Postdoctoral Researcher: Coastal Oceanography/Nonlinear Internal Waves

The Environmental Fluid Dynamics Lab in the Department of Mechanical and Aerospace Engineering at UCSD invites applications for a postdoctoral researcher in Coastal Oceanography to begin in Winter/Spring 2025. The successful applicant will participate an Office of Naval Research (ONR) funded study of the dynamics of refraction and reflection of nonlinear internal waves (NLIWs). The postdoctoral researcher will use numerical modeling along with analysis of existing observational data to examine the dynamics of NLIWs interactions with steep topography. The successful candidate will ideally have a working knowledge of physical oceanography (specifically internal wave dynamics) and ocean modeling, although candidates with similar skills will be considered. The position will also include collaborative work with investigators at partner academic institutions.

Additional information about postdoctoral positions at UCSD and benefits can be found on the UCSD Office of Postdoctoral and Research Scholar website.

DUTIES AND RESPONSIBILITES

• Conduct a series of idealized and realistic numerical simulations to examine NLIW refraction, reflection and generation using the SUNTANS (http://suntans.stanford.edu/) model;
• Use existing observations along with model output to contribute to an understanding of NLIW dynamics;
• Explore the effects of forcing mechanisms such as internal tides and rotation, as well as effects from nearshore NLIW such as residual currents, upwelling and mixing;
• Publish research in peer-reviewed journals and present results at national and international conferences;
• Mentor graduate and undergraduate students in the Environmental Fluid Dynamics Lab.

MINIMUM QUALIFICATIONS

• Doctoral degree in Oceanography or Engineering or a related field from an accredited university, with relevant background in Fluid Mechanics or Geophysical Fluid Dynamics;
• Experience in numerical ocean model application, validation and analysis;
• Ability to collaborate effectively in a team environment;
• Excellent written and oral communication skills;
• Publication record in peer-reviewed journals related to the minimum qualifications;
• Ability to pursue research independently.

The postdoc will work directly with Dr. Geno Pawlak Tejada (https://sites.google.com/ucsd.edu/efdlab) at the Department of Mechanical and Aerospace Engineering and Scripps Institution of Oceanography, UC San Diego and will also collaborate with co-investigators at Stanford University. Additionally, there will be opportunities to mentor graduate and undergraduate students. Initial appointment will be for 12 months and will be renewable for up to one year, subject to performance and availability of funding. Salary will commensurate with qualifications and experience and with the UCSD Postdoc Salary Scale. (https://postdoc.ucsd.edu/postdocs/index.html)

To Apply: email Geno Pawlak Tejada (pawlak@ucsd.edu) with a cover letter, CV, and contact information for 3 references. Screening of applicants will begin immediately and will continue until the position is filled, however for full consideration, please email your application file before Dec. 13, 2024.

UCSD is an equal opportunity/affirmative action employer with a strong institutional commitment to excellence and diversity. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or status as a protected veteran.