Two PhD positions at UC Davis in computational oceanography and climate

The Computational Climate and Ocean Group with PI Maike Sonnewald invites applications for two Ph.D. positions at the University of California Davis on topics related to:

Ocean and climate:
1: Drivers of large scale ocean dynamics and their role in climate and extremes
2: Emergence and predictability of ocean biogeochemical fluxes
3: Long range predictability of sea level and weather

Computational:
1: Data mining: Statistical and ML based methodologies for classification
2: Sparse data inference: ML limited data for regression and prediction
3: AI for science: Uncertainty quantification and intelligible ML to leverage ML as a universal function approximator for theory advancement

For past projects see above links or here. A unifying objective of the Group is to improve long range predictions (weeks to months) and climate projections with models through better understanding of physics and biochemical interactions.

There are many opportunities for inter-institutional collaborations and research visits. Ph.D. candidates will develop academic presentation and writing skills and will be encouraged to travel to and present at academic conferences.

Qualifications

Experience in both ocean/climate and computational aspects are *not* expected, but strong enthusiasm and backgrounds are desired in one or more of these areas: ocean/climate dynamics, geophysical fluid dynamics, applied math, statistics, supervised ML, unsupervised ML, and numerical analysis.

Depending on an applicant's research interests and educational background, they can apply to the Ph.D. programs in Computer Science, Atmospheric Science, and Applied Mathematics. Due to the high volume of applicants, please list Maike as the preferred adviser and highlight relevant skills in computational and ocean/climate disciplines. For questions, email Prof. Maike Sonnewald (sonnewald@ucdavis.edu) with the subject 'Ph.D. candidate' and include a CV (tips here).

Commitment to Diversity

UC Davis ranks among the Forbes best employers for Women and Diversity overall. We believe that it is vital to cultivate an environment that fosters the success of diverse individuals and that diversity, equity, and inclusion are fundamental to the success of our education and research mission. This commitment to diversity informs our efforts in recruitment and hiring as we actively seek colleagues of exceptional ability who represent a broad range of viewpoints, experiences, and value systems, and who share UC Davis' dedication to excellence.