Wir bringen Forschung
auf Top-Niveau voran –
und uns selbst.

Veränderung startet mit uns.

IT System Administrator in the Quantum Computing team (all genders)

The "Quantum Computing" team in the Digital Business research department at the Fraunhofer Institute for Industrial Engineering IAO is working on national and international research and consulting projects to harness the potential of quantum computers for business and society.
We use innovative quantum computing algorithms to holistically implement economically relevant issues and demonstrate practicable quantum advantages on various hardware platforms. Through internationally networked excellence research along the entire value chain, we build bridges between theory and practice and are a central point of contact for business, science and politics. Together with international research partners, we develop algorithms in the fields of quantum machine learning, quantum simulation and quantum optimization that are based on information theory and motivated by application. These solutions are made available to the German economy as digital services and the know-how is communicated to specific target groups. We examine both the current status of available NISQ computers and future quantum applications in the error-corrected regime in a holistic manner, with an open-minded approach to technology and results.
To support our scientific team, we are looking for dedicated IT system administrators to further expand and support our digital infrastructure for research, demonstrators and training.

What you do with us

You will support our team with the professional operation and further development of our IT systems. Your tasks will include:
- Development and support of the laboratory infrastructure including asset management, procurement of new systems and professional disposal of old hardware
- Administration and further development of our high-performance computing cluster
- Support and maintenance of servers and virtual machines (e.g. JupyterHub, Binder, Open OnDemand) for interactive quantum computing demonstrators and training courses
- Administration and future expansion of the Windows systems in the quantum lab via a domain controller
- Maintenance and further development of our project websites, including integration of demonstrators
- Creation and maintenance of technical documentation for IT systems as well as support and instruction of scientific staff
- Implementation of IT security guidelines, including troubleshooting, backup management and license management

What you bring with you

- A university degree (Master's or Diploma) in computer science, computer engineering, computer engineering or a comparable subject area
- Several years of practical experience in the administration of complex IT infrastructures
- Sound knowledge in the administration of Unix/Linux and Windows systems
- Experience in script programming, preferably with Python
- Knowledge of network administration (e.g. DHCP, DNS, NAT, firewall)
- Initial experience with distributed systems and high-performance computing (e.g. Slurm or comparable cluster managers)
- Basic knowledge of virtualization techniques (e.g. Docker, Kubernetes, vSphere, NVIDIA Container Runtime)
- Experience in dealing with web servers (e.g. WordPress, nginx, Apache)
- Familiarity with IT security standards (e.g. ISO/IEC 27001, BSI basic protection) and ideally experience with IT audits
- A structured, independent way of working, coupled with strong teamwork and communication skills
- The ability to document complex systems in an understandable way and to communicate knowledge to the target group
- Very good written and spoken German and English skills

You can find additional information on our work under flaQship and Digital Business.

What you can expect

- Working on one of the most exciting topics of the future in an interdisciplinary, highly motivated team
- A comprehensive, individual further training and qualification program, with the possibility of a doctorate
- A fair and transparent remuneration system with individual, performance-related remuneration components and profit-sharing
- Flexible working hours with opportunities for mobile working as well as support services for balancing family and career (including emergency care and homecare eldercare via our pme family service, mobile co-working office)
- A pleasant and modern workplace on the easily accessible research campus in Stuttgart-Vaihingen
- Further benefits (including sports and health offers, canteen, company pension scheme, discounted Germany ticket and company cell phone - also for private use)

We value and promote the diversity of our employees' skills and therefore welcome all applications - regardless of age, gender, nationality, ethnic and social origin, religion, ideology, disability, sexual orientation and identity. Severely disabled people are given preference if they are equally qualified.

The position is initially limited to 2 years. Long-term continued employment is sought.

The weekly working time is 39 hours. The position can also filled part-time.

Have we piqued your interest? Then apply online now with your detailed application documents. We look forward to getting to know you!

Questions about this position will be answered by
Dr. Christian Tutschku
Phone +49 152 28835266

Fraunhofer Institute for Industrial Engineering IAO www.iao.fraunhofer.de

Reference number: 79740   Application deadline: 30.06.2025