Job Reference

206_CS_MASS_R1

Position

PhD Student in LEGaTO project R1

Data de tancament

Dissabte, 31 Març, 2018

About BSC

BSC-CNS (Barcelona Supercomputing Center – Centro Nacional de Supercomputación) is the National Supercomputing Facility in Spain and manages MareNostrum, one of the most powerful supercomputers in Europe. The mission of BSC-CNS is to investigate, develop and manage information technology in order to facilitate scientific progress. With this aim, special dedication has been taken to areas such as Computer Sciences, Life Sciences, Earth Sciences and Computational Applications in Science and Engineering.

Look at the BSC experience:

BSC-CNS YouTube Channel
BSC-CNS Corporate Video
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Context and Mission of the role

The Heterogeneous Architectures group within the Computer Science department of Barcelona Supercomputing Center is offering a full-time PhD student position within the LEGaTO project. The successful candidate will complete a PhD degree in computer architecture in topics related to task-based programming model and runtime system support for irregular data structures (e.g. meshes and graphs) on distributed memories.

The successful candidate will join a dynamic research group (currently four postdocs, one developer and eleven PhD students) with strong connections to industry (including ARM, NVIDIA, Bull and Samsung). The group is at the forefront of research in energy-efficient system architectures and programming models.

The position will be located at BSC within the Computer Science department. The successful candidate will also be enrolled in the doctorate program in the Department of Computer Architecture at Universitat
Responsibilities

- Complete a PhD relating to task-based programming models and runtime systems, including abstractions and runtime techniques for portable support of irregular data structures (e.g. meshes and graphs) on distributed memories
- Collaborate with research teams across Europe in the ExaNode, EuroEXA and LEGaTO projects

Requirements

1. Education

- M.Sc in Computer Science or a related discipline
- Candidates with B.Sc in computer science and an outstanding academic record are also encouraged to apply

2. Competence and Professional Experience

- Excellent written and verbal communication skills
- Ability to take initiative, prioritize and work under set deadlines and pressure
- Ability to work independently and in a team
- Fluency in English is essential
- Must be willing to travel

3. Technical Skills

- Excellent computing skills in C/C++ and Fortran required
- Understanding of distributed computing, e.g. cluster architectures is required
- Experience of development and performance analysis of runtime systems is desired
- Experience with MPI and OpenMP is essential
- Familiarity with parallel programming models, e.g. PGAS and OmpSs, would be preferrable
- Understanding of numerical algorithms (linear algebra, finite element) in scientific software would also be desirable

Conditions

A competitive salary will be provided, matched to the cost of living in Barcelona, depending on the value of the candidate

Applications Procedure
All applications must be done through the BSC website:

http://www.bsc.es/about-bsc/employment/vacancies

Including:

1. A full CV including contact details.
2. A cover letter

**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.

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