



Mittwoch, 22.06.2016, um **16:00 Uhr**

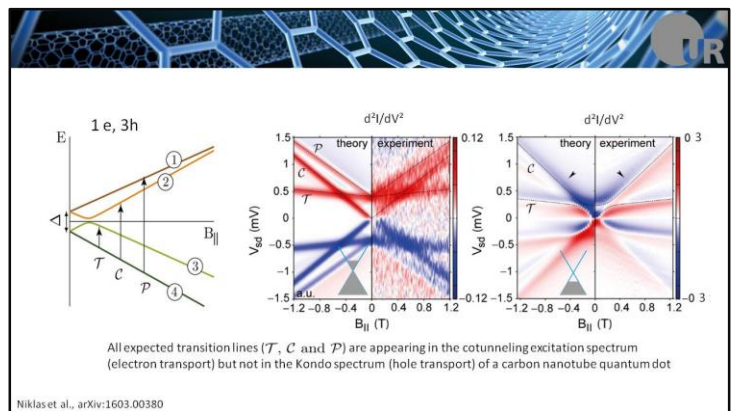
Ort: Reichenhainer Str. 90;
Zentrales Hörsaal- und Seminargebäude,
Raum 2/N013

Prof. Dr. Milena Grifoni

Universität Regensburg
Institut für Theoretische Physik

The fascinating world of carbon nanotubes: from electron interferometers to tunable Kondo systems

Carbon nanotubes (CNTs) are cylindrical carbon molecules with a diameter of a few nanometers and lengths up to few micrometers. They can be thought as a graphene sheet rolled onto a seamless cylinder, and have remarkable transport properties which stem from the sublattice structure of the underlying graphene lattice. When the CNT is strongly coupled to source and drain leads, it behaves as an electron waveguide: electron waves transmitted through the CNT interfere and give rise to multimode Fabry-Perot interference patterns. By decreasing the tunneling coupling to the leads, the particle nature of the electrons and Coulomb interactions become important: the CNT behaves as a quantum dot. I will discuss a peculiar Kondo effect observed in recent experiments on CNT-based quantum dots, demonstrating a remarkable realization of many-body entanglement.



Alle Zuhörer sind ab 15:45 zu Kaffee und Tee vor dem Hörsaal eingeladen.

Informationen zum Vortrag erteilt:
Prof. Dr. Michael Schreiber, Tel. 0371 531-21910

