

## Open PhD and Postdoc positions in climate modeling

The Center for Climate Systems Modeling (C2SM) at the ETH in Zürich has openings for 6 Ph.D. and 2 postdoctoral positions. The Center was established in 2008 as a joint venture involving researchers from the ETH, MeteoSwiss, Empa, and ART with the vision to establish a world-leading climate modeling center in the Zurich area. Specific research activities include the refinement and employment of a hierarchy of climate and climate-related models, the exploitation and analysis of climate data sets, and the preparation of models for the next generation of high-performance computers. Recently, the Center was successful in securing funding to start a highly collaborative research project on “the Modeling the water cycle in a changing climate – a multi-scale interaction challenge”.

The 6 PhD positions relate to the following topics:

- (1) Ph.D. 1B: Statistical downscaling of regional climate models: Spatial coherence in complex topography (primary advisor: Dr. Christof Appenzeller (MeteoSwiss); secondary and formal ETH Advisor: Prof. Reto Knutti)
- (2) Ph.D. 2A: Possible influence of aerosols on the strength and location of extratropical cyclones and their associated precipitation (primary advisor: Prof. Ulrike Lohmann, ETH Zürich; secondary advisor: Prof. Heini Wernli, ETH Zürich)
- (3) Ph.D. 2B: Impact of decadal changes in the radiation balance on the hydrological cycle on global to regional scales (primary advisor: Prof. Martin Wild, ETH Zürich; secondary advisor: Prof. Reto Knutti, ETH Zürich)
- (4) Ph.D. 2C: Impact of stratospheric aerosols from strong volcanic eruptions on the strength of the global and regional hydrological cycle (primary advisor: Prof. Thomas Peter, ETH Zürich secondary advisors: Prof. Ulrike Lohmann, ETH Zürich and Dr. Eugene Rozanov, PMOD/WRC)
- (5) Ph.D. 3B: The impact of changes in freshwater fluxes on Southern Ocean stratification, circulation, and biogeochemistry in cold and warm climates (primary advisor: Prof. Nicolas Gruber, ETH Zürich; secondary advisor: Prof. Gerald Haug, ETH Zürich)
- (6) Ph.D. 4B: European-scale atmosphere-land surface water interactions and budgets (primary advisor: Prof. Sonia Seneviratne, ETH Zürich; secondary advisor: Prof. Harald Bugmann, ETH Zürich)

The 2 postdoctoral positions relate to the following topics:

- (7) Postdoc 1: Development and application of a regional atmosphere-ocean coupled modeling system on the basis of COSMO and ROMS (Prof. Nicolas Gruber, ETH Zürich and Dr. Isabelle Bey, C2SM) (2 years of funding)
- (8) Postdoc 2: Application and analyses of a global coupled atmosphere-ocean modeling system on the basis of ECHAM6 and MPIOM (Prof. Martin Wild, ETH Zürich and Dr. Isabelle Bey, C2SM) (1 year of funding)

The desired qualifications for the Ph.D. candidates are: Master degree in atmospheric and/or climate sciences, oceanography, biogeochemistry, plant sciences, physics, computational

sciences or a closely related discipline; experience with a higher programming language; fluency in English; good communication skills; interest in climate change research.

The desired qualifications for the postdoctoral candidates are: Ph.D. in atmospheric and/or oceanography sciences, substantial experience with numerical models of the atmosphere and/or ocean and a proven research and publication record.

Applications should be submitted electronically to the following links:

For the Ph.D. positions: <http://internet5.refline.ch/845721/1704/++publications++/1/>

For the postdoc positions: <http://internet5.refline.ch/845721/1705/++publications++/1/>

Please include a letter of interest, your CV, the names and contact information of 2-3 references, and state your preference for the 8 topics and/or 2 postdoc positions. Evaluation of applications will begin by November 15, 2011. Expected starting date for most positions is January 2012.

For further information please contact the following web-link ([www.c2sm.ethz.ch](http://www.c2sm.ethz.ch)) or contact the respective advisors.