



Leibniz Supercomputing Centre

of the Bavarian Academy of Sciences and Humanities



Leibniz Supercomputing Centre (LRZ) has been at the forefront of its field as a world-class IT service and computing centre serving Munich's top universities and colleges as well as research institutions in Bavaria, Germany and Europe for almost 60 years. As an institute of the Bavarian Academy of Sciences and Humanities, it is dedicated to providing an optimal IT infrastructure to its customers throughout the scientific community offering the complete range of IT services and technologies as well as consulting and support – from e-mail and web servers to internet access, virtual machines, cloud solutions and the Munich Scientific Network (MWN). Being home to SuperMUC-NG, the LRZ functions as one of three national HPC centres in Germany serving as the backbone for progressive research and discovery. LRZ pursues a leading role in 'Future Computing' focusing on emerging technologies, artificial intelligence and machine learning as well as quantum computing. Last but not least, the AI agency located at the LRZ is significantly driving the implementation of Bavaria's AI strategy.

We are currently looking to fill multiple positions for

High-Performance Computing Software Engineer for Quantum Computing (f/m/d)

The LRZ Quantum Computing Group is a new group of specialists at LRZ dedicated to providing, researching, and advancing quantum computing technologies for the Bavarian and international quantum communities. The QC team provides users with a broad portfolio of resources and services, including quantum simulators, remote access to quantum hardware, scientific consultancy, and education/training. More experimentally, this team explores and develops integration pathways for quantum acceleration capabilities in next-generation high-performance computing (HPC) systems. As a member of LRZ's Quantum Computing team, you will work at the very forefront of conceptualizing and providing new tools and methods; working with new innovative hardware technologies; developing the Munich Quantum Software Stack for multiple quantum technologies including programming models, OS, compilers and abstraction layers; and building unique solutions to aid quantum computing end-users in the advancement of their research. Your work will be instrumental in shaping Bavaria's reputation as a global quantum hotspot and in pushing the boundaries of innovative scientific discoveries achievable with quantum computing.

Your Responsibilities

- Be part of a large software development team developing the Munich Quantum Software Stack
- Develop the needed technologies for making quantum computing practical, including programming environments, tools, scheduling and virtualization/multi-user tenancy
- Interface with the quantum physics community in the Munich Quantum Valley (MQV) to understand constraints and requirements
- Follow good software development practices, including continuous integration
- Work in a large team across institutional boundaries
- Actively publish on new developments and technical achievements

Basic Qualifications

- PhD or MS in Computer Science, or related experience
- Knowledge of HPC environments and system software
- Experience in developing software
- Proficient oral presentation and writing skills in English
- Strong desire to contribute your education, experience, energy and enthusiasm to help build a dynamic and progressive quantum computing team and share in its success.

Preferred Qualifications

- Interest in active pursuit of a PhD if not already acquired
- Experience in developing open-source software
- Experience in working on dynamic, fast-paced teams
- Experience in quantum computing software and tools
- Experience with quantum computing simulators on HPC systems
- Proficiency with the German language, or intent to gain proficiency

What you can expect from LRZ

- Ample room for contributing and implementing your own ideas
- A smart, motivated, fun, and tightly coupled team with an important mission in which to join and of which to be part
- An organization that greatly values your contribution to our common success

We offer a multifaceted and intellectually stimulating position with flexible working hours and a family-friendly atmosphere in one of the largest and most innovative scientific data centres in Europe. You will work in a dynamic, collaborative and innovative environment characterised by an excellent working atmosphere and creative leeway. If you are interested and a topic matching your work theme can be identified, a subsequent doctoral graduation is possible.

Salary and benefits are compensated according to the collective employment agreement of the German Federal States (Tarifvertrag der Länder, TV-L). Classification is based upon qualifications and assigned duties. LRZ operates flexible work schemes. Handicapped persons will be given preference to other equally qualified applicants. As an Institute of the Bavarian Academy of Sciences, we are an equal opportunity, affirmative action employer and encourage applications from women and men alike, regardless of their social or cultural background. We would like to point out that all personal designations in this advertisement include every gender.

These full-time positions will initially be limited to three years and is to be staffed immediately.

You can count on us! Can we count on you?

We are looking forward to receiving your complete application documents (including cover letter, CV and certificates) in a single PDF file via e-mail (other file types are not accepted) by latest **06.01.2022**:

E-Mail: jobs@lrz.de

Subject: **HPQC-SE6 (2021/64)**

If you have open questions regarding this position, our colleagues are happy to answer them at the above e-mail address.

Please follow www.lrz.de/jobs for information regarding the EU General Data Protection Regulation and our application procedure.



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