Job Reference

345_22_ES_CES_RE1

Position

Model Input/Output C++ developer (RE1)

Data de tancament

Dilluns, 31 Octubre, 2022
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Job title: Model Input/Output C++ developer (RE1)

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 770 staff from 55 countries.

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

Context And Mission

Within the Earth Sciences Department of Barcelona Supercomputing Center, led by Prof Francisco Doblas-Reyes, the department aims to deliver novel, advanced and well-evaluated high-resolution global climate models, capable of simulating and predicting climate estimations with unprecedented fidelity. Within the Computational Earth Sciences group, the successful candidate will be part of the Data and Diagnostics Team compound of 15 members.

The successful applicant will join the team and participate in a new European project to build next-generation climate models. The candidate will integrate a third-party library (MultIO) into the climate model to generate model outputs and extract derived information. The library is a code specially developed in C++
to work with weather and climate outputs, and is runtime-configurable.

The successful applicant will be in direct interaction with the model developers, the team developing the library and the people responsible for the data infrastructure where the models will be run. The selected candidate should have strong C++ knowledge and physics knowledge or interest will be highly appreciated.

**Key Duties**

- Integration of third-party library into climate models I/O routines
- Develop arithmetic data extraction pipelines based on model outputs
- Interact with climate scientists to understand the needs and fulfil requirements
- Design, build and maintain efficient and reliable C++ code
- Maintenance and care of C++ code quality

**Requirements**

- **Education**
  - Having a Bachelor in Computer Science, Engineering, Mathematics, Physics or related discipline

- **Essential Knowledge and Professional Experience**
  - Experience (or relevant internships) in software development
  - C++ or object-oriented skills from similar languages such as Java or C#
  - Experience in Linux / Unix operating systems
  - Programming skills to manage big and collaborative projects and experience with Git

- **Additional Knowledge and Professional Experience**
  - Experience or knowledge in the usage and support of Unix- or Linux-based HPC systems, will be valued
  - Physics knowledge and skills to deal with weather and climate data, will be valued
  - Knowledge of weather/climate data formats (GRIB), will be valued
  - Excellent problem solving and analytical skills
  - Highly organised with the ability to prioritise own workload and adhere to deadlines
  - Ability to work both independently and/or collaboratively within a team
  - Fluent in English

- **Competences**
  - This is a specialized position so the successful candidate is expected to have a demonstrated learning capacity and the motivation to maintain a learning progression during the contract
  - The BSC Earth Sciences department is an international and interdisciplinary environment, so the candidate must be fluent in English and have good written and verbal skills
  - The candidate will work for an international collaborative project, so it is mandatory to be able to fulfill schedules and coordinate with members from other institutions, as well as disseminate the advances in international workshops
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 working hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Open-ended contract due to technical and scientific activities linked to the project and budget duration
- 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: ASAP

Applications procedure and process

All applications must be made through BSC website and contain:

- A full CV in English including contact details
- A Cover Letter with a statement of interest in English, including two contacts for further references - Applications without this document will not be considered

In accordance with the OTM-R principles, a gender-balanced recruitment panel is formed for every vacancy at the beginning of the process. After reviewing the content of the applications, the panel will start the interviews, with at least one technical and one administrative interview. A profile questionnaire as well as a technical exercise may be required during the process.

The panel will make a final decision and all candidates who had contacts with them will receive a feedback with details on the acceptance or rejection of their profile.

At BSC we are seeking continuous improvement in our recruitment processes, for any suggestions or feedback/complaints about our Recruitment Processes, please contact recruitment [at] bsc [dot] es.

For more information follow this link

Deadline

The vacancy will remain open until suitable candidate has been hired. Applications will be regularly reviewed and potential candidates will be contacted.
OTM-R principles for selection processes

BSC-CNS is committed to the principles of the Code of Conduct for the Recruitment of Researchers of the European Commission and the Open, Transparent and Merit-based Recruitment principles (OTM-R). This is applied for any potential candidate in all our processes, for example by creating gender-balanced recruitment panels and recognizing career breaks etc.

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.

For more information follow this link

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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