Lehrstuhl für Rechnerarchitektur und Parallele Systeme
Technische Universität München – I 10 Prof. Dr. Martin Schulz

The Chair for Computer Architecture and Parallel Systems (CAPS) at the Faculty of Informatics, Technical University of Munich intends to fill several positions at the earliest as

Scientific Researcher for Architecture and Hardware Design (m/f/d) –

100%, TV-L E13, Postdoc or PhD candidate

The Chair for Computer Architecture and Parallel Systems (CAPS) offers several scientific researcher positions (100% TV-L E13) in the area of hardware design and development. As part of multiple projects we intend to design RISC-V based processors and accelerators for AI and Quantum Computing applications. Work includes architecture design, implementation and evaluation, simulation studies, reconfigurable hardware and hardware emulation, as well as the design of ASICs. In collaboration with partners we intend to tape-out fabricate the designed processors for actual hardware tests and validation. Further, the work includes the design and implementation of low-level software support as well as the integration into existing compute setups.

CAPS is part of TUM's department of Informatics, one of the leading CS departments in Europe. We focus on a wide range of aspects of computer architecture – from edge and IoT devices to HPC and cloud systems, from AI accelerators to quantum computing systems – as well as the needed system software needed to extract a maximum of efficiency form the respective architectures. The latter includes work on programming models, operating systems, scheduling, tools, I/O as well as application optimization.

Required Qualifications:

- Above-average MS degree with emphasis in informatics, computer engineering or a related field.
- Very good knowledge of computer and system architecture, as well as low-level programming.
- Pleasure in taking responsibility, independent and structured way of working, high commitment, communication and team skills as well as very good English skills.

Preferred Qualifications:

- Experience designing hardware design or FPGA development using HDLs
- Some experiences in AI hardware and algorithms or quantum computing systems
- Practical experience in teaching (e.g., as a tutor) or in industry.

Our Offer

We offer an interesting, well-equipped workplace at a renowned university and a pleasant working atmosphere in a nice and very international team. There is also a high degree of flexibility and self-responsibility and the opportunity to present scientific papers at international conferences. Work will be conducted either in collaboration with the University of Potsdam or in the context of the Munich Quantum Valley as well as with a wide range of national and international partners in academia and industry.

Application

Please send your complete applications (curriculum vitae, copies of certificates, letter of recommendation if available) until 31.01.2022 by e-mail in the form of a single PDF file, to Prof. Dr. Schulz (schulzm@in.tum.de). Applications received after the application deadline may be considered for future application rounds until the position has been filled.

TUM aims to increase the proportion of women and minorities in teaching and research. Qualified women and members of minority groups are therefore explicitly encouraged to apply. Disabled applicants will be given preference if their suitability and qualifications are otherwise essentially equal.

Data protection notice

When applying for a position at the Technical University of Munich (TUM), you submit personal data. Please refer to our data protection information in accordance with Art. 13 of the General Data Protection Regulation (DSGVO) http://go.tum.de/554159 regarding the collection and processing of personal data as part of your application. By submitting your application, you confirm that you have taken note of the TUM data protection information.