POST-DOCTORAL POSITIONS
IN LAND SURFACE AND ECOSYSTEM MODELING

LSCE, Gif-sur-Yvette, 18/09/2015

The land-surface modeling group at the LSCE ("Laboratoire des Sciences du Climat et de l’Environnement", www.lsce.ipsl.fr/) is looking for several post-doctoral researchers interested in land surface modeling and ecosystem functioning. The positions are available for a fixed-term period of 24 months with a possible one or two year extension.

The scientific context for these positions includes the quantification of carbon and water fluxes in the soil-plant-atmosphere continuum, the understanding of the underlying processes to support greenhouse gas (GHG) emission mitigation in the context of global changes (climate, land-use and land-management changes), the impact of nitrogen cycle on ecosystem carbon fluxes, and the investigation of carbon- and water-related ecosystem services (i.e., wood production, carbon sequestration, water availability). The main scientific objectives and the related tasks of the position will be determined following discussions between the applicant and the principal investigators, while taking into account the experience and career path of the applicant. The European projects that will fund these positions will provide additional context and may guide some of the objectives of the work. For instance, two projects with the University of Lund aim to i) better understand how interactions between forest management and nitrogen inputs (fertilization, deposition) impact the carbon storage of European forests and ii) use data assimilation techniques to improve model skill with multiple data streams (in particular from the ICOS European infrastructure). Another project with ECMWF meteorological centre will focus on the reanalysis of the carbon cycle over the last century.

The post-doctoral researcher will primarily use the global land surface model ORCHIDEE, including recent developments related to the nitrogen cycle, forest management, and crop and pasture management. Atmospheric transport models may also be used to assimilate atmospheric GHG concentrations as large-scale constraints using advanced data assimilation techniques. The activities will be mainly located at LSCE (CEA, Orme des Merisiers, Gif/Yvette, France) on the plateau of Saclay, approximately 25 km south-west of Paris, with some travel to Sweden.

Home institution:

Laboratoire des Sciences du Climat et de l’Environnement (LSCE, Orme-les-Merisiers, Gif-sur-Yvette). LSCE is a joint research unit of Commissariat à L’Energie Atomique et des Energies Alternatives (CEA), Centre National de la Recherche Scientifique (CNRS) and Université de Versailles Saint Quentin-en-Yvelines (UVSQ). LSCE employs over 320 researchers covering 30 different nationalities. Their research mission is to contribute to a better understanding of the interactions between human activities in the Earth System, environment and climate dynamics at different time scales. LSCE is a world-class institute and a thriving nexus for climate change research.
Qualifications required:

Given the interdisciplinary nature of the research we are seeking highly motivated individuals with a degree (Master or PhD) in for example mathematics, physics, engineering, computer science, meteorology or theoretical ecology. A broad interest in natural sciences and more specifically in terrestrial ecology is essential. Rather than requiring any particular training, we are looking for candidates motivated by science with ability to develop code (particularly Fortran 90) and to integrate scientific knowledge into numerical schemes. Priority will be given to individuals who have published peer-reviewed papers but it is not a strict requirement.

Required content of the application:

There are no specific application forms. Applications and inquiries should be sent to:

Bertrand Guenet (bertrand.guenet__at__lsce.ipsl.fr)
Sebastiaan Luyssaert (Sebastiaan.Luyssaert__at__lsce.ipsl.fr)
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Applications should include (1) a curriculum vitae, (2) statement of motivation including a short description (½ page no more than 1 page) of a recent scientific question you answered and (3) names, addresses, phone numbers, and email addresses of at least two references. The position is available from September 1st and will remain open until filled with a review of applications and interviews starting on 24th June. Salary follows national directives and is adjusted for work experience. A dual position may be explored in case your partner/spouse has a competitive CV and background in line with the research activities at LSCE.