

Partnership for Advanced Computing in Europe RISC-Linz Research Institute for Symbolic Computation



## Software Development Engineer for High Performance Computing

The Research Institute for Symbolic Computation (RISC) of the Johannes Kepler University (JKU) Linz, Austria, in cooperation with the RISC Software GmbH, a company mainly owned by JKU, is offering a position in high performance computing for massively parallel platforms. The full time position is initially a fixed-term employment for two years with the possibility for prolongation respectively for obtaining a permanent status at RISC Software. The position is offered within the EU FP7 project PRACE (Partnership for Advanced Computing in Europe, http://www.prace-project.eu).

Candidates should have profound software engineering experience in C, C++, or Fortran2003 and preferably a strong background in computational mathematics. Relevant areas of expertise include design of parallel algorithms and concurrent data structures, distributed computing, and numerical and symbolic methods for computational engineering. The main focus of the work will be the development of new algorithms and the design of highly efficient implementations for simulation, analysis, and optimization systems in engineering sciences. The position offers an excellent opportunity to work closely with our international academic and industrial partners from the HPC community using Europe's most advanced supercomputing infrastructure.

## **Primary Duties and Responsibilities**

- Designing and implementing highly scalable (1K nodes or more), parallel algorithms for very large scale computations.
- Analyzing and enabling existing industrial applications code to exploit multi-petaflop systems.
- Fostering technology transfer between academia and industry in the area of HPC.

## **Qualifications and Skills**

- Master's or doctoral degree in computer science or applied/computational mathematics.
- Two or more years work experience in software design of scientific software systems.
- Programming skills in C, C++, or Fortran2003 and knowledge of OpenMP, MPI, or Cilk.
- Fundamental understanding of modern computer architectures and operating systems.
- Interest in engineering sciences (preferably structural mechanics or fluid dynamics).
- High level of attention to detail and interest in documenting and presenting results.
- Interest in working independently and in an international team, practically and theoretically.

The salary follows the wage agreement set by the University of Linz (minimum EUR 35.448 per year for 40 hours a week and 5 weeks of holidays per year); well-qualified individuals will be rewarded with above-market compensation. For further information please contact Peter Stadelmeyer <peter.stadelmeyer@risc-software.at> or Wolfgang Schreiner <wolfgang.schreiner@risc.jku.at>.

We look forward to receiving your application including a CV/resume. Please send it to RISC Software GmbH, Softwarepark 35 (IT-Center), 4232 Hagenberg, Austria <office@risc-software.at>.

## The deadline for applications is September 30, 2012, or until filled.

