

# Building a quantum computer with superconducting qubits

is our goal at the Walther-Meißner-Institute (WMI – [wmi.badw.de](http://wmi.badw.de)) of the Bavarian Academy of Sciences and Humanities and the Technical University of Munich ([www.tum.de](http://www.tum.de)). We are looking for you to strengthen and join our efforts within the Munich Quantum Valley ([www.munich-quantum-valley.de](http://www.munich-quantum-valley.de)) and our German quantum computing project MUNIQ-SC ([t1p.de/8c6h](http://t1p.de/8c6h)), where we have several open postdoctoral positions for

## Quantum Researchers (m/f/d).

### Your role.

- You will work in an international growing team focusing on quantum technology and computing with superconducting qubits.
- You will take on responsibility in one or more of the following areas:
  - Fabrication of high-coherence quantum circuits and the investigation of novel materials, fabrication processes and surface treatments
  - Investigation of alternative qubit approaches
  - Automation, gate optimization, calibration and benchmarking
  - Gate and readout optimization
  - Architecture, design and fabrication of 3D-integrated quantum processors
  - Full-stack system integration, setup, characterization and operation
- You will work at the intersection of basic science and technology development and closely interact with project partners at universities, research organizations, and companies.
- You will actively participate in outreach events and present your results at conferences, workshops and in research publications.

### Your profile.

- You have a solid background in the design, the fabrication and/or the control and characterization of quantum systems.
- You hold a degree in physics, engineering or material science ideally at the PhD level.
- You have excellent skills in instrumentation and measurement and/or expertise in micro- and nano-fabrication and like to push technology to its limit to realize highest quality scalable quantum systems with up to 100 qubits.
- Ideally you have gathered experience in working with superconducting quantum circuits and bring in expertise in circuit modeling and simulation.
- You have experience in cryogenics and the operation of dilution refrigerators.
- You are an independent worker and bring in creative ideas into a larger team.
- You like to work in an academic setting with a technology-oriented innovative mindset.
- You have strong communication and writing skills.

## Our offer.

- A curiosity and technology driven research environment with an international team of scientists and researchers at the Walther-Meißner-Institute working on superconducting quantum circuits, hybrid quantum systems and magnetic materials.
- A position at the Garching Research Campus, one of the most advanced research and education facilities in Europe, with internationally visible research programs in quantum science and technology.
- Close connection to the activities of the Munich Quantum Valley with its main goal to build a quantum computer based on different platforms, to develop suitable algorithms and application, and to establish an ecosystem for innovative quantum technologies.
- A remuneration according to qualifications and professional suitability in accordance with the collective bargaining agreement of the German federal states (depending on qualification between TVL-E13 and E15).
- Depending on prior expertise and career level, a tenured position or a position that is limited to two years with the intention for further extension and the potential for tenure.

**How to apply.** If your aim is to advance superconducting quantum computing and you are motivated to join the team, we would be happy to receive your application. Please send us your documents including your CV, a publication list and a brief motivation letter in a single PDF file to Martina Meven ([sekretariat@wmi.badw.de](mailto:sekretariat@wmi.badw.de)) mentioning the code '2021-SF-R02'. Positions are available starting immediately, applications will be taken into consideration until July 31, 2022.

**Diversity.** We are determined to build an inclusive culture that encourages and values the diverse voices of all members of our research team embracing the full diversity of gender identities, cultures and ideologies to do excellent research. Disabled candidates with equal qualification and aptitude will be given preferential consideration according to the SGB IX.

**Data Protection Information.** When you apply for a position, you are submitting personal information. Please take note of the data protection information on collecting and processing personal data contained in your application in accordance with Art. 13 of the General Data Protection Regulation (GDPR). By submitting your application, you confirm that you have acknowledged the above data protection information of the BAdW. Please visit [badw.de/die-akademie/service-und-jobs.html#c3843](https://badw.de/die-akademie/service-und-jobs.html#c3843) for more information.

