Functions of perturbed self-adjoint operators

Rupert Frank
LMU Munich

Host: Robert Seiringer

We consider the difference f(H1)?f(H0) for self-adjoint operators H0 and H1 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 H0 and H1in 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 H0=?? and H1=??+V are the free and the perturbed Schrdinger operators in L2(?d), and Vis a real-valued short range potential.The talk is based on joint work with A. Pushnitski.

Thursday, January 31, 2019 04:30pm - 06:30pm
Big Seminar room Ground floor / Office Bldg West (I21.EG.101)