

Some inequalities for the fractional laplacian: elliptic and parabolic equations¹

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We will study some inequalities involving $(-\Delta)^s$.

A review of the summability of the solutions to

$$\begin{cases} (-\Delta)^s u = f & \text{in } \Omega, \\ u = 0 & \text{in } \mathbb{R}^N \setminus \Omega \end{cases}$$

according with the summability of the data will be obtained by nonlinear methods.

Also the heat equation with fractional diffusion will be considered.

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