347_19_CS_GCS_RE1

Job Reference

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Position

Compiler Software Engineer (RE1)

Data de tancament

Dijous, 16 Gener, 2020
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Job title: Compiler Software Engineer (RE1)

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
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Context And Mission

The Computer Sciences (CS) department of the Barcelona Supercomputing Center is a key participant of the European Processor Initiative (EPI) which aims to design and execute a roadmap for a future European low power processor for HPC and automotive. BSC involvement in the EPI project includes work in a RISC-V based accelerator and development of in-house technologies for parallel runtimes.

Many HPC applications are currently written in Fortran, so good Fortran support is required in EPI. The main task will be making Fortran a reality in the context of EPI.

Key Duties
Integrate the Fortran F18 front-end into the LLVM-based EPI compiler
Make sure Fortran applications can be compiled using the EPI compiler against common HPC runtimes like OpenMP and MPI
Identify opportunities of improvement of F18 code generation strategy that improve EPI workloads

Requirements

Education
- Bachelor or Master degree in Computer Science

Essential Knowledge and Professional Experience
- Interest in compilers and compilation technology based on LLVM is a must
- Good knowledge of C/C++
- Ability to deal with lower-level aspects of systems like instructions, assembler language and binary interfaces

Additional Knowledge and Professional Experience
- Knowledge of Fortran is a plus. Willingness to become proficient in Fortran is a must.
- Knowledge of OpenMP and MPI is a plus
- Knowledge of LLVM and Clang codebases is a plus
- Knowledge of HPC architectures and systems is a plus

Competences
- Good communication and interpersonal skills to be able to work within a team to complete tasks on schedule
- Show a problem-solving, can-do, pro-active and result-oriented attitude
- Are keen to deliver good quality code and follow good practices in the industry
- Be curious and willing to learn about LLVM, RISC-V and HPC.

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 - Linked to EPI 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: Pending

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.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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