

Postdoc Position

at Department of Computer and Information Science, Linköping University, Sweden

The Department of Computer and Information Science was founded in 1983 but its roots go back to the early 1970s. It is one of the largest computer science departments in northern Europe. Our research covers a broad spectrum of fields, from core to applied computer sciences. Its vast scope also benefits our undergraduate and graduate study programmes, ranging from several engineering programmes at bachelor's and master's levels to programmes in statistics, cognitive science and innovative programming.

LINKÖPING UNIVERSITY hereby advertises a position as **Postdoctor in Computer Science** formally based at the Department of Computer and Information Science.

Duties

The position is placed within Laboratory of Programming Environments (PELAB), research group on Compiler Technology and Parallel Computing, and is included in one of our international research projects. The tasks include research and development of an advanced compositional programming framework for efficient and adaptive execution of high-level parallel application programs from several HPC domains. The project targets large-scale parallel and distributed computer systems that involve accelerators such as GPU, Xeon-Phi and FPGA. In particular, the project involves the design and implementation of a modular compiler framework as well as of specific techniques for program analysis, parallelization, optimization, adaptivity support, and code generation. For this purpose, a solid background in compiler technology (preferably including practical work within some modern open-source compiler framework such as LLVM) is expected, as well as in parallel programming with OpenMP and MPI, and GPU programming with OpenCL or CUDA. Very good programming skills in C/C++ and familiarity with Linux are necessary for this project. Moreover, we also welcome background knowledge and interest in combinatorial optimization, design and analysis of algorithms, computer architecture, scientific computing, or software composition. The project involves occasional business trips mostly within Europe, e.g. to meetings with our project partners.

The work will consist of 80 percent project research and 20 percent teaching.

Qualifications

The position requires a doctorate degree in computer science or related topic. The doctorate shall have been obtained no longer than three years before the expiration date of the application.

The PhD thesis topic should ideally match some of the aspects of the position profile described above. We also expect a solid mathematical/theoretical background, very good grades, very good programming skills, and very good abilities in written and oral communication in English. The applicant is expected to possess an ability to work independently and have an interest in teaching. If Swedish is not your native language, you are encouraged to learn some Swedish during the work to be able to understand oral communication.

Appointment time

Appointment time is one year, with the possibility for extension. The total time of appointment cannot exceed 2 years.

Starting date

By agreement, but preferably as soon as possible. The project starts in September 2018.

Application procedure

Apply for the position by clicking the "Apply" button in the official announcement, see the URL below. Your application must be received at latest the **5th of April**. Applications and documents received after this date will not be considered.

Equal opportunities

A majority of our postdoctors within the Department of Computer and Information Science are men, which is why precedence will be given to women in cases where qualifications are deemed otherwise equivalent.

Linköping University will continue to develop as an attractive and creative place of work, characterized by equal terms and actively works for equality and diversity.

We look forward to receiving your application!

Contact person

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Official announcement and link to the application system

<https://liu.se/en/work-at-liu/vacancies?rmpage=job&rmjob=8090&rmlang=UK>