402_22_CS_EEA_RE3

Job Reference

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Position

Senior Researcher position on Operating System for the MEEP project (RE3)

Data de tancament

Dilluns, 31 Octubre, 2022
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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

The Parallel Programming Models (PM) group, as part of the Computer Science Department, is one of the biggest groups composed of more than 30 PhD students, support engineers, postdocs and senior researchers. PM has a strong background on parallel and distributed programming models, domain specific languages (DSLs), compilers and accelerators. The PM group is involved in many EU project such as DEEP-SEA, MEEP and Textarossa, as well as, industrial projects with IBM, Mellanox, Huawei, and Fujitsu. The successful applicant will be based at BSC, but will also interact with our academic and industrial partners. The PM group is looking for scientists from the national and international community who wish to develop his/her career in a stimulating environment, rich in technological resources and campus life. We encourage applications from highly motivated computer scientists with outstanding qualifications. Successful candidates will join the PM research group to carry out their research in cutting-edge areas of parallel and distributed programming models, including the implementation of high-performance codes, heterogeneous
systems, compilers, runtimes, accelerators, DSLs, etc.

Key Duties

- Adaptation of the Linux kernel to the variety of Risc-V hardware available (production boards) and developed (FPGA-based) in the MEEP project
- Coordination with the hardware team on the various features to be supported: processor cores (Ariane, Lagarto...) with different ISAs (F, D, and C instructions), physical memory and persistent memory (Pmem), host-RISC-V communications (offload model, file transfers), and ethernet support on top of 100GbE connections.
- Develop the ethernet driver for the RISC-V access to the 100GbE.
- Participating on group/project publications, dissemination and training.

Requirements

- Education
  - PhD in Computer Science, Computer Engineering, or equivalent.

- Essential Knowledge and Professional Experience
  - Good skills in programming in C and C++.
  - Knowledge about the Linux kernel internals and device driver development.
  - Knowledge about OpenMP, MPI and/or Verilog/VHDL, and high-level synthesis tools is highly recommendable.

- Competences
  - Good written and verbal communication skills (English/Spanish).
  - Ability to take initiative, prioritize and work under set deadlines and pressure.
  - Ability to work independently and in a team.

Conditions

- The position will be located at BSC within the Computer 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: November 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 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](https://www.bsc.es/ca/join-us/job-opportunities/40222cseeare3)

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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