



Sonderforschungsbereich 631
Festkörperbasierte Quanteninformationsverarbeitung
Seminarankündigung

Ludwig-Maximilians-Universität
Theresienstr. 37
Seminarraum 450

Datum: Donnerstag, den 24.05.2007

Uhrzeit: 16:00

Vortragender: Jens Siewert

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Titel: Switchable coupling of Cooper-pair boxes inside microwave cavities and generation of multipartite entangled states

Abstract:

Circuit quantum electrodynamics is one of the exciting recent achievements in the field of superconducting nanocircuits.

While there are strong analogies with cavity QED, there are also interesting differences compared to the quantum-optical system, e.g., with regard to the system parameters and the flexibility of the superconducting setup. We have studied the possibility of a superconducting cavity whose resonance frequency can be tuned by means of an external magnetic flux. By using such a cavity, a tunable coupling between qubits can be engineered. One possible application is the generation of different types of multipartite entangled states.
