

The **Environmental Physics Group at the Swiss Federal Institute of Technology Zurich (ETH Zurich)** is a vibrant interdisciplinary team of researchers studying the interaction of biogeochemical cycles and climate from regional to global scales. A new focus of the group is the investigation of extreme events, i.e., conditions in either physical or biogeochemical state that are way outside the norm. We are particularly interested in Eastern Boundary Upwelling Systems, such as the California and Humboldt Current Systems, as we suspect them to be particularly susceptible to such events. In this context, we are searching for a

## Postdoctoral researcher in coupled ocean-atmosphere modeling

in the framework of the XEBUS project funded by the Swiss National Science Foundation. The overarching goal of XEBUS is to understand and quantify the extreme events associated with warming, ocean acidification and oxygen loss and their impact on biogeochemistry and lower trophic level ecosystems in the California and Humboldt Current Systems. We will study the past, present and future of extremes using a model-based approach augmented with the analysis and interpretation of in-situ and remote sensing-based observations. The core tool is a high-resolution Regional Earth System Model (R-ESM) consisting of the regional atmospheric model COSMO coupled to the Regional Oceanic Modeling System (ROMS) with an embedded ecosystem/biogeochemical model.

**The successful candidate** will work on the development and application of the coupled R-ESM, focusing on the relative roles of weather and climate in forcing the extremes. This researcher will be part of the XEBUS team consisting of three additional Ph.D. students who will investigate the impact of the extremes, each focusing on a particular subject, such as deoxygenation and impacts on the marine nitrogen cycle, or the impact of heat waves and ocean acidification on marine phytoplankton and zooplankton and the resulting changes in primary and export production.

**The ideal postdoc** has a Ph.D. degree in atmospheric, oceanic and/or climate sciences, or a closely related discipline with substantial expertise in modeling, preferably with atmosphere or ocean models. You have very good oral and written English skills, you are an excellent communicator, you like to work in an interdisciplinary environment, and you have demonstrated the ability to lead projects and write publications. The postdoctoral researcher will work in the Environmental Physics group of Prof. Nicolas Gruber and collaborate closely with Dr. Matthias Münnich. The starting date of this position is spring to early summer 2018.

**We look forward** to receiving your online application including a CV, a statement of research interest, and the names of two academic referees until March 15, 2018, but the position stays open until filled.

**For further information** about the position please contact Prof. Nicolas Gruber at [nicolas.gruber@env.ethz.ch](mailto:nicolas.gruber@env.ethz.ch) or visit our website [www.up.ethz.ch](http://www.up.ethz.ch).



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