Dr Jussi Behrndt Technische Universität Berlin

Title: Spectral properties of a class of elliptic differential operators on bounded and unbounded domains

Abstract: In this lecture we consider a formally symmetric second order elliptic differential expression L on a bounded or unbounded domain Ω with smooth boundary $\partial\Omega$. Our aim is to describe the spectral properties of a family of selfadjoint realizations of L in $L^2(\Omega)$ with nonlocal boundary conditions on $\partial\Omega$. For this we apply boundary triplet and Dirichlet-to-Neumann techniques, as well as general perturbation methods from abstract operator theory.