



# Spectral Theory and Dynamics of Quantum Systems

GRADUIERTENKOLLEG 1838

## Stuttgart-Tübinger Doktorandenseminar

**27. Januar 2014**

Institut für Analysis, Dynamik und Modellierung  
Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen  
Seminarraum 8.122

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### Programm

14.00 – 14.25	Ulrich Linden: Störungen vom Rang Eins und Delta-Potentiale
14.30 – 14.55	Johannes von Keler: Mean-Field Limes und Dimensionsreduktion
15.00 – 15.25	Steffen Gilg: Lattice approximations for the Gross-Pitaevskii equation with a periodic potential
15.30 – 16.00	Bernd Brumm: A fast matrix-free algorithm for spectral approximations to the Schrödinger equation

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### Kaffeepause

16.30	Mathematisches Kolloquium
ab 18.00	Nachsitzung

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### Mathematisches Kolloquium:

On a Generalization of Herbst's Generalized Hardy Inequality  
**Prof. Dr. Heinz Siedentop** (LMU, München)

Abstract: We will investigate under which conditions

$$|p|^a |q|^b + |q|^b |p|^a$$

is positive. Here  $p$  is the momentum operator,  $q$  the position operator.

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