



LUDWIG-  
MAXIMILIANS-  
UNIVERSITÄT  
MÜNCHEN

PROF. DR. ULRICH SCHOLLWÖCK  
LEHRSTUHL FÜR THEORETISCHE NANOPHYSIK



At the Chair for Theoretical Nanophysics at the Arnold-Sommerfeld-Center for Theoretical Physics, LMU Munich, we seek applications for a

## **Doctoral Position** in Theoretical Condensed Matter Physics

**Begin: Earliest 01.10.2016 or upon mutual agreement**

**Deadline for applications: 03.08.2016**

**Salary based on: TV-L 13 (75%)**

**Duration of employment: 3 years**

The position can be filled on a part-time basis. The Ludwig-Maximilians-University Munich (LMU) is one of the best renowned and largest universities in Germany.

### **Project description**

Our group develops and applies density matrix renormalization group algorithms and related methods to many-body systems with strong correlations. The envisaged research effort will be part of the newly established DFG (Deutsche Forschungsgemeinschaft) Research Unit FOR 2414 on *Artificial Gauge Fields and Topological States of Matter*. In our project, we will investigate the equilibrium and nonequilibrium properties of interacting quantum gases in optical lattices in the presence of Abelian gauge fields. The successful candidate will be expected to participate in the activities of the Research Unit and to collaborate with other local team members and other research teams of FOR 2414.

### **Required qualifications**

Potential candidates should have an excellent university degree (master degree or diploma) in physics and a very solid background in theoretical physics. A solid working experience with programming languages (e.g., C/C++) and computing environments (Linux/Unix) is expected. Previous experience with exact diagonalization, density matrix renormalization group or tensor network methods, or any other computational many-body technique would be helpful. Good communication and team work skills are important and in particular, a good command of English, both written and spoken, is essential as the project will be carried out in an international team and environment.

Your prospective working place is situated in a central part of downtown Munich and can conveniently be reached by public transportation. We offer an interesting and challenging work environment. Candidates with disabilities and equivalent qualifications will be given preference. The University of Munich is interested in increasing the number of female scientists in physics and encourages women to apply. Candidates with disabilities and equal qualifications will take preference.

Please send your complete applications containing a CV, a list of publications and scientific presentations, a short statement of research interest written in English, and the names of two references (all in one pdf file) to:

Priv.-Doz. Dr. Fabian Heidrich-Meisner  
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For further information on this position, please contact Fabian Heidrich-Meisner at [heidrich-meisner@lmu.de](mailto:heidrich-meisner@lmu.de).