



Einladung zum Physikalischen Kolloquium

Montag, 23.11.2009
16.15 Uhr, H2 (O25)

Prof. Steffen Glaser
TU München

“Optimal Control of Spin and Pseudo-Spin Systems”

Abstract:

The ability to efficiently control the dynamics of spin and pseudo-spin systems is an important prerequisite for a wide range of practical applications, ranging from quantum information processing, molecular spectroscopy to medical imaging. In magnetic resonance, nuclear or electron spins are manipulated using complex radiofrequency and microwave pulse sequences. Based on principles of optimal control theory, fundamental open controllability questions can be addressed and time-optimal and relaxation-optimized building blocks can be designed to control the dynamics of spin and pseudo-spin systems. In this talk I will highlight experimental applications in high resolution nuclear magnetic resonance and beyond.

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