Supercomputers help us to find solutions to major scientific challenges and are indispensable for modern research. The Jülich Supercomputing Centre (JSC) operates one of the most powerful computer systems for scientific and technical applications in Europe and makes it available for research purposes to scientists at Forschungszentrum Jülich, in Germany, and throughout Europe. The Jülich UNified Infrastructure for Quantum computing (JUNIQ) integrates quantum computers (QC) and quantum annealers in the form of quantum-classical hybrid computing systems into the modular high performance computing environment of the JSC. In co-operation with the research group for Quantum Information Processing of the JSC, JUNIQ is involved in several cutting-edge research activities developing QCs and quantum algorithms as well as provides access to latest QC technology for researchers and industrial partners. We are looking for a postdoc researcher who wants to contribute to one of the most exciting and currently fastest developing research areas.

We are looking to recruit a

**Postdoc for Quantum Computing - Algorithms, Benchmarking and Simulations**

**Your Job:**
- Developing and implementing QC algorithms (QAA, QAOA, QSVM), quantum AI algorithms, use case adapted algorithms to test and benchmark latest technology focusing on gate-based QC
- Advancing JUNIQ’s user platform by integrating QCs into the Modular Supercomputer of JSC
- Developing and conducting trainings for QC users
- Collaborating with project partners from academia and industry
- Presenting research outcomes to project stack-holders and the research community at meetings, conferences and by publishing in high-impact journals
Your Profile:
- Master’s degree and PhD in quantum physics, computer science, electrical engineering, mathematics or a related field
- Experience in quantum computer programming
- Experience in applying numerical methods and algorithms, preferably in the domain of QC, such as QAA and QAOA
- Experience in cloud computing and building cloud computing infrastructure
- Interest and/or experience in developing and conduction lectures and/or trainings for QC
- Proficiency in writing numerical software, preferably in C++ and Python
- Excellent command of written and spoken English, command of German is helpful

Our Offer:
We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:
- A large research campus with green spaces, offering the best possible means for networking with colleagues and pursuing sports alongside work
- Comprehensive training courses and individual opportunities for personal and professional further development
- Extensive company health management
- Ideal conditions for balancing work and private life, as well as a family-friendly corporate policy
- Flexible work (location) arrangements, e.g. remote work
- Flexible working hours in a full-time position (39 hours/week) with the option of slightly reduced working hours
- 30 days of annual leave and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)
- Exploration and preparation of next career opportunities, supported by our Career Center & Postdoc Office: https://www.fz-juelich.de/en/career-center-postdoc-office

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer: https://go.fzj.de/benefits

The position is initially for a fixed term of 2 years, with possible long-term prospects. Salary and social benefits will conform to the provisions of the Collective Agreement for the Public Service (TVöD-Bund), pay group 13, depending on the applicant’s qualifications and the precise nature of the tasks assigned to them.

We particularly welcome applications from people from a diverse range of backgrounds (e.g. regardless of age, gender, disabilities, sexual orientation/identity, as well as social, ethnic, and religious background). We strive to offer a diverse and inclusive working environment in which people enjoy equal opportunities and are able to fulfill their potential.