



institute for
complex
quantum systems

$$\int D[z] e^{i\frac{1}{\hbar} \mathcal{Z}[z]}$$

PhD in Theoretical Physics

Electrical Manipulation of Majorana states and topological superconductivity

The **Institute for Complex Quantum Physics (Prof. J. Ankerhold, Dr. Ciprian Padurariu)** at **Ulm University** in partnership with the **Centre for Integrated Quantum Science and Technology (IQST) Ulm-Stuttgart** seeks applications for a **PhD position in Theoretical Physics**.

The research position builds upon an experimental breakthrough in the technique of superconducting scanning tunneling microscopy (STM) developed at the **Max Planck Institute for Solid State Research** in Stuttgart (MPI FKF, group of **C. Ast**) to find pioneering solutions for the **electrical characterization and manipulation of Majorana states** that develop at the edges of tailored superconducting nanostructures.

We are looking for motivated researchers who share our enthusiasm for exploring quantum states of matter. The project requires pure theoretical work as well as a close collaboration with colleagues performing state-of-the-art experiments.

The successful candidate will benefit from:

- research guidance within an international and interdisciplinary environment of experts in theoretical and experimental physics.
- access to experimental data from world-record instruments.
- PhD training (writing, presenting, thesis planning) offered by the Ulm-Stuttgart IQST Graduate School.
- international mobility to conferences/workshops/scientific visits.

Review of applications will begin immediately and continue until the position is filled. Interested applicants should send a **short letter of motivation** (1-2 paragraphs) detailing their interest in theoretical and quantum physics, a **CV**, and their **grade transcripts** to:

Dr. Ciprian Padurariu (ciprian.padurariu@uni-ulm.de).

Useful links:

ICQ Uni Ulm <https://www.uni-ulm.de/en/nawi/institute-for-complex-quantum-systems/welcome/>
MPI FKF Stuttgart https://www.fkf.mpg.de/85705/01_Atomic_Scale_Phenomena

