

## PhD Scholarships

Last Updated Friday, 05 March 2010

Msc Data Assimilation & Inverse Methods in Geosciences at University of Reading. [Informations here](#)

### PHD positions at Clermont-Ferrand University

Title: Reciprocal interactions between microbes and physicochemical conditions in clouds Application deadline: May 31st, 2010 Starting date: October 1st, 2010 Duration: 36 months

Supervisors (persons to contact for information and applications): A-M. Delort (Directeur de recherche CNRS - SEESIB): [A-Marie.Delort@univ-bpclermont.fr](mailto:A-Marie.Delort@univ-bpclermont.fr) L. Deguillaume (Physicien adjoint LaMP/ OPGC): [l.deguillaume@opgc.univ-bpclermont.fr](mailto:l.deguillaume@opgc.univ-bpclermont.fr) P. Amato (Chargé de recherche CNRS &ndash; SEESIB): [pierre.amato@univ-bpclermont.fr](mailto:pierre.amato@univ-bpclermont.fr)

Host laboratories: SEESIB (Laboratoire de Synthèse Et Etude de Systèmes à Intérêts Biologiques), UMR6504 CNRS &ndash; Clermont Université, 63177 AUBIERE cedex, France. <http://seesib.univ-bpclermont.fr/pages/> This laboratory works at the interface between biology and chemistry. Researches on the biodegradation of xenobiotics in the environment and on the development of synthesis pathways of molecules of interest involving enzymes are notably currently running.

LaMP (Laboratoire de Météorologie Physique), UMR6016 CNRS &ndash; Clermont Université, 63177 AUBIERE cedex, France. <http://wwwobs.univ-bpclermont.fr/atmos/fr/index.php> This laboratory studies the processes occurring in the atmosphere, such as the formation of aerosols and clouds, the behavior of clouds. Numeric models of atmospheric processes are used and developed by the LaMP.

Scientific description of the PhD position: Bacteria are present in the atmosphere, clouds and precipitations. A fraction of them are alive and metabolically active in cloud water, and despite the harsh conditions they are subject to, they are suspected to participate to the chemistry of clouds and to the chemical composition of the atmosphere. In addition, airborne microorganisms are particles that could contribute to the formation of droplets and ice crystals forming clouds. The PhD student involved in this study will be in charge of the cloud sampling operations at the puy de Dôme station, newly entirely re-equipped, and will characterize the biological content of the samples (cell concentration and nature, cell activity, concentration of biological ice nuclei&hellip;). He or she will analyze biological data along with the physicochemical data collected by our collaborators, and determine the influence of human activities on the microbial composition of the atmosphere and its characteristics. A rapid overview of the sampling site (puy de Dôme) and of biological and chemical measurements that are made on cloud samples can be found at <http://wwwobs.univ-bpclermont.fr/SO/beam/data.php>. In addition, a large part of the PhD will be devoted to researches in the laboratory. The reciprocal interactions existing between the physicochemical characteristics of clouds (temperature, pH, chemical composition, UV light, presence of free radicals&hellip;) and the physiology, metabolic activity and nucleation capacity of microorganisms isolated from clouds will be studied in details. The goal of this study is to develop a numeric model of atmospheric processes taking into account the action of microbial cells and their behavior during their journey in the air. The candidate will have the opportunity to utilize a large panel of methods in microbiology, molecular biology, analytical chemistry, physics, and meteorology, including cell culture, flux cytometry, PCR, bioluminescence, NMR, mass spectrometry, ion chromatography. Prerequisites in microbiology and/or molecular biology and microbial ecology would be appreciated and a scientific knowledge of the atmosphere would be a plus. Finally, he or she should be enthusiastic and imaginative, and be able of designing relevant experiments to address new scientific questions.

PHD positions at King's College London PhD position available starting early 2010 to be part of the project 'ClearFlo'. The student, to be based at King's College London, will focus on the meteorological dimension of the project. The NERC funded ClearFlo project is concerned with the relations between air quality, human health and meteorology in urban areas. ClearFlo aims to provide integrated measurements of the meteorology, composition and particulate loading of London's urban atmosphere, made at street level and at elevated sites, implemented by modeling, to improve predictive capability for air quality. New measurement capabilities in London will be established, including long-term measurements and intensive observation periods. Analysis and modeling of the measurements will be used to establish key processes.

The PhD student research will focus on the micrometeorology and boundary layer meteorology of London. A wide range of new instruments will be installed at sites in and near London including: eddy covariance towers, large aperture scintillometry, and ceilometers. The student will develop their own research thesis within the scope of the larger project; possibilities include the influence of surface characteristics and flux partitioning on boundary layer development.

The student will join a dynamic, international group of PhD students and post-docs working on urban atmosphere research at King's College London < <http://www.kcl.ac.uk/schools/sspp/geography/people/acad/grimmond/>>; <<http://geography.kcl.ac.uk/micromet/index.htm>> as well as having close collaboration with colleagues at the University of Reading and a number of other UK universities and research institutes involved in the ClearFlo project.

**Student: Strong interest in measurement, data analysis, micrometeorology and/or boundary layer meteorology with**

experience in one or more of these aspects, and keen to learn about the other areas. Background in meteorology, physics, engineering, physical geography or other relevant areas will be considered. A strong undergraduate and master's degree are essential.

Requirements: student must be eligible for NERC funding (i.e. a UK citizen or resident in the UK for longer than 3 years while not participating in education). Please check the NERC website if you are uncertain about your eligibility.

Application: Please send an email with the following: CV, statement demonstrating appropriate skills and interest (1 page), example of previous research (e.g. Master's thesis, published papers), names of two referees. Indicate when you would be available to start a PhD. Please email: Prof Sue Grimmond [sue.grimmond@kcl.ac.uk](mailto:sue.grimmond@kcl.ac.uk)  
Closing date: December 7th in the first instance. Applications will be accepted until the position has been filled.

For EU/UK citizens: additional opportunities exist on a project concerned with urban energy, water and carbon exchanges (please follow the application instructions above but clearly indicate that this is for position 2).

Note for non UK citizens (and UK citizens), there are additional PhD opportunities. KCL funding deadline is 1 February 2010 (note you will need to complete an online PhD application <http://www.kcl.ac.uk/schools/sspp/geography/phd/apply.html> and funding application <http://www.kcl.ac.uk/graduate/funding/funding1011>).

PHD positions at IMPRS-ESM Earth System research The International Max Planck Research School on Earth System Modelling (IMPRS-ESM) in Hamburg, Germany, offers several PhD positions to outstanding students with interest in advanced training and interdisciplinary studies in Earth system research. Detailed information is available on our web site: <http://www.earthsystemschool.de>.

Positions are available starting March 2010.

Research Assistantship at the University of Alaska Fairbanks. "Studying the effect of small scale processes on the structure and dynamics of the Stable Boundary Layer" Project and aims: We invite applications for a fully funded studentship (MS or PhD) with the aim to improve understanding of the effects of small scale dynamical processes (e.g., drainage flows) in the Stable Boundary Layer (BL) structure and surface fluxes. At the University of Alaska Fairbanks (http://www.uaf.edu/) the selected student will participate of a winter micrometeorological/dynamic experiment involving a backscatter lidar, Doppler sodar, scintillometers, sonic anemometers and conventional meteorological instruments searching to connect small scale flows with the evolution, state and morphology of the Stable-BL and will explore linkages with surface micrometeorological fluxes in presence of multiple inversion layers, destruction and reformation of inversion, shear layers, etc. This study will improve understanding basic physical mechanisms governing exchanges between surface and the BL under extreme stable conditions and will contribute to refine mesoscale simulation of Air pollution processes in high latitude. The student will join the Atmospheric Sciences Department at the University of Alaska Fairbanks composed by a group of very active and diverse researchers (<http://www.gi.alaska.edu/AtmosSci/index.html>). The student will be trained in field experiments in atmospheric sciences, instrumental techniques for BL research, data analysis, signal processing, signal interpretation and computational modeling. Atmospheric Sciences facilities comprise a Lidar site in UAF campus and Aerosol Research Facilities. The successful candidate will be based at University of Alaska Fairbanks and will develop the BL experiment in Fairbanks campus. The candidate will be supervised by Dr J. Fochesatto ([foch@gi.alaska.edu](mailto:foch@gi.alaska.edu)). Applicant requirements: We are looking for a creative and self-motivated candidate with a BS or equivalent in physics, atmospheric sciences, environmental monitoring/science, and with strong physics background, instrumental and computational skills. Experience with micrometeorological instruments, computer programming, or BL research will be of advantage. American citizens and foreign students are encouraged to apply. Please see eligibility conditions at (<http://www.uaf.edu/asp/>). Studentship includes tuition fees and salary. Fall semester of 2009 would be a preferable starting period but applications to apply to the following spring semester 2010 will be also under consideration. To apply for the MS/PhD studentship, an application form can be obtained from the Admission Office web site ([www.uaf.edu/admissions/](http://www.uaf.edu/admissions/)) or by contacting Barbara Day by phone:(907)474-7368 or by email: [atmos@gi.alaska.edu](mailto:atmos@gi.alaska.edu). Completed application forms should be returned to the Admission Office by the closing date. Please email to [foch@gi.alaska.edu](mailto:foch@gi.alaska.edu) with a short message to confirm that you have submitted an application, for helping us ensure that all applications are considered. Ph.D. Position (TV-L E13/2): Gas and Energy Exchange in Disturbed Forest Ecosystems The project is part of a cross-disciplinary collaboration to study ecosystem-atmosphere exchange of carbon, water and energy in areas of extensive wind-damage in relation to bark beetle dispersion in National Park "Bavarian Forest" in Bavaria, Germany. The successful candidate will conduct Ph.D. thesis research and contribute to work including

- Set-up and operation of micrometeorological trace-gas and energy flux measurement sites in windfall areas in rugged mountainous terrain
- Development and application of emission and dispersion models at high temporal and spatial resolution
- Measurement and modelling of ecosystem carbon exchange following a major disturbance (with all biomass debris left intact on the ground)

Methods: mobile and stationary micrometeorological systems, eddy covariance techniques, footprint analysis, dispersion

modelling.

The successful candidates must have a Master of Science degree (or equivalent) with documented expertise in at least one of the following fields: micrometeorology, meteorology, environmental physics or physics. The project work involves extensive field- and team-work at remote sites and requires the ability to work in rugged terrain and a valid driving licence. We expect outstanding technical, analytical and social skills. TUM is an equal opportunity employer. Working location will be Garmisch-Partenkirchen in southern Bavaria, Germany.

Please send your application and CV in electronic form (including contact information for three professional references) to:

Prof. Dr. Hans Peter Schmid

Email: HaPe.Schmid@imk.fzk.de PhD for the Earth System Modelling Group at MPI-C The Department of Atmospheric Chemistry at the Max Planck Institute for Chemistry in Mainz is looking for a Ph.D. student for the Earth System Modelling Group The Earth System Modelling Group at the Max Planck Institute for Chemistry (Mainz, Germany), invites applications for Ph.D. candidates interested in the effects of the ocean on atmospheric chemistry. The candidate will work on an interdisciplinary project in collaboration with the Cyprus Institute (Nicosia) examining the effects of air-sea tracer exchange and the feedback to the terrestrial climate system. The focus of the project is to extend / improve the Modular Earth Submodel System (MESSy, [www.messy-interface.org](http://www.messy-interface.org)) and to conduct simulations of the global climate system including atmospheric and oceanic chemistry. The candidate will be integrated into a dynamic group working on Earth System Modeling and get the opportunity to perform cutting-edge research within the climate change community. A strong collaboration with the experimental groups within the Max Planck Institute is intended, e.g. measurements of ocean surface constituents will be compared with the model simulations and used to improve the model parameterizations. Financial support will be provided through an initially 2-year (prolongable by one year) research scholarship of the International Max Planck Research School (IMPRS) on Atmospheric Chemistry and Physics. The candidate should have a Master's or corresponding degree in a quantitative science (e.g. chemistry, physics, meteorology, geophysics, physical geography, computer science) with an interest in applying her/his expertise to Earth System chemistry and numerical modeling. The project will involve mainly computer modelling and code developments, thus a strong interest in programming is required. Applications must include a complete and signed application form (<http://www.atmosphere.mpg.de> -> Application, admission -> application.pdf), two letters of recommendation, to be sent from the referees directly to the IMPRS office, certified copies of academic certificates, Curriculum Vitae (including a portrait photo), a brief motivation as well as a statement of future goals. At a later stage you may be required to submit your thesis (in English) and are invited to Mainz for an interview with Dr. P. Jöckel, Dr. A. Pozzer, and other members of the Earth System Modelling Group. Traveling costs will be reimbursed by the IMPRS. The Max Planck Society intends to increase the portion of female scientists in underrepresented fields. Therefore, we particularly encourage women to apply. Applications from handicapped people are particularly encouraged. For more information please contact: Dr. Jöckel ([joeckel@mpch-mainz.mpg.de](mailto:joeckel@mpch-mainz.mpg.de)) and Dr. Pozzer ([pozzer@mpch-mainz.mpg.de](mailto:pozzer@mpch-mainz.mpg.de)). If you fulfill the requirements you are heartily invited to send your application until February 5, 2009 to: MPI for Chemistry, Dept. of Atmospheric Chemistry c/o Tineke Lelieveld, IMPRS Coordinator P.O. Box 306055020 Mainz, Germany Registrations now open for PhD Degree in Climate and Environmental Studies

The Multi-Institution Program for PhD/Master's Degree in Climate and Environmental Studies (CLIAMB), a partnership between the National Institute for Amazonian Research (INPA) and the University of Amazonas State (UEA), announce that registrations are now open for Master and PhD Degrees. There are 25 posts available, 15 for master's degree and 10 for PhD degrees.

The CLIAMB Program has currently 45 students enrolled, 22 PhD and 23 Master's Degree students.

Applications for entrance exams for Master's Degree ends January 9, 2009, and applications for PhD Degrees ends January 30, 2009. Both should be done at the General Offices of the Program for Climate and Environment Studies located at the Center for Advanced Studies of the Humid Tropic (CESTU), in the UEA's Rectory, Avenida Djalma Batista, 3578 - Flores, Manaus, AM, Brazil, between 09:00 AM to noon. The entrance exams will be qualifying and eliminatory. Locations and dates will be published in a near future in the web sites of the two institutions.

The program's focal point is the interaction climate-biosphere in the Amazon and has as objectives, besides the understanding and modeling of processes of interaction biosphere-atmosphere in the Amazon, to deal with climatic and environmental impacts in the Amazon caused by land use in the region and the global climatic changes in multi and interdisciplinary fields.

Interested parties in participating in the entrance exams should have background education in areas of Exact or Earth Sciences (Meteorology, Physics, Mathematics, Statistics, Chemistry, Computer Science, Geology, Oceanography, among others), Engineering (Agronomic, Forest, Electric, Civil, Mechanics, among others) or Biological Sciences, including Ecology.

For more information: +55 (92) 3236-8569 (UEA) [cestu@uea.edu.br](mailto:cestu@uea.edu.br) and +55 (92) 3643-3255 (INPA) [cliamb@inpa.gov.br](mailto:cliamb@inpa.gov.br)

The announcements are available at: <http://posclima.inpa.gov.br/?p=folder> PhD position available at the Institut für Meteorologie und Klimaforschung (IMK) A PhD position is available at the Institut fuer Meteorologie und Klimaforschung (IMK), Forschungszentrum Karlsruhe. Within the Helmholtz research network EOS-2 (Earth observing system - 2) we will detect global distributions of atmospheric trace species in the upper troposphere from infra-red spectral measurements of a satellite-borne instrument and compare them with simulation results of several atmospheric chemistry-transport models. The aim of the study is to improve our knowledge of natural and anthropogenic sources (like industrial pollution or biomass burning) of trace species being involved in climate processes, and to advance our understanding of transport into the free atmosphere (to altitudes of 8 km and above) and chemical conversion of the relevant species in this altitude range. The observations of the MIPAS instrument on board the European Environmental Satellite (ENVISAT) will form the data basis. MIPAS is a Fourier Transform Infra-red Emission Spectrometer, measuring the thermal emission of the atmosphere with high spectral resolution. The trace gas distributions measured by MIPAS for several episodes of upper tropospheric pollution will be compared with results of simulations performed with the ECHAM/MESSy Atmospheric Chemistry (EMAC) model and the regional chemistry-transport model COSMO-ART.

The successful candidate will analyse MIPAS data to derive trace gas distributions from the spectral measurements, run the chemistry-transport models, and analyse the observational and model data sets. The work will be performed in close co-operation between the MIPAS data analysis group and atmospheric modelling group at IMK.

Funding is available within the Helmholtz research network EOS-2 covering TVoED 13/2 for a period of 3 years. The position is open immediately and will remain open until filled. The position can be used to obtain the PhD grade (Dr. rer. nat.) at the faculty of physics of University of Karlsruhe.

The candidates should have a scientific education either in meteorology, physics, physical chemistry, or other related fields, with excellent qualification. They should enjoy working in data analysis and have profound computer skills. Knowledge of programming languages (preferably FORTRAN90, IDL) is requested, as well as good knowledge of English and/or German.

Interested candidates please contact Dr. Gabriele Stiller <[gabriele.stiller@imk.fzk.de](mailto:gabriele.stiller@imk.fzk.de)> or Dr. Roland Ruhnke <[roland.ruhnke@imk.fzk.de](mailto:roland.ruhnke@imk.fzk.de)> at IMK (<http://www.fzk.de/imk/asf>) for further information on the position.

Applications should be sent electronically, including a curriculum vitae together with the names of two referees, to Prof. Dr. H. Fischer at the Institut fuer Meteorologie und Klimaforschung <[herbert.fischer@imk.fzk.de](mailto:herbert.fischer@imk.fzk.de)> with copies to <[gabriele.stiller@imk.fzk.de](mailto:gabriele.stiller@imk.fzk.de)> and <[roland.ruhnke@imk.fzk.de](mailto:roland.ruhnke@imk.fzk.de)>.