

Boundary Harnack Principle for Lévy Processes

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Abstract: Recently there have been a lot of interests in studying discontinuous Lévy processes due to their importance in theory as well as applications. Many important results have been established. In this talk, we will discuss one of most important results on discontinuous Lévy processes; the boundary Harnack principle.

For any $\alpha \in (0, 2)$, a truncated symmetric α -stable process is a symmetric Lévy process in $\mathbf{R}^d$ with a Lévy density given by $c|x|^{-d-\alpha} 1_{\{|x|<1\}}$ for some constant c . In this talk, we study a boundary Harnack principle for nonnegative functions which are harmonic with respect to these processes in detail.

1 Presented by Panki Kim