



18-month Post-doctoral position on ocean-atmosphere modeling at Laboratoire de l'Atmosphère et des Cyclones, Saint-Denis, La Réunion, France

Keywords: ocean-atmosphere fluxes, tropical cyclones, numerical modeling

A postdoctoral position in the field of atmospheric science (hurricane modeling and air-sea interactions) is available in La Reunion Island at the Laboratoire de l'Atmosphère et des Cyclones (LACy), a joint research unit of Reunion University, CNRS and Meteo-France. The appointment is for 18 months and should start by early 2018. The position will remain open until fulfilled.

Context and objectives

LACy coordinates the research proposal ReNovRisk-Cyclones (INTERREG-V Indian Ocean), successfully selected for funding by the European Commission in September 2017. ReNovRisk-Cyclones is the international component of the research program ReNovRisk, which aims at analyzing the impact of hazards associated with tropical cyclones (wind, swell, marine submersion, flood, erosion...) on the socio-economic development of Réunion island and other countries of the South-West Indian Ocean (SWIO). The current postdoctoral position focuses on tropical cyclone modeling, in particular on the modeling of ocean-atmosphere interactions.

A crucial point in the modeling of tropical cyclones concerns its energy supply. Currently most parameterizations used to represent ocean-atmosphere turbulent flows (heat and motion quantity) in meteorological models have been developed and validated for wind conditions well below cyclonic velocities. The successful candidate will contribute to the development of the ocean (CROCO) – wave (WW3) – atmosphere (Meso-NH) coupled model used at LACy through interpreting numerical simulations of tropical cyclones performed with a variety of ocean-atmosphere fluxes parameterizations. Some developments will also be proposed to take into account the effect of high wind and sea sprays on the heat and momentum fluxes.

The selected candidate will work in collaboration with the scientists of the Tropical Cyclone research unit of LACy and of the Laboratoire d'Océanographie Physique et Spatiale (LOPS), located in Brest (France).

Candidate profile

The candidate should have a PhD in meteorology or physical oceanography, together with some experience in mesoscale modeling. Good English level and demonstrated autonomy, communication and writing skills will be required. Research experience in tropical meteorology would be considered as an important additional skill.

Important information

Location: The successful applicant will work at Laboratoire de l'Atmosphère et des Cyclones (UMR 8105) located in Saint-Denis de La Réunion (Indian Ocean) with possible short-terms stays in Brest to exchange with LOPS researchers.

Duration: 18 months

Salary will be provided according to Reunion University salary rates. The net monthly salary shall amount from 2100 to 2300€, commensurate with experience (including social services and health insurance).

Application

Interested candidates should submit their applications, no later than 30 November, 2017, by email together to: Dr. Christelle Barthe (christelle.barthe@univ-reunion.fr) and Dr. Soline Bielli (soline.bielli-bousquet@univ-reunion.fr).

The application must include a statement of research interests, a CV and the names and contacts of at least two references. Applications will be examined at the beginning December, short-listed candidates will be interviewed by mid-December, making it possible to start on February 2018.