

Prof. Dr. Annabelle Bohrdt

Ludwig-Maximilians-University (LMU), Munich

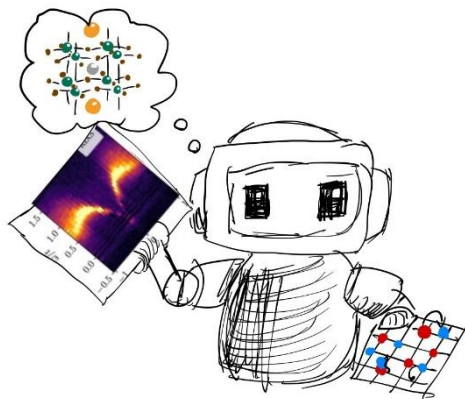
From cuprates to neural quantum states and quantum simulation

Thursday, 04.12.2025, at 2.00 p.m. **c. t.**

Building C6.4, Lecture Hall II (00.9)

Following the discovery of high temperature superconductivity, unraveling its origins has become a key problem of condensed matter physics. From a model perspective, a wealth of research has concentrated on the paradigmatic Fermi-Hubbard model, which has been a key motivation for analog quantum simulation using fermionic atoms in optical lattices.

In this talk, I will motivate why - following theoretical considerations as well as experimental observations - a direct description of the cuprates by the conceptually simpler t-J model may be more appropriate. I will then demonstrate some of our recent efforts to understand the physics of these models through (i) neural quantum states, where the quantum state is represented by a neural network; and (ii) quantum simulation using cold atoms in optical lattices or tweezers.



You can participate online via MS Teams: <https://shorturl.at/HXqYR>

Interested people are cordially invited.

Coffee and cookies are served at 2.00 p.m. in front of the Lecture Hall