Elliptic and parabolic problems for a class of operators with discontinuous coefficients

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Abstract. We study elliptic and parabolic problems associated to the second order elliptic operator

$$L = \Delta + (a-1) \sum_{i,j=1}^{N} \frac{x_i x_j}{|x|^2} D_{ij} + c \frac{x}{|x|^2} \cdot \nabla - b|x|^{-2}$$

with $a > 0$ and b, c real coefficients. We prove generation of analytic semigroup and domain characterization.

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