

## Postdoc and PhD positions in Theoretical Quantum Technology at RWTH Aachen University and Forschungszentrum Jülich

The [theoretical quantum technology group](#) led by [Markus Müller](#) is offering postdoc (E13) and PhD positions (E13 3/4) to conduct research in the area of quantum information processing. The research focuses on:

- Advanced Quantum Computing, Topological Quantum Error Correction and Many-Body Physics with Ions, Rydberg Atoms, and Rydberg Ions
- Verification and Certification of Quantum Fault-Tolerance
- Open Quantum Neural Networks - From Fundamental Concepts to Implementations with Atoms and Photons

Candidates need to have a strong background in theoretical physics, strong academic record, commitment and motivation. We seek postdoctoral applicants preferentially with experience in quantum information theory, quantum error correction and fault-tolerance, atomic physics and quantum optics, quantum or classical machine learning, quantum benchmarking, or closely related fields; for PhD applicants, previous experience in quantum information and programming is desirable. We particularly welcome applications from women and applicants with diverse backgrounds.

Our group is highly passionate about [research](#), with an inclusive and open working environment, and substantial international collaborations with leading theoretical and experimental groups and industrial partners. We are part of a vibrant, growing research environment, including [JARA](#) and the Cluster of Excellence [ML4Q](#). Successful applicants are expected to actively engage in ongoing local and international collaborations and activities.

Applications should include a cover letter (including motivation), CV (including publication list), and a brief (max two pages) research statement. For postdoc (PhD) applications two (one) letters of recommendation should be arranged for. PhD applications should include a copy of the master thesis and transcripts. We are in particular looking for applicants to strengthen our [research](#) related to the VEQTOR, QNets, MUNIQC-Atoms and BRISQ projects. Postdoc (PhD) positions will run for at least two (three) years, with the possibility of extensions.

Applications and enquiries shall be sent to [m.mueller@physik.rwth-aachen.de](mailto:m.mueller@physik.rwth-aachen.de). Review of applications will start immediately and continue until the positions are filled. Positions can start as soon as possible.