

PhD and postdoc positions in theoretical condensed matter physics

The group of Ass.-Prof. Mathias Scheurer (see [website](#)) at the Institute for Theoretical Physics at the University of Innsbruck invites applications for a PhD and a postdoctoral position in theoretical condensed matter physics. The group's [research](#) deals with a broad range of phenomena of quantum many-body systems, employs different analytical and numerical methods, ranging from quantum field theory to machine learning approaches, and frequently involves collaborations with experimentalists.

About the research:

The research will be on the correlated quantum many-body physics of novel artificial superlattices, such as those built from twisted graphene layers and other related materials. It will cover a range of phenomena, including (but not limited to) unconventional superconductivity, quantum magnetism, and topological phases of matter. The ideal PhD candidate should have a strong background in condensed matter theory, in particular, with an interest in analytical approaches, while being open to learning numerical techniques as well. In addition, for the postdoc applicant, an interest in machine-learning techniques is expected.

About the position:

The preferred starting date of the positions would be in early 2023, but earlier or later starting dates can be arranged as well. The positions will be funded by an ERC Starting grant and include generous travel funds.

The University of Innsbruck is committed to increasing the proportion of women in science and research and therefore encourages women to apply. Disabled persons with suitable qualifications will be considered preferentially.

How to apply:

Please contact Mathias Scheurer (Mathias.Scheurer@uibk.ac.at) directly, providing the following:

- 1) A **CV** that includes a brief description of the research interests/expertise, and a list of publications (if any)
- 2) Names and email addresses of 1-3 senior researchers that can provide **letters of recommendation**
- 3) For PhD candidates: your **transcript of records** of bachelor and master studies; if already available, please also forward your Master thesis or a link to it.

Feel free to provide additional information if you feel it will support your application. Do not hesitate to contact Mathias Scheurer by email if you have any questions.

Review of applications will start immediately and will continue until the positions are filled.