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Dynamic boundary conditions for divergence form operators with Hölder coefficients

TIM BINZ AND A. F. M. TER ELST

Abstract. We consider a second-order elliptic operator in divergence form with merely Hölder continuous coefficients on a bounded domain Ω with $C^{1,\kappa}$-boundary Γ with Wentzell boundary conditions of the type $\operatorname{Tr} Au = \beta\, \partial_\nu u + \alpha \operatorname{Tr} u$ on Γ. For strictly positive bounded measurable β we prove maximal regularity on $L^p(\Omega) \times L^p(\Gamma)$ for all $p \in (1, \infty)$, the generation of a holomorphic C_0-semigroup with angle $\frac{\pi}{2}$ for all $p \in [1, \infty)$ and also the generation of a holomorphic C_0-semigroup with angle $\frac{\pi}{2}$ on $C(\overline{\Omega})$.

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