**251_ES_CP_RE12**

**Job Reference**

251_ES_CP_RE12

**Position**

Research Engineer on Data Assimilation (RE12)

**Data de tancament**

Divendres, 30 Novembre, 2018  
**Reference:** 251_ES_CP_RE12  
**Job title:** Research Engineer on Data Assimilation (RE12)

**About BSC**

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS) is the leading supercomputing center in Spain. It houses MareNostrum, one of the most powerful supercomputers in Europe, and is a hosting member of the PRACE European distributed supercomputing infrastructure. The mission of BSC is to research, develop and manage information technologies in order to facilitate scientific progress. BSC combines HPC service provision and R&D into both computer and computational science (life, earth and engineering sciences) under one roof, and currently has over 500 staff from 44 countries.

Look at the BSC experience:  
BSC-CNS YouTube Channel  
BSC-CNS Corporate Video  
Let's stay connected with BSC Folks!

**Context And Mission**

Within the Earth Sciences Department of Barcelona Supercomputing Center (BSC-ES), led by Prof Francisco Doblas-Reyes, the climate prediction group, led by Dr. Markus Donat and Dr. Pablo Ortega, aims at developing climate prediction capability for time scales ranging from a few weeks to a few decades and from regional to global scales. The group is also part of the development team and a key user of the EC-Earth global climate model (http://www.ec-earth.org) and as such collaborates closely with all the members of the EC-Earth consortium. The Climate Prediction group is looking for a research engineer or a scientist to help with the production of initial conditions for our climate prediction activities.
Key Duties

- Maintain, integrate, and optimize the different model capabilities that allow for the assimilation of observations, both in the ocean and atmosphere (through the use of nudging techniques) and sea ice (with an Ensemble Kalman filter).
- Supervise and verify, in collaboration with the group’s scientists, that the model outputs of the assimilation experiments are scientifically sound, and that observations are well assimilated.
- Assist in the production and monitoring of assimilation experiments, as well as in the post-processing of the outputs to generate the initial conditions for the prediction experiments.
- Collaborate with other groups within the department to support scientific application work and computational development.
- Help the users to run the model with the maximum performance and efficiency

Requirements

- Education
  - Bachelor degree in Computer Science, Mathematics or Physics or related discipline. Advanced degrees and experience in meteorology/oceanography will be considered an asset.

- Essential Knowledge and Professional Experience
  - Excellent computing skills in high-level computer languages (especially FORTRAN and C/C++) and experience with UNIX/LINUX environments, scripting languages (bash, Python …) and debugging tools
  - Experience working with numerical models of ocean, atmosphere and other Earth System components
  - Experience in using HPC architecture and parallel programming (multi-threaded applications) will be valued
  - In-depth knowledge of data assimilation would be a clear advantage.
  - Experience with revision control systems (e.g., SVN or Git) will be valued

- Competences
  - Very good interpersonal skills
  - Fluency in English
  - Excellent written and verbal communication skills
  - Ability to take initiative, prioritize and work under set deadlines
  - Ability to work both independently and within a team

Conditions

- The position will be located at BSC within the Earth Sciences Department
- We offer a full-time contract, a good working environment, a highly stimulating environment with state-of-the-art infrastructure, flexible hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Temporary. The contract will be for 1,5 year, with possibility for renewal.
- Salary: we offer a competitive salary commensurate with the qualifications and experience of the candidate and according to the cost of living in Barcelona
- Starting date: 01/01/2019
Applications Procedure

All applications must include:

- A motivation letter with a statement of interest, including two contacts for further references - COMPULSORY - Applications without this document will not be considered
- A full CV including contact details

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.

Diversity and Equal Opportunity Employment

BSC-CNS is an equal opportunity employer committed to diversity and inclusion. We are pleased to consider all qualified applicants for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability or any other basis protected by applicable state or local law.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación