Looking for a **place at the cutting-edge of supercomputing to grow your career? Then read on!**

The Quantum Computing and Technologies Department (QCT) at LRZ is a team of computer science and quantum physics specialists researching, advancing and providing quantum computing technologies for local and international advanced computing communities. The QCT team provides scientific users with a broad portfolio of quantum resources and services, including quantum simulators, remote access to quantum hardware, on-premise quantum systems, development environment tools, scientific consultancy, and education/training. A main forcus of this team is the research and development of integration pathways for quantum acceleration capabilities for next- generation high-performance computing (HPC) systems. Read more at quantum.lrz.de.

As a member of the LRZ Q-Crew, you're in the driver's seat developing and providing new tools and methods, working with cutting-edge hardware technologies; and developing the Munich Quantum Software Stack including programming models, OS, compilers and abstraction layers for multiple quantum technologies based on superconducting, neutral and ion qubits. You are pivotal for building unique solutions merging quantum and HPC workflows, advancing the community's research capabilities, and in propelling Bavaria as a global quantum hotspot pushing the boundaries of innovative scientific discoveries achievable with quantum-accelerated computing.

We're actively seeking a few positions for:

HPC Systems Software Senior Researcher (f/m/d) for HPC-Quantum Hybrid Software Stack

We'll work with you to figure out your specific responsibilities based on your skill set and interests, so tell us what you can do!

Generally, in this position, you:

- Define and execute research around design and evaluation of quantum-HPC software
- Develop a software stack for seamless integration of quantum accelerators into current and next- generation Exascale systems including programming environments, tools, scheduling and virtualization/multi-user tenancy methods
- Write and test code following software development best practices incl. continuous integration
- Engage the Munich Quantum Valley (MQV) developer and user communities to understand and translate their requirements to our software development requirements
- Actively publish on new developments and technical achievements

Skills you need:

- At least an MS in Computer Science or engineering sciences with 8 years proven experience or PhD and 3+ years experience with research software development
- Experience with HPC environments and developing system software (OS, compilers, runtimes, programming models, etc)
- Solid knowledge of HPC programming models including OpenMP and MPI as well as low-level architectures
- Oral presentation and writing skills in English
- Great team member skills, able to work well with others internally and across institutional boundaries, self-starter spirit and a drive to figure things out when faced with uncertainty
- Quantum computing knowledge is valuable, but not required initially

What you can expect from us:

- Ample room to contribute your own ideas to an important mission.

- On-premise access to multiple cutting-edge quantum computers, HPC testbeds and large-scale supercomputers. We work with multiple vendors, giving you a rare, broad view
- Substantial backing for large-scale R&D projects in a stable funding portfolio
- Smart, highly educated, motivated and fun teammates
- Direct-line leadership actively committed to your growth and advancement
- Time and a process path to pursue PhD with your work, if not already acquired
- Mentoring/teaching opportunities with local universities

An exciting mission in the service of research. A collegial, appreciative working environment. An international, stimulating, diverse corporate climate. Flexible working for an optimal work-life balance and a lot of creative freedom These are the standards at LRZ. We represent a new age of public sector employment: all the benefits of public service in one of Europe's most technologically advanced computing centers stocked with leadership-class resources. We actively promote diversity and welcome applications from talented individuals, regardless of cultural background, nationality, ethnicity, gender and sexual identity, physical abilities, religion and age. We give priority to applications from people with disabilities who are equally qualified (SGB IX).

Area	Quantum Computing
Working time	Full Time (40,1 hrs) flexible working model with electronic time recording
Term of the contract	Until 31.12.2024 (this is an administrative restriction for grants, but extensions are already pending)
Remuneration	E13, see Entgelttabelle TV-L
Annual leave / compensatory time off	30 days (24.12. + 31.12. additionally day off) Overtime is compensated by additional time off
Further trainings	Individual support for in-service training and further education
Benefits	e.g. home office option, public transport discount (job ticket), bus and subway (U6) minutes from our doorstep, free parking, pension plan of the Versorgungsanstalt des Bundes und der Länder (VBL), state-of-the-art work equipment

The LRZ in a nutshell:
Since 1962, Bavarian universities and research institutions have relied on the IT expertise of the Leibniz Supercomputing Centre of the Bavarian Academy of Sciences and Humanities. When it comes to the digital transformation of science, we are traditionally ahead of the game.

We look 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 **01.03.2023**:

E-Mail: jobs@lrz.de
Subject: **QC-SWSR (2022/68)**

Still have questions about this position? Our colleagues are happy to answer your questions at the above e-mail address.

Interested, but this job doesn't quite fit you? Take a look at https://www.lrz.de/wir/stellen/ or send us a general application!

Here you will find information about the collection of personal data during the application process