



## POSTDOC POSITION IN OCEAN PROCESS MODELING AND THEORY

Applications are invited for a postdoctoral researcher in **ocean process modeling and theory** to work with Prof. Leif Thomas in the Department of Earth System Science at Stanford University. The successful candidate will pursue research on the interactions of internal waves with submesoscale currents in bottom boundary layers (BBLs) as part of a NSF-funded, collaborative project with Prof. Jacob Wenegrat at the University of Maryland.

BBLs on sloping bathymetry can support submesoscale currents with strong shears and lateral density gradients. While progress has been made on understanding the physics of BBL submesoscale flows in isolation, their interactions with the ubiquitous internal wave field are relatively unexplored. Theory predicts that such submesoscale currents can significantly affect the properties and propagation of internal waves, and in particular modify how the waves reflect off bathymetry, with implications for wave breaking, mixing, and energy exchange between the waves and currents. The successful candidate will test and extend these theories using state-of-the-art, high-resolution numerical simulations and analyses of mooring observations from the Gulf Stream, East Greenland Current, and the Denmark Strait Overflow where internal wave-mean flow interactions in the BBL are likely.

Candidates should have a strong background in geophysical fluid dynamics with application to the ocean or atmosphere and knowledge in numerical modeling. Evaluation of applications will begin June 1<sup>st</sup>, 2024 and will continue until the position is filled. The start date would be in Fall 2024, but completion of the PhD is required. The initial appointment is for one year and may be renewable for one additional year, subject to satisfactory performance, eligibility, and availability of funding. Applications should be sent by email to [leift@stanford.edu](mailto:leift@stanford.edu) and include a CV, brief statement of research interests, experience, and future career plans, and the names and contact information of three or more references.

Stanford is an equal opportunity employer and all qualified applicants will receive consideration without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, veteran status, or any other characteristic protected by law.