

*CONSIGLIO NAZIONALE DELLE RICERCHE  
ISTITUTO DI SCIENZE MARINE*



## **CICLO DI SEMINARI**

26 febbraio 2024 – ore 10-11

**The Wave Driven Circulation and Transient Wave Transport**

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Longshore currents are familiar wave-generated currents. I will give an overview of the wave driven circulation at global, basin scales, as well as in the shallow water limit. In the latter currents and waves affect each other and the theory is not complete unless long gravity wave components are also included. Inspired by numerical experiments on wave breaking we develop a model for the transient wave-generated transport these ways produce. Standard asymptotic theory for wave generated transport is no longer valid. We develop the correct model for this type of transport, a ubiquitous but largely unexplored phenomenon, far from the shore.

Juan Restrepo è uno dei due autori dello storico paper McWilliams and Restrepo, 1999, "The wave driven ocean circulation" in cui, partendo dall'input meteorologico e fornendo energia solo al moto ondoso, hanno ricreato la circolazione mondiale con un input dato solamente dal white-capping delle onde.

