



Einladung zum Oberseminar Wissenschaftliches Rechnen

Julius-Maximilians-Universität Würzburg
Lehrstuhl für Wissenschaftliches Rechnen IX

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An optimal control problem governed by the Wigner equation: transport of single atoms in optical tweezers

Single atoms movable from one place to another would enable a flying quantum memory that can be useful for dynamic quantum computing architectures. Optical tweezers are versatile tools in modern science, being used to trap and guide small particles like atoms. Single particles manipulated at a few micrometers distance by optical tweezers are well suited to control and investigate their interaction nature among themselves and with others, even at the quantum level. Due to these motifs, single atoms in optical tweezers represent an interesting tool as quantum information carrier. We study an optimal control problem for the transport of atoms trapped in optical tweezers in order to replicate experimental conditions where tweezers are Gaussian-shape potential and each atom can be represented as a thermal state.

Ort: Raum 30.02.003 (Mathematik West, 2.Stock)

Zeit: Donnerstag, 27.06.24, 9:30 Uhr

Zu diesem Vortrag laden wir Sie herzlich ein.
You are cordially invited to this lecture.

gez. Prof. Dr. Alfio Borzi
gez. Prof. Dr. Frank Werner