Position

Earth Modelling Performance Engineer (RE2)

Data de tancament

Dijous, 16 Desembre, 2021
Reference: 430_21_ES_CES_RE2
Job title: Earth Modelling Performance Engineer (RE2)

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 700 staff from 49 countries.

Look at the BSC experience:
BSC-CNS YouTube Channel
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Context And Mission

Within the Earth Sciences Department of Barcelona Supercomputing Center, led by Prof Francisco Doblas-Reyes, the Computational Earth Sciences group supports the development of 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.

The IS-ENES3 project aims at improving the European High-Performance Computing (HPC) and climate modelling infrastructures, both in terms of computational performance and data management.

The successful applicant will join the BSC Computational Earth Sciences group, within the Earth Sciences Department, to help at the practical implementation for IS-ENES3, working with the NEMO ocean model.
Key Duties

- Optimize and adapt earth system models code, especially the NEMO ocean model.
- Improve the performance of existing parallel codes, working on the serial efficiency and the scalability, changing if necessary the code or helping the developers with their required modifications.
- Generate performance analysis and benchmarks for selected applications and report the results to the applications developers and explore new possibilities to optimize earth system models.

Requirements

- Education
  - Master in Computer Science, Mathematics or Physics specialized in High Performance Computing.

- Essential Knowledge and Professional Experience
  - Minimum 2 years of experience in a similar position.
  - Experience using performance analysis tools, and parallel debuggers.
  - Experience in the optimization of Earth System Models using MPI/OpenMP or other parallel paradigms.
  - Experience supporting and collaborating with external partners.
  - Good understanding of Linux environment and Shell scripting.

- Competences
  - Excellent communication and interpersonal skills to be able to work within a team to complete tasks on schedule.
  - Capacity to interact and build strong relations with both climate and computer scientists.
  - Fluency in English.

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: Temporary - 31/12/2022 renewable
- 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: January 2022
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 of 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](https://www.bsc.es/ca/join-us/job-opportunities/43021escesre2)

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.

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