**JOB DESCRIPTION**

**Ref: ESiWACE\_Perf\_Engineer**

**Job Title: Junior ESiWACE 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:**

In the framework of the ESiWACE project, the candidate will substantially improve efficiency and productivity of numerical weather and climate simulation on high-performance computing platforms by supporting the end-to-end workflow of global Earth system modelling in HPC environment. This will be obtained by improving and supporting: scalability of models, tools and data management on state-of-the-art supercomputer systems, usability of models and tools throughout the European HPC eco-system, and exploitability of the huge amount of resulting data. The candidate will develop solutions for cross-cutting HPC challenges particular to the weather and climate domain.

**Key Duties**

The candidate will:

* Join the team developing the tool
* Maintain the operational deployment on different HPC platforms
* Support the users inside and outside the center adding new features
* Maintain the software in the PyPi repository, pushing both source code updates and documentation

**Requirements**

* **Education**
	+ **Having a Bachelor in Computer Science, Telecommunications, Physics or related discipline. Having a Master’s or PhD degrees will be valued.**
* **Knowledge**
	+ **Excellent development skills in python and experience with UNIX/LINUX environments and scripting languages (bash, …)**
	+ **Strong object-oriented programming experience**
	+ **Experience of version control in a distributed team, including SVN or Git**
	+ **Previous experience in scientific python packages (Python Numpy, Scipy, …) will be valued**
	+ **In-depth knowledge of application and development of scientific applications on parallel computers**
	+ **Understanding of HPC computer architecture issues including CPU, accelerators, memory, interconnect, parallel I/O performance tuning and networking performance**
* **Professional Experience**
	+ **Previous experience in a scientific area related to the research position, in particular related to atmospheric modeling, will be appreciated**
* **Competences**
	+ **Capacity to interact and build strong relations with both earth and computer scientists**
	+ **Fluency in English**
	+ **Excellent written and verbal communication skills**
	+ **Ability to take initiative, prioritize and work under set deadlines and pressure**
	+ **Ability to work both independently and within a team**

**Conditions**

The position will be located at BSC within the Earth Sciences department in collaboration with the specific program coordinator. The contract will be for **two 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)***