Nonlocal heat equations with generalized fractional Laplacian

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Abstract

We study heat equtions with generalized fractional Laplacian, which is defined by the spectral theory. Here, we develop the existence theory for that equations. Moreover, we present some numerical simulations for our problems.

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$g(z) = z$ $g(z) = z^{0.6}$ $g(z) = \sin^2 z$