

Empa is the interdisciplinary research and services institution for material sciences and technology development of the ETH Domain.

The Laboratory for Air Pollution & Environmental Technology investigates a broad range of effects of human activity on the atmosphere/climate system as a contribution to a healthy and safe environment by combining state-of-the-art measurement techniques and modeling.

In the research field of air quality – climate interactions we offer a

PhD position or a Postdoc in atmospheric/climate science on numerical modeling of future air quality in a changing climate

The project is funded through the Swiss COST office and is embedded in the European COST Action ES1004 EUMETCHEM (<http://eumetchem.info/>) with more than 40 participants across Europe.

Our project aims to better understand how summertime air quality will respond to future changes towards warmer and drier conditions in Europe. In this context, an important role is played by vegetation which acts both as a source (emissions of biogenic volatile organic compounds) and sink of air pollutants (e.g. dry deposition of ozone), both expected to change significantly in the future. The project will investigate how ozone and particulate matter concentrations in Europe will respond to climate variations and how air quality will interact with climate through land surface/vegetation – atmosphere interactions.

The successful candidate will perform numerical simulations with the coupled model system COSMO-ART-CLM which is a unique combination of a regional air quality/climate model (COSMO-ART developed at KIT, Germany; <http://www.imk-tro.kit.edu/english/3509.php>) with a land surface model (CLM developed at NCAR, U.S.A.; <http://www.cgd.ucar.edu/tss/clm/>) both being actively used at Empa. Model simulations for present day conditions will be evaluated against observations and other modeling systems in the framework of the AQMEII (<http://aqmeii.jrc.ec.europa.eu/>) initiative where our group is playing an active role.

If executed as a PhD study, the project will be jointly supervised with a Professor at ETH Zurich and the PhD degree will be granted by ETH.

The desired qualifications for the PhD student (*Postdoc*) are: Master degree (*PhD degree*) in atmospheric and/or climate 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.

Applications received before Monday, 3 September, 2012 will receive full consideration. Applicants should preferably be able to start before end of year, earliest possible date is 1 October 2012. We are looking forward to your application including a letter of motivation, your CV, transcripts, a list of publications (mandatory for Postdoc applications) and the names of 2-3 academic referees.

Applications have to be submitted online at the following web site

<http://internet1.refline.ch/673276/0306/++publications++/1/index.html>

For information about our research group please visit

http://www.empa.ch/plugin/template/empa/701/*/--/l=2

and for further questions about the project or the application procedure please contact

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