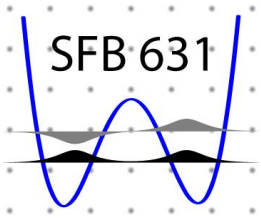

Sonderforschungsbereich 631

Festkörperbasierte Quanteninformationsverarbeitung

TECHNISCHE UNIVERSITÄT MÜNCHEN

SEMINARANKÜNDIGUNG

Dienstag, 25. November 2008

17:15 Uhr

WSI, Seminarraum S 101

"Coherent and optimal control of open quantum systems: Application to qubits and quantum gates"

Optimal control represents an inverse problem in which optimal control fields are sought which minimize a cost functional under constraints. Applied to the control of quantum systems, the cost functional represents a physical objective and the constraints usually are given by the system´s kinetic equations.
We will briefly review state-dependent and state-independent control tasks for open quantum systems. The main portion of the talk will discuss application to solid-state realizations of quantum gates and qubits, with the goal to control (minimize) the effective system-bath interaction when performing a specific gate operation.

Prof. Walter Pötz
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Karl-Franzens Universität Graz
Austria