



Seminarankündigung

**Dienstag, 20. Januar 2015
15:00 Uhr**

WSI, Seminarraum S 101

“Qubit as a spectrometer of the environmental noise”

Qubits lose their coherence due to interaction with their environment. This is mostly viewed as an obstacle on the way towards quantum computation. However, one can look at the problem from another perspective: a qubit can be treated as a nanoscale sensor of environmental fluctuations. When it is driven by a sequence of N dynamical decoupling pulses, the measurement of its coherence at different times and different values of N can be used to reconstruct the spectral density of environmental noise. I will outline the theoretical basis for such a method noise spectroscopy, and give a few examples (out of numerous recent results) of its experimental implementations.

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