**Job Reference**

307_19_CS_CAPP_RE23

**Position**

EPI CAD Engineer (RE)

**Data de tancament**

Dissabte, 29 Febrer, 2020  
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Job title: EPI CAD Engineer (RE)

**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 600 staff from 49 countries.

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

**Context And Mission**

BSC is looking for talented and motivated professionals with expertise in Processor Design, Validation and IP integration and DFT for a European HPC accelerator in the European Processor Initiative (EPI) Project. The design is based on RISC-V architecture.

**Key Duties**

- You will collaborate closely with design, verification and test professionals in active projects and providing tool support and customization as needed.
- Develop and support design and validation methodologies and tool flows, including systems´ support
and license management.

- Provide support for system archiving and sharing with Design partners and enable server support and IP protection.
- Provide support for design integration, logic synthesis and design optimization for area, timing and power.
- Provide systems and tools support for Validation Plans for pre and post Silicon validation, Reporting and Debugging. Support analytics, correlation analysis.
- Participate in chip bring-up and testing.

Requirements

- Education
  - BS or MS degree in Electrical Engineering, Computer Engineering, or equivalent Engineering degree (Ph.D. preferred) with demonstrable professional experience.

- Essential Knowledge and Professional Experience
  - Working knowledge on systems administration and support.
  - Unix / Linux and Windows operating systems strong background.
  - Scripting ability to perform support adjustments and customization of design and Validation tools flows, including support for System Verilog, simulation and emulation, Synthesis, Place & Route and Timing Tools.
  - Working knowledge of Universal Verification Methodology(UVM), writing test plans, simulating, debugging, and documenting results.
  - Solid understanding of Silicon technology and the process of creating & maintaining technology libraries.
  - Practical knowledge of verification concepts such as constrained randomization, coverage, and assertion.
  - Experience with ASIC Design Flow is a plus.
  - 3rd Party IP integration experience is a plus.
  - Experience in Design Validation, Testing and Debug techniques is a plus.
  - Develop and communicate expectations for quality performance, continuous improvement, process controls infrastructure for critical sustaining parts and new products.
  - Excellent Communications skills.
  - Ability to work as part of a cross-functional team according to an established timeline.
  - Must have working knowledge of System’s administration and provide Linux/Unix/Windows support.
  - Scripting ability to customize tools flows and develop support facilities for design, Verification, Synthesis, P&R, timing analysis and set up regression facilities.
  - Working knowledge of RTL Design and Verification. Experience in SoC Design Verification and HW/SW verification highly desirable.
  - Knowledge of low level HW/SW interaction and debug.
  - Experience with development of fully automated flows.
  - Working knowledge of Universal Verification Methodology(UVM), writing test plans, simulating, debugging, vertical test bench integration and documenting results.
  - Knowledge of verification concepts such as constrained randomization, coverage, and assertions
  - Experience with ASIC and SOC Design Flows.
  - Good understanding of Processor Design and Architecture.
● Additional Knowledge and Professional Experience
  ○ Strong scripting/programming in C/C++, Tcl, Python, Perl/Csh
  ○ Strong analytic skills, familiarity with automated parameters’ extraction and setting automated facilities for results comparison.
  ○ Desirable: 3+ years of experience in verifying and validating hardware and software solutions.
  ○ Able to apply a risk-based approach to testing strategies, for a more efficient and targeted validation effort.
  ○ Experience integrating automated instruments with Information Management Systems (IMS).
  ○ Skilled in generating audit-ready required documentation.
  ○ Skilled in gathering software and process requirements.
  ○ Skilled in identifying root cause and complex problem-solving.
  ○ Performance analysis, able to extract performance behavior through analytics.
  ○ Able to create and follow validation plans/protocols/reports. Validate system requirements and verify specs. Perform Risk assessments, report results and implement remedial actions, when necessary. Provide traceability matrices for processes, systems and software / hardware validation.
  ○ Execute tests. Analyze data, prepare reports summarizing results and statistics.
  ○ Develop and communicate expectations for quality performance, continuous improvement, process controls infrastructure for critical sustaining parts and new products.
  ○ Must be able to operate a variety of laboratory instrumentation and simulators to perform integration testing and functionality testing in hardware and software.
  ○ Provide consultation to other departments performing design/validation activities.
  ○ Demonstrated ability to lead cross-functional teams through the design, testing, and implementation of software-based workflows.
  ○ Experience partnering with Quality Assurance and Information Technology to build compliant workflows, processes, and procedures.
  ○ Having solid concepts of Processor Architecture, Instruction Set (ISAs) including RISC-V, and their implementation within in-order and out-of-order processor cores will be consider an additional PLUS

● Competences
  ○ Great attitude for team work. Must be self-organized and possess great ability adapt to variable circumstances and provide timely responses to the demands of the job. Systems and tools must be always up and running.
  ○ Excellent interpersonal, written, and verbal communication skills.
  ○ Ability to work as part of a cross-functional team according to an established timeline.
  ○ Proficient in Microsoft Office applications or equivalent
  ○ Fluency in English is essential, Spanish is welcome
  ○ The candidate must be an effective communicator, multitask, and work well on collaborative projects
  ○ Keeps abreast of technology trends
  ○ Ability to think creatively
  ○ Ability to work independently and make decisions
  ○ Ability to take initiative, prioritize and work under set deadlines and pressure.
Conditions

The position will be reporting to the Director of RISC-V Development in EPI in the Computer Science Dept. in BSC.

- 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 - [duration] 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: [starting-date]

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.