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CONTROL OF QUANTUM CORRELATIONS IN TAILORED MATTER
SFB/TR 21 – STUTTGART, ULM, TÜBINGEN

Kolloquium

Prof. Dr. Frank Wilhelm

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Superconducting nanocircuits as artificial atoms and spins

In devices scaled down to the nanoscale quantum physical effects known from the world of atoms and molecules become significant. In particular, solid-state nanodevices can be used as prototypes for quantum computation.

I will describe a superconducting quantum bit design known as the flux qubit. I will describe the possibility to adapt schemes from quantum-optical cavity quantum electrodynamics for building a source for single microwave photons. I will also describe how to control small registers of qubits analogous to spins, applying the optimum control technique.

Wann? Freitag 15.12.2006, 14:00 Uhr

Wo? Universität Tübingen,
Auf der Morgenstelle 14, Raum D4 A19