

Liouville theorem for the fractional semilinear equations in unbounded domain

Huyuan Chen ¹

In this talk, we discuss the nonexistence of nonnegative very weak solutions of

$$(-\Delta)^\alpha u = u^p + \nu \quad \text{in } \Omega, \quad u = g \quad \text{in } \mathbb{R}^N \setminus \Omega, \quad (0.1)$$

where $\alpha \in (0, 1)$, $p > 0$, Ω is an unbounded C^2 domain in \mathbb{R}^N with $N > 2\alpha$, $g \in L^1(\mathbb{R}^N \setminus \Omega, \frac{dx}{1+|x|^{N+2\alpha}})$ nonnegative and ν is a nonnegative Radon measure.

¹chenhuyuan@yeah.net