

Marjeta Kramar Fijavž
University of Ljubljana, Slovenia

On perturbing the domain of certain generators

Basing on the approach of Greiner (1987), Salomon (1987), Weiss (1994), and Staffans (2005), Adler-Bombieri-Engel (2014) and Hadd-Manzo-Rhandi (2015) obtained very general abstract results on the well-posedness of perturbed Cauchy problems. Using these results we will study first and second order differential operators with variable coefficients and general boundary conditions acting on spaces of L_p -functions defined on a finite union of intervals. We will present conditions on the coefficients and the domain which assure the generation of a C_0 -semigroup and hence well-posedness of the corresponding Cauchy problem.

The talk is based on joint work with Klaus-Jochen Engel (L'Aquila).