9_CS_OS_R2R3

Job Reference

9_CS_OS_R2R3

Position

PostDoc (R2/R3) on Hardware Design and Machine Learning (SuPerCom Project)

Data de tancament

Dimecres, 31 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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BSC-CNS Corporate Video

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Context and Mission

Applications are invited for a PostDoc to conduct research and development on computer architecture and machine learning in the context of the ERC-funded project “Sustainable Performance for High-Performance Embedded Computing Systems” (SuPerCom). ERC is one of the most prestigious projects a European researcher can be awarded (https://erc.europa.eu/about-erc/mission).
SuPerCom is a 5-year project funded by the European Union that starts in early 2018 and that involves around 10 researchers. The main objective is to propose a holistic multidisciplinary approach that addresses the challenge of providing high and sustainable performance with future embedded computers comprising high-performance hardware with unprecedented complexity levels.

This project involves research in hardware designs to improve performance predictability and machine learning techniques for embedded systems like those in automotive or space domains. Francisco J. Cazorla is the principal investigator (PI) of the project. For a complete list of publications of the PI, please visit: http://people.ac.upc.edu/fcazorla/.

Key Duties

- Contribute to the research and application of machine learning techniques. This includes dealing with state of the art tools/libraries and applications
- Contribute to the hardware simulator infrastructure of the CAOS group for the SuperCom Project
- Analysis of application/benchmarks for future real-time systems
- Ability to work with real boards for performance analysis in real-time systems

Requirements

- Education
  - Degree in Computer Science, Computer Engineering or related field
  - PhD in topics related to hardware design and machine learning

- Essential Knowledge and Professional Experience
  - Previous Experience on Machine Learning Techniques
  - Previous Experience on Hardware design and modeling
  - Previous Experience with modifications in architectural simulators
  - Previous Experience with real platforms
  - Programming: C, C++, python

- Competences
  - Ability to take initiative, prioritize and work under set deadlines pressure
  - Ability to work independently and in a team
  - Capacity to interact and build strong relations with other research groups
  - Good verbal communication skills in English

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, home office, 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

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.

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