

Title

Nonlinear nonlocal equations involving subcritical or power nonlinearities
and measure data

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Abstract: Let $s \in (0, 1)$, $1 < p < \frac{N}{s}$ and $\Omega \subset \mathbb{R}^N$ be an open bounded set. In this talk we study the existence of solutions to problems (E) $Lu + g(u) = \mu$ and $u = 0$ a.e. in $\mathbb{R}^N \setminus \Omega$, where $g \in C(\mathbb{R})$ is a nondecreasing function, μ is a bounded Radon measure on Ω and L is an integro-differential operator with order of differentiability $s \in (0, 1)$ and summability $p \in (1, \frac{N}{s})$. More precisely, L is a fractional p -Laplace type operator. We establish sufficient conditions for the solvability of problems (E) . In the particular case $g(t) = |t|^{\kappa-1}t$; $\kappa > p - 1$, these conditions are expressed in terms of Bessel capacities.

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