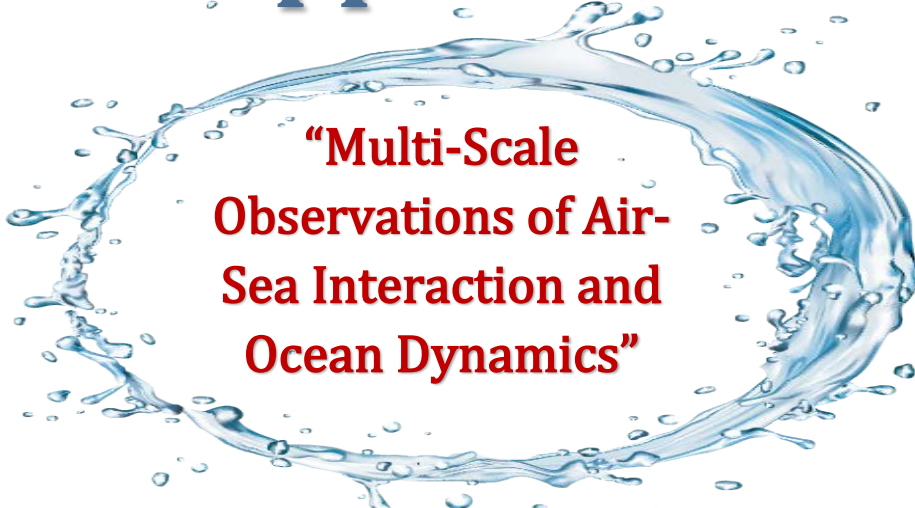


Center for Environmental & Applied Fluid Mechanics



**“Multi-Scale
Observations of Air-
Sea Interaction and
Ocean Dynamics”**

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San Diego

Over the last several decades, there has been growing recognition from both the oceanographic and atmospheric science communities that processes taking place in the vicinity of the ocean surface play a crucial role in the interaction between the atmosphere and the ocean. To better understand the complex, multi-scale couplings that drive the air-sea fluxes of mass (e.g. gases, aerosols), momentum (e.g. generation of waves and currents) and energy (e.g. heat and kinetic energy for currents and mixing), spatio-temporal observations of these processes are critically needed. Unfortunately, collecting in-situ measurements in such a rapidly evolving environment (both in space and time) over the broad range of scales of air-sea interaction processes has proven to be particularly challenging from traditional oceanographic platforms, while satellite products remain for now limited to coarse resolutions. In this talk, I will discuss recent progress advancing our ability to characterize air-sea interaction processes and ocean dynamics from mesoscale to submesoscale (and smaller) achieved through the development of novel observational techniques. In particular, I will focus on the role surface gravity waves and wave breaking in air-sea interaction and submesoscale dynamics, and discuss recent scientific advances made possible by measurements acquired using a unique combination of remote sensing platforms, in-situ and laboratory observational approaches.



Spring 2023 CEA FM Seminar Series
October 27, 2023 ✦ 3:00 PM ✦ Hodson Hall 210