Job Reference

326_19_CS_CAOS_R2

Position

Processor design PostDoc (R2)

Data de tancament

Divendres, 31 Gener, 2020
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Job title: Processor design PostDoc (R2)

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 650 staff from 49 countries.

Look at the BSC experience:
BSC-CNS YouTube Channel
Let's stay connected with BSC Folks!

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. Our work is mainly done in the context of bilateral projects with several processor companies as well as several European-funded projects. For a complete list of publications of the group in the last years, please visit: www.bsc.es/caos

The objective of this position is to work in the context of two European projects enhancing processor designs prototyped in FPGAs as part of a young and dynamic team researching on hardware processor designs for space and avionics systems. The PostDoc is expected to have some experience (either in...
industry, academia or as part of his/her grade/master/PhD) on hardware prototyping (RTL, VHDL or Verilog). Candidates with 0 to 5 years of experience are wanted, although other profiles may be considered. The PostDoc will join a team of 4 people helping him/her to familiarize with the needed tools and developments for a smooth ramp up process.

The PostDoc is expected to take care of some responsibilities in European projects, mentored by a senior PostDoc helping him/her over time until gaining autonomy. The PostDoc will be participate in the supervision of a small team of 1-3 people (engineers and master/PhD students), and will perform some developments also by his/her own.

Motivation and ability to learn quickly are more important than experience for this position. This position offers the possibility to collaborate with research institutions and industry from several European locations, thus offering enriching experiences and opportunities to learn.

**Key Duties**

- Supervise a small research team on hardware design (mentored by a senior researchers)
- Perform hardware prototyping in FPGA for Space-grade commercial processors or research processors as part of a team.
- Learn and participate in verification and validation activities of the developments performed.
- Coordinate with a local team at BSC, and interact with European project partners

**Requirements**

- **Education**
  - PhD (or being close to PhD completion) in Electronics, Computer Sciences or Telecommunications

- **Essential Knowledge and Professional Experience**
  - Some practical experience designing digital hardware designs (RTL, VHDL or Verilog)
  - Knowledge on digital processor or microcontroller designs, either as part of his/her studies or work experience

- **Additional Knowledge and Professional Experience**
  - Knowledge on processor microarchitecture (e.g. Arm, Infineon, Intel, or AMD processors among others) is welcome
  - Knowledge on electronics is welcome
  - Experience with FPGA use and debug tools is also welcome

- **Competences**
  - Problem-solving, pro-active, result-oriented work attitude
  - 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 working hours, extensive training plan, tickets restaurant, private health insurance, fully support to the relocation procedures
- Duration: Temporary - 3 years renewable
- 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: 01/01/2020

Applications Procedure

All applications must include:

- A Cover Letter with a statement of interest in English, including two contacts for further references - Applications without this document will not be considered
- A full CV in English 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. This position is reserved for candidates who meet the requirements and have the legal status of disabled persons with a degree of disability equal to or greater than 33%. In case there are no applicants with disabilities that meet the requirements, the rest of the candidates without declared disability will be evaluated.

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