**JOB DESCRIPTION**

**Ref:**

**Job Title: Earth Sciences scientist support engineer**

**About BSC:**

BSC-CNS (Barcelona Supercomputing Center – Centro Nacional de Supercomputación) is the National Supercomputing Facility in Spain and was officially constituted in April 2005. BSC-CNS manages MareNostrum, one of the most powerful supercomputers in Europe, located at the Torre Girona chapel. The mission of BSC-CNS is to investigate, develop and manage information technology 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 400 staff from 41 countries. To get an idea of what its like to work at the BSC take a look at this video: <https://www.youtube.com/watch?v=VRkEii7OzRE>

**Context and Mission:**

Within the Earth Sciences Department of Barcelona Supercomputing Center, led by Prof Francisco Doblas-Reyes, the climate prediction group aims at developing a climate prediction capability for time scales ranging from a few weeks to a few decades into the future (sub-seasonal to decadal climate prediction) and from regional to global scales.

**In the framework of the H2020 PRIMAVERA and EUCP projects, which will deliver novel, advanced and well-evaluated high-resolution global climate models as well an innovative European ensemble climate prediction system. The successful applicant will join the Computational Earth Sciences group to provide technical support for other researchers and develop scientific codes to develop and renew climate workflows suitable for the needs of the department. This work will be carried out interacting closely with the climate prediction group.**

**Key Duties**

**The applicant will provide technical support for both computational and climate engineers and researchers to run experiments using shell scripts and workflow tools. Hence, special emphasis will be placed to improve the existing workflow solutions by making the codes flexible and robust, as well as efficient from a computational point of view. This will entail optimizing the scripts to adapt them to the needs of the group and, in certain cases, developing new features. The applicant will also provide the support necessary to solve the problems found by other researchers and engineers and to integrate their solutions into the set of scripts managed at the BSC. The codes will be appropriately documented and updated using SVN and GIT tools.**

**Requirements**

* **Education**
	+ **Having a Bachelor in Computer Science, Telecommunications, Physics or related discipline**
* **Knowledge**
	+ Excellent computing skills in high-level computer languages (especially FORTRAN and C/C++) and experience with UNIX/LINUX environments and scripting languages (bash, Python …)
	+ Good knowledge of object-oriented programming
	+ Excellent programming skills to manage big and collaborative projects and
	+ Excellent understanding of both Git and SVN
	+ **Basic knowledge of climate data formats (GRIB, NetCDF) and data dissemination technologies (e.g. ESGF, OPeNDAP)**
* **Professional Experience**
	+ **Computer programming experience related to solving scientific computing problems involving the handling of very large scientific codes**
	+ Previous experience in a scientific area related to the position, in particular climate or ocean modeling
	+ Previous experience in HPC architecture and parallel programming (multi-threaded applications) will be valued
	+ Previous experience in scientific software and tools (R, CDO, Python Numpy and Scipy, …) will be valued
* **Competences**
	+ Excellent problem-solving skills
	+ Proactive attitude and motivation to improve already existing solutions
	+ Ability to take initiative, prioritize and work under set deadlines and pressure
	+ Capacity to interact and build strong relations with both climate and computer scientists
	+ Fluency in English
	+ Excellent written and verbal communication skills
	+ **Ability to work both independently and within a team**

**Conditions**

The position will be located at BSC within the Earth Science department in collaboration with the specific program coordinator. The contract will be for 2 years.

**Applications Procedure**

All applications must be applied in LINK including:

1. A motivation letter
2. A full CV including contact details
3. Two reference LETTERS or CONTACTS

**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.

***OTHER DETAILS INTERNAL USE:***

***Duration of the contract:***

***Funding Project:***

***Salary Range: (To be confirmed with HR)***