



DANIEL CANO 'Hybrid Quantum Systems: Potential Applications and Technical'

DANIEL CANO

September 26, 2011

Seminar, September 26, 2011, 12:00. Seminar Room

DANIEL CANO

Physikalisches Institut

Universitaet Tuebingen, GERMANY

Hybrid quantum systems integrating ultracold atomic gases and superconducting circuits will be excellent tools for fundamental research in cavity quantum electrodynamics and quantum information. Hybrid quantum systems will offer the possibility to combine the high speed of information processing of superconducting circuits with the longer coherence times of atomic ensembles. In this talk I will review their

basic aspects and describe the technical challenges of their realization. I will also explain how to take advantage of the strong dispersive forces in ultracold Rydberg gases to produce hybrid quantum systems with long-distance interactions.

Seminar, September 26, 2011, 12:00. Seminar Room

Hosted by Prof. Morgan Mitchell