226_CS_SS_R3

Job Reference

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Position

R3 - Established Researcher

Data de tancament

Diumenge, 31 Desembre, 2017

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

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Context and Mission
The job will be developed within the NextGenIO project. The overall objective of the Next Generation I/O Project (NEXTGenIO) is to design and prototype a new, scalable, high-performance, energy efficient computing platform designed to address the challenge of delivering scalable I/O performance to applications at the Exascale. It will achieve this using highly innovative, non-volatile, dual in-line memory modules (NV-DIMMs). These hardware and systemware developments will be coupled to a co-design approach driven by the needs of some of today’s most demanding HPC applications. By meeting this overall objective, NEXTGenIO will solve a key part of the Exascale challenge and enable HPC and Big Data applications to overcome the limitations of today’s HPC I/O subsystems.

Today most high-end HPC systems employ data storage separate from the main system and the I/O subsystem often struggles to deal with the degree of parallelism present. As we move into the domain of extreme parallelism at the Exascale we need to address I/O if such systems are to deliver appropriate performance and efficiency for their application user communities.

**Key Duties**

- Lead the design and development of the data scheduling module
- Help in the design of the NVRAM file system specialized for the project needs
- Devise research topics that may lead to new research lines within the group

The candidate will work closely with the storage system research group and the NextGenIo consortium

**Requirements**

- Education
  - PhD in computer science (or equivalent)
  - Essential Knowledge and Professional Experience
  - Development of low-level system software
  - Proven leadership of small groups
  - Proven capacity to derive new research lines
  - Additional Knowledge and Professional Experience
  - Task-based programming
  - Machine learning
  - Programming libraries fro NVRAM
  - Competences
  - Fluency in spoken and written English, while fluency in other European languages will be also valued
  - Team working

**Conditions**

- The position will be located at BSC within the Storage system group at the computer science 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
- 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
- Internal candidatures will be prioritized

**Applications Procedure**
All applications must include:

- A motivation letter with a statement of interest, including two contacts for further references
- 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

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