analyze and predict coastal morphodynamics, offering new ways to model complex interactions between waves, sediment transport, and shoreline evolution. This talk will introduce the fundamentals of ML, highlighting their strengths in handling data and capturing nonlinear coastal processes. By integrating data-driven insights with established physical models, AI-driven approaches can provide a powerful tool for understanding and managing coastal environments.
This talk aims to bridge the gap between coastal scientists and ML practitioners, fostering collaboration and innovation in data-driven coastal research. Whether you are new to ML or seeking advanced applications, this discussion will offer valuable perspectives on the future of Artificial Intelligence in coastal and environmental sciences.

GIOVANNI COCO, PHD

PHD IN NEARSHORE OCEANOGRAPHY AT THE UNIVERSITY OF PLYMOUTH (UK), HE IS PROFESSOR IN THE FACULTY OF SCIENCE AT THE UNIVERSITY OF AUCKLAND (NZ) AFTER BEING ENROLLED AT SCRIPPS INSTITUTE OF OCEANOGRAPHY (USA), NATIONAL INSTITUTE OF WATER AND ATMOSPHERIC RESEARCH (NZ) AND UNIVERSITY OF CANTABRIA (SPAIN).
HIS RESEARCH FOCUSES ON COASTAL PROCESSES USING A VARIETY OF APPROACHES THAT INCLUDE NUMERICAL AND DATA-DRIVEN MODELING INFORMED BY FIELD AND LABORATORY OBSERVATIONS. HE CURRENTLY WORKS ON PROJECTS DEALING WITH THE HYDRO- AND MORPHODYNAMICS OF THE NEARSHORE UNDER CLIMATIC CHANGES.

14 APR 2025

16:00
SALONE NOBILE - VILLA CAMBIASO

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CoMEM + MASTER OF SCIENCE IN COASTAL AND MARINE ENGINEERING AND MANAGEMENT

MeteOcean