

On the solvability of some systems of integro-differential equations with anomalous diffusion in higher dimensions

Vitali Vougalter

University of Toronto
Canada
vitali@math.toronto.edu

The work deals with the studies of the existence of solutions of a system of integro-differential equations in the case of the anomalous diffusion with the negative Laplace operator in a fractional power in \mathbb{R}^d , $d = 4, 5$. The proof of the existence of solutions is based on a fixed point technique. Solvability conditions for non Fredholm elliptic operators in unbounded domains are used.