

Colloquium
Dahlem Center for Complex Quantum Systems

AC Josephson effect without superconductivity, and other effects of radio frequency quantum nanoelectronics

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Time: Tuesday, January 27, 2015, 16:00 c.t.

Location: Hörsaal A (1.3.14)

Abstract:

In this seminar, I will discuss recent developments in the theory of time resolved quantum nanoelectronics.

With single coherent electron sources and electronic interferometers available in the lab, the dynamics of electronics quantum states -- mostly confined to two level systems before -- can now be probed for propagating states such as the so called "flying Qbits".

I will discuss the concept of "dynamical control of an interference pattern" that extends interference patterns observed in d.c. to the time domain. I will also briefly advertize our software for computing quantum transport properties, Kwant (<http://kwant-project.org>) and its time-dependent extension T-Kwant.