

The Vienna Doctoral Programme on Complex Quantum Systems  
invites you to the

# Seminar Talks

Monday, 18 June 2018

16:00h

**Markus Greiner**

Harvard University

*Ultracold atom quantum simulations:  
Exploring low temperature Fermi-Hubbard phases*

Ultracold-atom model-systems offer a unique way to investigate a wide range of many-body quantum physics in uncharted regimes. Quantum gas microscopy enables us to "zoom in" on a single particle level. We can explore many-body quantum physics in regimes that are not computationally accessible. In my talk I will present the first observation of an anti-ferromagnetic phase of Fermions in an optical lattice, and the observation of string pattern in the doped Fermi-Hubbard model.

17:15h

**Marin Soljačić**

Massachusetts Institute of Technology (MIT)

*A few novel nanophotonics phenomena*

Via nanophotonics, one can tailor the laws of physics (as far as light is concerned) almost at will. This way, a variety of novel physical phenomena can be enabled and observed. Some recent examples in light-matter interaction as well as topology and non-Hermitian physics will be presented.

ATI Main lecture hall, Stadionallee 2, 1020 Vienna

Hosted by: Jörg Schmiedmayer & Stefan Rotter