

The Many-Body Group of the **Institute for Theoretical and Computational Physics** of the **TU Graz** is hiring:

Five PhD Students in Computational Modeling of strongly correlated systems

Who we are: Our group consists of five permanent and tenure-track members, ten PhD students and postdocs, as well as several master and bachelor students. We investigate equilibrium and nonequilibrium properties of systems with strong correlation with a variety of methods, ranging from ab-initio DFT+many body approaches to Matrix Product State techniques for model Hamiltonians and Keldysh Green's functions. We also develop new algorithms for the numerical simulation of correlated electron systems. Our work is supported by several projects funded by the Austrian Science Fund (FWF) and we participate in the Special Research Area (SFB) "ViCoM" – Vienna Computational Materials Laboratory (<http://www.sfb-vicom.at>), one of the largest European initiatives for the development of new computational methods for material research.

We are located in Graz, the capital of the Austrian state of Styria; the city has a total population of around 300.000 and hosts 6 universities, with a total of 40.000 students. The Graz University of Technology, founded in 1811, is the second largest university in Graz, with approx. 12000 students and 1500 researchers. For more details on our research activity please visit our group web page (<https://itp.tugraz.at/AG/>).

What we are looking for: We are looking for three outstanding candidates to work on the following projects (*follow the links for a project description*):

- [Nonequilibrium correlated systems: auxiliary Master approach \(Arrigoni\)](#)
- [Collective Phenomena in Oxide Films and Heterostructure \(VICOM: Boeri\)](#)
- [Quantum Impurity Solvers and nonequilibrium many body systems \(VICOM: H.G. Evertz, with F. Verstraete\)](#)

The ideal candidates should hold a master degree in physics, have a strong interest in theoretical physics and computational modeling, and a strong motivation to carry out independent research in an international environment. Previous experience in strongly correlated electron physics is desirable, but not necessary. The working language is English; knowledge of German is not a prerequisite.

What we offer: We offer a three years (36 months) PhD position, with salary based on the official FWF rates: <https://www.fwf.ac.at/en/research-funding/personnel-costs/> (this includes standard benefits, such as holidays and health insurance. You will be part of the Doctoral School of the TU Graz, which is part of the physics and chemistry doctoral network (<http://www.pcam-doctorate.eu/networks-partners/>) and (for VICOM candidates) participate in VICOM schools and activities.

How to Apply: Enquiries and **applications** should be sent by **e-mail** to the address: positions@itp.tugraz.at. Applications should indicate the title of the project, and include a letter of motivation and a CV (with university grades, description of research interests, names and email addresses of possible referees). **The starting dates are flexible; the positions will be filled as soon as suitable candidate are found.**