



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

The mission of the Institute for Quantum Computing Analytics (PGI-12) is to model and improve quantum computing systems on multiple levels. From optimal control of the hardware, over error mitigation and compilation, to application specific quantum algorithms. We focus working on interfaces between disciplines in large innovative projects that strive for the development of scalable and useful quantum computers. In a tight integration with quantum computer hardware developers, we investigate the applicability of quantum computers towards real-world applications in a hardware-software co-design paradigm.

Join our team to the next possible date as

Postdoctoral Researcher - Quantum Algorithms for Drug Discovery

Your Job:

As part of an interdisciplinary project team with researchers from bioinformatics you will work on quantum algorithms for drug discovery. Here, the focus lies on machine learning and optimization. Together with a dedicated partner from bioinformatics you will first survey pairs of drug discovery application problems and corresponding quantum algorithms, before you focus on promising candidates which are explored in more depth. In particular you will work on

- the extension, development and analysis of new quantum algorithms for near-term and fault tolerant quantum computers for drug discovery
- investigating potential quantum advantage of such algorithms in real-world scenarios (in particular in collaboration with the project partners from bioinformatics)
- the estimation of quantum computing resources for the proposed solutions
- the development of quantum algorithms for the efficient input and output of data sets as they occur in drug discovery
- leading contributions to technical reports and scientific articles
- the supervision of PhD and master students

Your Profile:

We look forward to receiving your application until 18.01.2026 via our

Online-Recruitment-System!

Questions about the vacancy?

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

- PhD in physics, computer science, mathematics or comparable fields
- Proven research experience in the area of quantum algorithms or quantum information theory
- Good organizational and communication skills
- Ability to work independently in interdisciplinary teams
- Good written and spoken English language skills
- Ideally good German language skills, both written and spoken
- Ideally experience in software development

Our Offer:

We work on highly topical, socially relevant issues and offer you the opportunity to actively shape change! You can expect a wide range of opportunities:

- **MEANINGFUL TASKS:** The position offers a varied and diverse role in an international environment
- **SUCCESSFUL START:** It is important to us that you quickly settle into the team and are given structured training for your tasks. We also support you from the very beginning and make your start easier with our Welcome Days and Welcome Guide: <https://go.fzj.de/welcome>
- **KNOWLEDGE & FURTHER TRAINING:** Your professional development is important to us – we provide targeted, individual support
- **HEALTH & WELL-BEING:** Your health is important to us. You can look forward to a comprehensive occupational health management program with a wide range of offerings - e.g., a beach volleyball court, running groups, yoga classes, and much more. In addition, our company medical service and an experienced social counseling team are available to assist you on site
- **WORK-LIFE BALANCE:** Optimal conditions for balancing work and private life, as well as a family-friendly company policy. The option of flexible working (in terms of location) is generally available after consultation and in line with upcoming tasks and (on-site) appointments
- **FLEXIBILITY:** Flexible working time models, including options close to full-time (<https://go.fzj.de/near-full-time>), allow you to tailor your working hours to suit your individual needs
- **FAIR REMUNERATION:** Depending on your existing qualifications and the tasks assigned to you, you will be classified in pay grade 13-14 of the TVöD-Bund (Collective Agreement for the Public Service). All information on the TVöD-Bund collective agreement can be found on the BMI website: <https://go.fzj.de/bmi.tvued> . The monthly salaries in euros can be found on page 69 of the PDF download
- **PERSPECTIVE:** After a 2-year fixed-term contract, our goal is to hire you on a permanent basis. Let's use this time to find out how well we fit together

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

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

The following links provide further information on diversity and equal opportunities:
<https://go.fzj.de/equality> and on specific support options for women:
<https://go.fzj.de/womens-job-journey>