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Other - Faculty Candidate for the Coastal Position with the Department of Oceanography and Coastal Science, Civil and Environmental Engineering and CCT

Coastal Hydrodynamic and Morphodynamics**Giulio Mariotti, Massachusetts Institute of Technology**

W.O. Crosby Postdoctoral Fellow

Digital Media Center Theatre
December 04, 2013 - 01:30 pm

Abstract:

Detailed hydrodynamic models are a powerful tool to explore coastal processes, such as river outflow, tidal currents and wind waves. Numerical models allow exploring a wide range of environmental forcings, providing information to predict morphological evolution under different scenarios. In this talk I will first present a study on the wave- and current-induced erosive processes in shallow lagoons, and their responses to sea level rise and storm surges. Secondly, I will present a study on how jet instability affects deltaic depositional patterns, specifically the formation of elongated levees.

Speaker's Bio:

Dr. Giulio Mariotti received his Ph.D. in Coastal Geomorphology from Boston University in January 2013 and is currently a W.O. Crosby Postdoctoral Fellow at the Massachusetts Institute of Technology's Department of Earth, Atmospheric, and Planetary Sciences. His research goal is to understand the fundamental geomorphic mechanisms governing the morphological evolution of coastal environments and to predict their long-term trajectories under different scenarios. This research plan has two main directives: the study of coastal morphology using dynamical-systems modeling, and the coupling between morphology and ecology.

