228_CS_CAOS_R1

Job Reference

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Position

PhD Student for CLASS European project R1

Data de tancament

Dilluns, 15 Gener, 2018

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.

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Context and Mission

The Computer Architecture and Operating System group at the Barcelona Supercomputing Center aims at carrying out research on programming models for critical embedded systems in charge of controlling fundamental parts of cars, airplanes and satellites.
In the framework of the H2020 European project CLASS, the group is aiming to investigate the applicability of big data solutions into critical systems to cope with the future performance requirements (e.g., autonomous driving). Distributing computing technologies such as COMPSs and Spark, as well as advanced parallel programming models for parallel and heterogeneous processors (e.g. many-core fabrics, GPUs) will be considered. For this research, the group is looking for a PhD Student to investigate the use of big-data technologies in critical systems.

**Key Duties**

- Investigation of novel run-time solutions targeting critical automotive systems capable of distributing the computation of big-data analytics along the compute continuum (i.e., from edge to cloud computing)
- Support the development of the necessary software to integrate the COMPSs framework into critical real-time environments
- Interactions with the different CLASS partners to achieve project objectives, including the support to the project use case (smart city)
- Write technical documentation and project deliverables
- Attend project meetings

**Requirements**

- **Education**
  - Master’s degree in Computer Sciences

- **Essential Knowledge and Professional Experience**
  - Knowledge on Python, Java and C/C++ programming
  - Experience in parallel programming and/or big data programming will be valuable
  - Experience in real-time embedded computing domain will be appreciated
  - Knowledge of cloud computing and distributed runtime frameworks will be appreciated

- **Competences**
  - Problem-solving, pro-active, result-oriented work attitude
  - Capability to work in an international and fast-paced work environment towards tight deadlines
  - Good communication skills including a good command of the English language (written and spoken)

**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 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: 1st January 2018
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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