

Post-doc position in Earth system seasonal-to-annual predictability at Météo-France research center (CNRM), Toulouse (France)

A 36-month postdoctoral fellowship/researcher position (with a possibility for extension) is available for the research topic “**Assessment of seasonal to multi-annual predictions using Earth system models**” in the Centre National de Recherches Météorologiques (CNRM, Toulouse, France, <http://www.umr-cnrm.fr/cmip6/>).

Expected starting date is approximately **February 1st, 2020**.

Net annual salary ranges from 30624 to 39360€, depending on experience, with full social benefits.

General context and objectives:

The position is funded through the EU H2020/BG08 project TRIATLAS (standing for South and Tropical Atlantic climate-based marine ecosystem prediction for sustainable management) which aims to assess the seasonal to decadal predictability and climate change (limits and uncertainties) of key climate and biogeochemical drivers for marine ecosystems (such as water temperature or net primary production) and to deliver multi-model predictions and scenarios from seasonal to multi-decadal timescales and associated uncertainties for these drivers to relevant stakeholders.

These goals will be achieved by combining ecosystem observations, climate-based ecosystem prediction and information on future socio-economic and ecosystem service changes.

Météo-France/CNRM coordinates research on seasonal-to-annual predictability in TRIATLAS, expanding its longstanding expertise on seasonal climate prediction to Earth system variables. In this context, Météo-France/CNRM opens a 36-month postdoctoral fellowship/researcher position. It is expected that the candidate will:

- Exploit available perfect model predictability ensembles and assess the predictability of key climate and biogeochemical variables driving the variability of marine ecosystems
- Assess the impact of initialization on the predictive skill of CNRM-CM/CNRM-ESM models (by performing ensemble retrospective forecasts over the observed period with both CNRM-ESM2-1 and CNRM-CM6-1)
- Compare the impact of interaction between Earth system components on seasonal-to-annual predictive skill

Required qualification

We are looking for a candidate with strong interests in oceanography, ocean biogeochemistry and climate physics, and with strong statistical and numerical (Linux, Fortran, CDAT/Python, NCL and/or R) skills. The candidates should hold a PhD degree and have experience in Physics, Environmental/Climate Sciences, Mathematics, or similar disciplines. Experience with complex models on super-computers, analyses of large climate data sets is necessary. Innate curiosity, enthusiasm for reading scientific literature, excellent writing and communication skills in English are also essential. Some experience with evaluating climate prediction ensembles would be a clear asset.

Applicants should send to roland.seferian@meteo.fr and lauriane.batte@meteo.fr

- [1] a curriculum vitae (including research experience, publications and conferences, computing skills and different language practice...)
- [2] a brief statement of research interests
- [3] names and contact details (email + telephone number) of three academic referees

Please note that attachments larger than ~5Mo are not supported by our e-mail server.

Expected starting date is approximately **February 1st, 2020**.

Consideration of applications begins immediately.

Applications should be sent by email no later than **October 31st, 2019**.

Hosting institution

The Centre National de Recherches Météorologiques (CNRM) is the research department of Météo-France (<http://www.cnrm.meteo.fr>). It is responsible for conducting the largest part of the research activities in weather forecasting, climate modelling, atmospheric chemistry, land-surface processes including snow related processes, oceanography. Within CNRM, the climate research group is in charge of the development of global state-of-the-art CNRM Earth system model (CNRM-ESM), which includes components dealing with the atmosphere dynamics and chemistry (ARPEGE), ocean and sea ice (NEMO-GELATO), land surface & biosphere (SURFEX), and oceanic biogeochemistry processes (PISCES). Alongside the development of CNRM-ESM, CNRM contributes to the study of climate variability and predictability, of the projection of climate at global and regional scales, of atmospheric chemistry, ocean-atmosphere interactions and global carbon cycle. CNRM has a long history within the climate research community and contributes to the successive IPCC reports.