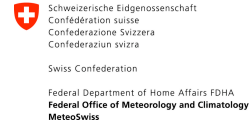




Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich



## Open position as post-doctoral fellow at the interface between regional climate modeling and HPC

The Center for Climate Systems Modeling (C2SM, [www.c2sm.ethz.ch](http://www.c2sm.ethz.ch)) at ETH Zurich is seeking to appoint a post-doctoral fellow (duration: 2.5 years) in the area of climate modeling and HPC. Successful candidates will have opportunities to help prepare a leading-edge climate and weather forecast model for higher resolution on emerging software and hardware technologies within a joint project involving ETH, MeteoSwiss, CSCS, DWD, and C2SM in the framework of the High-Performance and High Productivity Computing Initiative ([www.hp2c.ch](http://www.hp2c.ch)).

The areas of focus of this position will be:

- Software re-engineering of a climate model, in particular components addressing atmospheric dynamics and physical parameterizations
- Reformulation of model physics in line with the planned rewriting of the dynamical core to exploit existing optimized numerical libraries
- Explore possibilities of using CPU-GPU-type architecture for speeding up certain specific portions of the code.

A successful candidate will contribute to several focus areas of the HP2C project, including (but not limited to):

- Code development & rewriting, porting, evaluation and debugging of the model
- Sharing expert information and providing guidance to other teams involved in the project through the development of an active collaboration between atmospheric sciences teams (e.g. MeteoSwiss, ETH Zurich, C2SM) and HPC application development teams
- Publishing papers in high quality refereed conferences and journals.

The candidate should meet the following requirements:

- At least four years of experience in atmospheric modeling, computational fluid dynamics or high performance computing
- A doctoral degree in Atmospheric or Climate Science, Applied Mathematics, Computer Science or a related field
- Background in High Performance Computing
- Substantial code development experience in Fortran and/or C/C++
- Working knowledge of parallel programming languages and systems
- Fluency (written and oral) in English

This position is an opportunity for both domain scientists willing to strengthen their computer engineering skills or computer engineers willing to enter the climate /weather forecast modeling community. The position is based at ETH and Meteoswiss in Zurich but frequent travels will also

be required either to CSCS (located in southern Switzerland) and also possibly DWD. C2SM provides a stimulating environment, excellent working conditions, and collaborations within a team of highly motivated researchers and PhD students.

Potential applicants seeking further information are invited to contact William Sawyer at CSCS ([wsawyer@cscs.ch](mailto:wsawyer@cscs.ch), phone +41 91 610 82 29), Oliver Fuhrer at Meteoswiss ([Oliver.Fuhrer@meteoswiss.ch](mailto:Oliver.Fuhrer@meteoswiss.ch), phone +41 44 256 93 59) or Isabelle Bey at C2SM ([isabelle.bey@env.ethz.ch](mailto:isabelle.bey@env.ethz.ch), +41 44 632 79 15). The applications including a CV, a statement of interest, and addresses of two referees should be sent by email to Isabelle Bey ([isabelle.bey@env.ethz.ch](mailto:isabelle.bey@env.ethz.ch)). Applications received before August 1st, 2010 will receive full consideration. The position will remain open until filled.