Università Politecnica delle Marche

Dipartimento di Ingegneria Civile, Edile e Architettura

SEMINAR ANNOUNCEMENT

Coastal Engineering Research at Pontificia Universidad Católica de Chile

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Wednesday 18 February 2026, h.10:30, Room IDRA

Abstract. This talk summarizes recent and ongoing research conducted by my team within the Department of Hydraulic and Environmental Engineering (DIHA) at Pontificia Universidad Católica de Chile. Following a brief overview of the department's diverse faculty and research areas, I will focus on current efforts to characterize and forecast wave processes and their impacts on coastal flooding and beach/river inlet evolution along Chile's highly dynamic central coast. In particular, I will present findings from the interannual monitoring of the Intermittently Open/Closed Estuary (IOCE) at Cáhuil. This case study serves to illustrate the complex riverine-wave and morphodynamic interactions characteristic of micro-tidal, wave-dominated environments.

Rodrigo Cienfuegos is a Civil Engineer (concentration in Hydraulics) from Pontificia Universidad Católica de Chile and holds a Ph.D. in Earth Sciences from the University of Grenoble, France. He specializes in the physical and numerical modeling of nonlinear shallow water waves and tsunami hydrodynamics. For the past decade, Dr. Cienfuegos has led interdisciplinary research at CIGIDEN, a Center of Excellence focused on disaster risk reduction and climate change adaptation. Starting this year, he serves as co-PI for the "Hazards" research line at CIGIDEN (under a 5+5 year funding cycle), leading a nationwide effort to develop a new generation of early warning systems for coastal flooding, including compound interactions at river inlets. In collaboration with graduate students and international peers, he has authored over 100 peer-reviewed publications and frequently serves on national advisory committees dedicated to building resilience against natural hazards.

All interested people are invited to attend the seminar.

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