



Mathematics and CS Seminar

Functions of perturbed self-adjoint operators

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Host: Robert Seiringer

We consider the difference $f(H_1) - f(H_0)$ for self-adjoint operators H_0 and H_1 acting in a Hilbert space. We establish a new class of estimates for the operator norm and the Schatten class norms of this difference. Our estimates utilise ideas of scattering theory and involve conditions on H_0 and H_1 in terms of the Kato smoothness. They allow for a much wider class of functions f (including some unbounded ones) than previously available results do. As an example we consider the case where

$H_0 = -\Delta$ and $H_1 = -\Delta + V$ are the free and the perturbed Schrödinger operators in $L^2(\mathbb{R}^d)$, and V is a real-valued short range potential.

The talk is based on joint work with A. Pushnitski.

Thursday, January 31, 2019 04:30pm - 06:30pm

IST Austria Campus Big Seminar room Ground floor / Office Bldg West (I21.EG.101)



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