



Einladung zum Oberseminar Dynamische Systeme und Kontrolltheorie

Julius-Maximilians-Universität Würzburg
Professur für Dynamische Systeme und Kontrolltheorie

Prof. Dr. Daniel Burgarth

Universität Erlangen FAU, Institut für Theoretische Physik

Convergence speed of Trotter Evolution for unbounded operators

Achieving the quantum evolution of a sum of operators by quickly alternating between them has a long-standing history in mathematical physics with applications in quantum control and quantum simulation. Pioneering work of Kato and Trotter showed conditions of strong convergence for unbounded operators, but the convergence speed is still poorly understood. Here I will report a method of bounding the convergence speed and apply it to the kinetic and potential term of the hydrogen atom. We will find slower convergence for ground states, which has implications for quantum chemistry.

Ort: Mathematik Ost, Seminarraum 01.003

Zeit: Freitag, 12.01.2024 14:00

Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Sergey Dashkovskiy