

Post-Doctoral researcher position at CERFACS (France)

Required Education: PhD in atmospheric, oceanic or climate science

From: as soon as possible

Duration: 18 months

Salary: from 2350 to 2500 Euros net/month depending on experience (CNRS salary grid)

Contact: Christophe CASSOU (CNRS-Cerfacs, cassou@cerfacs.fr)

Application: Should include CV, PhD or previous postdoc summary, letter of motivation and at least two reference names to be potentially contacted.

Application closure date : 10/05/2017

A post-doctoral position is available at CERFACS to work on decadal variability using coupled global climate models. The position falls within the framework of the ANR (French National Agency for Research) national project called MORDICUS and the PRIMAVERA H2020 EU-project (<https://www.primavera-h2020.eu/>). The work will involve running and analysing numerical experiments in order to (i) disentangle the various mechanisms responsible for ocean-land teleconnections at decadal timescale with a special focus on the North Atlantic adjacent continents –Europe, North America, Africa- (ii) provide an assessment of the possible climate evolution over the next ~15 years including both response to anthropogenic forcings and decadal internal variability.

More precisely, the core set of experiments will be based on the so-called Decadal Climate Prediction and Predictability (DCPP)-Component C simulations performed with CNRM-CM6 as part of the CNRM-Cerfacs group contribution to CMIP6. In these experiments, the North Atlantic sea surface temperatures are restored to time invariant anomalies corresponding to the Atlantic multidecadal Variability pattern (AMV), with the goal of estimating AMV climate impacts. A comparable set of experiments will seek the influence of Pacific Decadal Variability (PDV) on global climate. Experiments will be run in both standard- (~120km in the atmosphere and 1° in the ocean) and high- resolution (50km in the atmosphere, ¼ degrees in the ocean) configurations to evaluate the sensitivity of the model response to the presence of ocean meso-scale eddies on one hand and to the ameliorated representation of the atmospheric synoptic storms on the other hand. Experiments will be also carried out in both coupled ocean-atmosphere and stand-alone atmosphere mode to evaluate the importance of the air-sea coupling. Following a process-oriented approach, the available position is devoted here to the understanding of the model sources of variability/predictability rather than to the evaluation of the predictability by itself.

The applicant will be in charge of the model integrations and analyses. We thus seek experience in climate modeling together with strong knowledge related to seasonal-to-decadal climate variability. Beyond scientific excellence as evidenced by submission and publication of authored publications in refereed journals, the applicant should also have demonstrated expertise in shell scripting and/or data-analysis languages (e.g. NCL, R, etc.). The applicant will join the Climate Variability group within the Climate Modeling and Global Change Team at CERFACS. The group has a recognized expertise in climate variability and climate change studies, data assimilation and ocean-atmosphere coupling on both scientific and technical aspects (the OASIS coupler). The team benefits from the strong technical support provided by a pool of research engineers who are experts on both software and

hardware coupling issues. The position presents an opportunity for a motivated scientist to get involved in the growing domain of decadal climate changes.