

The aim of the BMFTR research project “Q-Cyber” is to explore new approaches to networked multi-party quantum communication applications and to evaluate their practical feasibility and security. We will implement and investigate a range of advanced multipartite quantum communication protocols. We will develop suitable hardware solutions for the use of multipartite entangled quantum states as a fundamental resource in future quantum networks. We will test quantum-networked communication under application-oriented conditions in a real fibre-optic network within an academically and industrially oriented ecosystem.

**Join our cutting-edge research team realise quantum networks and to bring multipartite quantum communication protocols to real life:**

- **Work on the technical realisation of real-life multipartite quantum networks with multiple node and photonic quantum hardware**
- **Implement advanced quantum-network protocols including quantum conference key agreement, networked quantum computing.**

**You have:**

- Interest in collaborative and interdisciplinary research
- MSc in Physics, or related
- Experience in experimental quantum optics and (photonic) quantum technologies
- Programming skills (Python, Mathematica, Matlab, ...)

**Be part of the future of quantum innovation—apply now!**

**Send your application by Feb 15<sup>th</sup> 2026 with:**

- Short statement of research interests (max. 1 page) & prior experience
- CV
- Certificates or transcript of records
- Contact details of three referees

**The positions are fixed term and available until filled.** The positions are funded via the Federal Ministry for Research, Technology and Space, Project Q-Cyber(75% TVL E13 for Phd, 100% TVL E13 for Postdocs).

For more information:

- please contact Prof. Dr. Stefanie Barz: [barz@fmq.uni-stuttgart.de](mailto:barz@fmq.uni-stuttgart.de), [www.barzgroup.de](http://www.barzgroup.de)

**2 PhD positions & 1  
Postdoc position in  
Quantum Networks**  
[www.barzgroup.de](http://www.barzgroup.de)

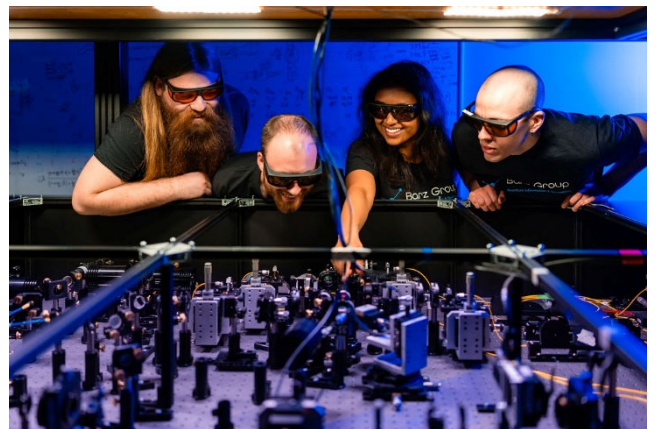


Photo: Barz Group, Uni Stuttgart