PhD and postdoc positions

Strongly correlated quantum many-body systems
Numerical approaches

Institute of Theoretical Physics and Computational Physics

Graz University of Technology, **Austria**

There is an opening for **one or more PhD and Postdoc** positions at our Institute as part of a funding program of the Austrian Science Fund (FWF).

The **starting date is flexible** (preferably in 2020) and there is no deadline for the application. The positions will be filled as soon as suitable candidates will be found. The appointment will initially be for three years for the PhD student(s) and for two years for the PostDoc, with the possibility of negotiable extensions.

The **project involves** theoretical and computational research for strongly correlated quantum systems out of equilibrium with particular focus on the interplay of phonons, electron correlation and heat dissipation in Mott insulators, in connection with electronic and photovoltaic applications. Optimisation procedures based on machine learning may also be involved.

Candidates should have a degree in Physics, as well as excellent skills in theoretical physics and/or numerical programming (preferably C++).
Ideal candidates should have a strong motivation as well as excellent skills in numerical and theoretical methods for strongly-correlated systems. For example (nonequilibrium) Green's functions, open quantum systems, dynamical mean-field theory, matrix product states. Please, point out knowledge and experience in these fields, if any. Qualified women are strongly encouraged to apply.

Applications with a CV (including Bachelor and Master university grades, description of research interests, names and emails of possible referees, publication list and ResearcherID if applicable , etc.) should be sent by e-mail as **a single pdf file** attachment **to Prof. Enrico Arrigoni (arrigoni@tugraz.at).** Salary is based on the FWF rates https://www.fwf.ac.at/en/research-funding/personnel-costs/

For a **more detailed** description of the job with information on related research activity and environment at the Institute see https://itp.tugraz.at/~arrigoni/