



Sonderforschungsbereich 631
Festkörperbasierte Quanteninformationsverarbeitung



Condensed Matter Theory Seminar

Wednesday, November 28, 2007

14.45 Uhr s.t.

Seminarraum 450, Theresienstr. 37

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Title:

Quantum simulation of Anderson and Kondo lattices with superconducting qubits

ABSTRACT: Quantum simulation consists on tuning the dynamics of a flexible quantum mechanical system to simulate the properties of another system or of a quantum mechanical model whose solution is unknown. In this work, we will explain how it is possible to simulate various magnetic impurity problem using superconducting circuits. Our proposal builds on the ideas and tools developed for quantum computation with superconducting qubits, but it is arguably simpler and seems more powerful than other proposals based on ultracold atoms and optical lattices.

gezeichnet: Prof. Enrique Solano, LMU

