Barcelona Supercomputing Center (BSC)
Barcelona, Spain

FPGA Designer

- **Deadline:** March 30, 2019
- **Career levels:** Engineer, Master, PostDoc, Software Engineer
- **Keywords:** Compilation, Computer architecture, HPC / Exascale, Runtime performance / Optimisation, System Software

**Context And Mission**

The European Processor Initiative (EPI) aims at the design of a roadmap for a future European processor technology for HPC and automotive. The EPI team within BSC is responsible for defining an architecture of a RISC-V accelerator to be used in conjunction with a general purpose processor for Exascale.

The development efforts of the EPI team within BSC are towards:

- Design and verification of IPs to be integrated into a state-of-the-art SoC design;
- Development of the necessary system software (compiler and runtime);
- Rapid prototyping of IPs for design validation and system software tests on FPGA.

**Key Duties**

We plan to periodically release FPGA-based “snapshots” of the IPs developed within the project by BSC and other partners to enable system software development and test kernels of HPC applications.

We are seeking an FPGA designer accountable for:

- Interact with the RTL design and verification team and the software development team;
- Integrate and perform the preliminary test with IPs on FPGA;
- Have quickly a clue of RTL designs and simple software executing on them;
- Work with different FPGA technologies.

**Requirements**

**Education**

- This is a research associate / post-doc position (RE2 / R2). Higher education in Computer Science, Electrical or Computer Engineering, Physics or Mathematics is required.

**Essential Knowledge and Professional Experience**

- Either Master and minimum 2 years of experience in a similar position. Or PhD with no previous PostDoctoral experience.
- Experience with hardware description languages (Verilog, SystemVerilog, VHDL).
- Understanding of microprocessor design.
- Familiarity with Vivado Design Suite and Xilinx IP cores.

**Competences**
• Understanding of operating system (desirable).
• Background in High-Performance Computing (desirable).
• Experience in chip design, verification, and validation (desirable).
• Background in PCB design (desirable).

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
• Duration: Temporary - 1 year 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: ASAP

Applications Procedure

All applications must be done via BSC’s web and include:

• A motivation letter with a statement of interest, including two contacts for further references - - Applications without this document will not be considered
• 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.