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. Review of applications will start immediately and continue until the positions are filled. Positions can start as soon as possible.