




## Academic staff

### Three Postdoctoral positions (f/m/d) (fulltime, E 13 TV-L)

Reference Number 2021/015.

**Applications are invited for three Postdoctoral Researchers starting in February 2021 or upon mutual agreement in Condensed Matter Theory and Quantum Information. The positions are available for 2 years. In principle, the positions can be divided into two part-time positions.**

The University of Konstanz is one of eleven Universities of Excellence in Germany. Since 2007 it has been successful in the German Excellence Initiative and its follow-up programme, the Excellence Strategy.

Two positions are part of the research programs QC4BW and QORA within the new Kompetenzzentrum Quantum Computing Baden-Württemberg. An additional position is part of the research program QUASAR within the quantum technology initiative funded by the German Federal Ministry of Education and Research (BMBF).

#### Your responsibilities

- Theoretical modelling and bench-marking of physical quantum processors based on solid-state qubits
- Implementation of small quantum error correcting codes
- Theoretical modelling of errors in an existing quantum computer
- Development of error-resilient optimization algorithms
- Implementation and optimization of algorithms on IBM Q System One

#### Your Competencies

- PhD in theoretical physics or equivalent
- Experience in at least one of the following research areas: condensed matter theory, quantum information and quantum computation, quantum simulation, theory of open quantum systems, quantum error correction, quantum optimization algorithms, theory of solid-state qubits, semiconductor physics, physics of quantum dots

#### We Offer

- Vibrant research environment in our research group active in quantum information and condensed matter physics
- Embedding in department research environment with collaborative research center SFB1432
- Privileged access to dedicated IBM quantum computer installed for the Kompetenzzentrum QC
- Collaborative research within the QC4BW, QORA and QUASAR networks with several theory, experimental, and industry research groups

Applications and informal inquiries may be addressed to Mr. Prof. Dr. Guido Burkard, [Guido.Burkard@uni-konstanz.de](mailto:Guido.Burkard@uni-konstanz.de).

Applications should include a curriculum vitae (CV), brief motivation letter and statement of research interest, publication list, and contact details of at least two references.

The application deadline is **February 5, 2021**, we look forward to receiving your application via our **Online Application Portal**. Later applications can be considered as long as the position is still open.

The University of Konstanz is committed to ensuring an environment that provides equal opportunities and promotes diversity as well as a good balance between university and family life. As an equal opportunity employer, we strive to increase the number of women working in the field advertised (<https://www.uni-konstanz.de/en/equalopportunities/equal-opportunity/>). Persons with disabilities are explicitly encouraged to apply. They will be given preference if appropriately qualified (contact + 49 7531 88-4016).