



2-year Post-doctoral position on tropical cyclone and climate change at Laboratoire de l'Atmosphère et des Cyclones, Saint-Denis, La Réunion, France

Keywords: climate change, tropical cyclones, numerical modeling

A 2-year postdoctoral position in the field of atmospheric/climate science (hurricane modeling and climate change) is available at Laboratoire de l'Atmosphère et des Cyclones (LACy), a joint research unit of Reunion University, CNRS and Meteo-France located in Reunion Island (Indian Ocean). The appointment should start by early 2018. The position will remain opened 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 the impact of climate change on cyclonic activity at local scale.

The successful candidate will set up the modeling protocol to perform high resolution mesoscale simulations of tropical cyclones over the SWIO basin at present and future times. The simulations will be performed with the ocean (CROCO) – wave (WW3) – atmosphere (Meso-NH) coupled model developed at LACy. The initial and lateral boundaries conditions will be extracted from high-resolution (0.1°) ARPEGE-Climat global climate simulations. He/she will perform simulations with the coupled ocean-atmosphere model over various regions of the SWIO basin (Reunion, Mauritius, Seychelles, Mayotte) to produce maps of wind, precipitation and swell at high spatial resolution. Another objective of this study will be to statistically assess changes in trajectory, intensity, structure, wind and precipitation of given tropical cyclones in the context of climate change.

This work will be conducted in collaboration with the scientists involved in the ReNovRisk program, in La Réunion and the SWIO area, as well as with researchers from Centre National de Recherches Météorologiques (CNRM, Toulouse) who will provide the outputs of the global climate simulations.

Candidate profile

The candidate should have a PhD in meteorology or climate, together with strong experience in numerical modeling. Good English level and demonstrated autonomy, communication and writing skills will be required. Research experience in tropical meteorology and/or tropical cyclones 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 Toulouse to exchange with CNRM researchers.

Duration: 24 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@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.