



## **Post-doctoral fellowship at CNRM (UMR 3589 – METEO-FRANCE, CNRS)**

**Applications are invited for one post-doctoral research fellowship starting in February 2021, at Météo-France, in the Mesoscale Modelling Group of Centre National de Recherches Météorologiques (CNRM) in Toulouse, France (<http://www.umr-cnrm.fr/>) to work on the following subject:**

### **Evolution of a global land data assimilation system (LDAS-Monde)**

(renewable 12-month contract)

CNRM develops the ISBA land surface model within SURFEX, an operational modeling platform able to simulate the terrestrial water and carbon fluxes. SURFEX is an open-source platform coupled to a number of atmospheric and hydrological models, and includes a land data assimilation system (LDAS) based on an Extended Kalman filter, able to analyze root-zone soil moisture and vegetation biomass at spatial resolutions ranging from 1 to 25 km.

LDAS-Monde is able to work at a global scale and satellite-derived products (soil moisture, LAI) are integrated into the ISBA land surface model. The analyses produced by LDAS-Monde account for the synergies of the various upstream products.

The post-doctorate fellow will contribute to develop the use of LDAS-Monde for several

applications such as drought early warning, water resource and greenhouse-gas emission monitoring. In addition to the adaptation of the tool to the production of climate services, the post-doctorate fellow will further develop the existing EnKF prototype together with the assimilation of new observations (snow products, Level 1 satellite observations). She(He) will contribute to the development of new observation operators based on machine learning techniques.

The gross annual salary will vary from about 39300 € to 46700 €, depending on qualification.

Application should be done by email by sending a resume, a motivation letter, and the names, telephone and email address of two referees to:

[jean-christophe.calvet@meteo.fr](mailto:jean-christophe.calvet@meteo.fr)

The closing date for applications is  
**25 September 2020.**

The candidates should have knowledge on data assimilation, land surface modelling and remote sensing of terrestrial surfaces. They should be familiar with programming data analysis in Python, with the Linux environment, and with the FORTRAN programming language.

Funding source: Météo-France.