



## Research Engineer position at CNRM-CEN, Grenoble, France Design and implementation of a new physical snow model

### General information:

- o Workplace: Centre d'Etudes de la Neige, Grenoble, France
- o Contract from ERC Starting Grant project IVORI
- o Duration: Up to 3 years
- o Expected date of employment: 1 December 2022
- o Deadline for application: 30 July 2022
- o Work proportion: 100%
- o Salary will be provided according to Météo-France salary rates and depends on the background of the retained candidate. For example, the gross monthly salary is about 2552€ for an engineer with 1-2 years experience.
- o Desired level of education: master or equivalent, PhD is not mandatory but considered as a plus
- o Contact: [marie.dumont@meteo.fr](mailto:marie.dumont@meteo.fr) , [bavay@slf.ch](mailto:bavay@slf.ch)

*Interested in this position? please send CV and motivation letter to the contact persons.*

### Context:

The position is part of the ERC starting grant project IVORI, starting in February 2021 (5 years project). IVORI's goal is to build a microstructure-based snow-firn model encompassing all the relevant snow and firn physical variables to improve the modeling of seasonal and perennial snow.

**More info regarding the ERC project : <https://ivori.osug.fr/>**

### Activities

The engineer will be in charge of the implementation and optimization of a new snow model, the physical and numerical core of which is currently under development by two post-doctoral positions. The objective is to build a software that is well-designed in terms of architecture, user-friendly and computationally efficient.

Marie Dumont (CNRM/CEN) and Mathias Bavay (WSL/SLF) will supervise the work. The position will take place at CNRM/CEN in Grenoble, France but short visits in SLF, Davos, Switzerland are to be expected. The position will benefit from the computing facilities of Météo-France including the HPC facilities. It will also benefit from a motivating scientific environment in the context of the research

project ERC IVORI about snow. Intense collaborations are expected with Matthieu Lafaysse at CNRM/CEN and several other laboratories: IGE (Grenoble, France), WSL/SLF (Davos, Switzerland).

The CNRM is the research center of Météo-France, it is a joint unit of the CNRS. With about 230 permanent staff, its mission is to develop the knowledge and tools that Météo-France needs to produce its forecasts of weather, air quality or climate. One of the six units forming the CNRM, the CEN, focuses on the study of snow. With about 25 permanent staff, CEN has been involved for many years in the snow modelling.

### **Skills**

This job requires strong skills in computing sciences, code design and numerical modeling (Python and/or C++ and/or Fortran). Knowledge in Julia programming language would be an asset for this position but is not mandatory. Skills for writing documentation, work organization and work independently are also required.