

PhD Research Opportunities in "Ocean and Climate Dynamics"

Department of Earth and Environmental Sciences, University of Pennsylvania

Philadelphia

<https://climate.sas.upenn.edu>

Seeking motivated doctoral students to join my ocean & climate dynamics group at UPENN for the 2016-2017 academic year.

Possible scientific research directions include:

- The distinct role of Southern Ocean physics in the global climate; physical connections between the Southern Ocean and tropics via the atmosphere and the ocean.
- The response of global ocean physics, carbon and oxygen cycles to climate change, including feedbacks. Developing theories on what controls the oceanic sink for atmospheric CO₂ on various timescales.
- Ocean ecology: past and future responses to a changing physical climate. Biological-physical interactions in the ocean. Phytoplankton functional groups from space.
- Including evolutionary concepts and functional traits into ecological models and coupling them to comprehensive global climate models.

Projects involve running global climate models and analyzing a combination of model output, in-situ data and satellite datasets. Applicants must be self-motivated and hard working, with good written and verbal communication skills. Strong analytical background irrespective of your undergraduate major (e.g. math, physics, engineering or theoretical ecology coursework) and programming experience (e.g. Fortran, Matlab, python, unix environment programming) are desired.

If interested, please contact [Dr. Irina Marinov](mailto:imarinov@sas.upenn.edu) at imarinov@sas.upenn.edu with your CV, transcripts, interests and written samples, as well as the relevant science/computational background. Formal PhD application deadline for our department is January 15 2016.