

**Post-Doctoral Research Scientist Position in Air-Sea Interaction
Lamont-Doherty Earth Observatory of Columbia University**

The Lamont-Doherty Earth Observatory (LDEO) of Columbia University invites applications for a Postdoctoral Research Scientist position studying air-sea interaction and ocean wave processes. Our research group within the Ocean and Climate Physics Division at LDEO is seeking to extend its long-term research capability for the study of the fundamentals of air-sea interaction. Specifically, we are carrying out leading edge observations, characterization, and analyses of the temperature, waves, and velocity of the sea surface. Our focus is on improving the accuracy of direct measurement of air-sea fluxes and near-surface properties for use in modeling applications, such as forecasting sea state, weather and climate. The successful candidate will study the energy transfer across the air-sea interface and the role of surface gravity waves at the boundary by dynamically linking the atmosphere and ocean via a unique set of turbulent kinetic energy (TKE) dissipation rate measurements along with measurements of ocean surface gravity-capillary waves and subsequent wave breaking. This set of measurements will be used to explore the expected TKE dissipation rate deficit/surplus at the interface relative to a rigid wall and assess the role of surface gravity waves in these deviations. Furthermore, PDRS will work to elucidate and differentiate the effects of wave breaking and Langmuir circulation driven turbulence and define characteristic turbulent scales to improve present and future mixing parameterizations in the upper ocean. The Postdoctoral Research Scientist will participate in research related to field measurements of air-sea interaction, ocean wave processes, marine atmospheric boundary layer and the ocean mixed layer as well as develop methods to improve our understanding of the linkages between air-sea interactions.

The position will involve preparation for and participation in field experiments at sea and in coastal regions, data analysis, the writing of research papers and presentations at scientific meetings. The disciplinary specialty of research will be Physical oceanography, air-sea interaction, and marine atmospheric boundary layer research. Additionally, the candidate will use state-of-the-art observing techniques and work to develop new instrumentation relevant to air-sea interaction research for deployment on various platforms including ships, towers, aircraft, and unoccupied aerial systems (UAS). The position will be located at the Lamont-Doherty Earth Observatory in Palisades, NY in the research group of Christopher Zappa (<https://zappa-lab.github.io/>).

As a research group, we specifically aim to foster a broader participation of underrepresented researchers in the oceanographic and atmospheric sciences. Our goal is to build a community that is supportive and inclusive.

Please feel free to contact the Zappa Lab if you are interested or know of exceptional candidates. We prefer a Fall 2020 or Winter/Spring 2021 start for the PDRS.

Candidates must have a PhD in either physical oceanography or climate, atmospheric and related sciences with a concentration in physical oceanography. The candidate should also have the technical expertise for field observations and have demonstrated skill in the ability to analyze and manipulate large and disparate datasets. Wave modeling experience is preferred. Must be able to go to and work at sea.

Appointment will be for 1 year, with continuation pending progress and funding.

Search will remain open for at least 30 days after the ad appears and will continue until the position is filled.

Applicants should send a Curriculum Vitae, a Statement of Research Interests, and names and addresses of 3 referees to: Prof. Christopher J. Zappa (zappa@ldeo.columbia.edu)

Thank you.

Columbia University benefits offered with this Officer of Research appointment.

Columbia University is an Equal Opportunity/Affirmative Action employer -- Race/Gender/Disability/Veteran.