

On the rate of growth of Lévy processes with no positive jumps conditioned to stay positive

Juan Carlos Pardo Millan, *Department of mathematical science*

Abstract

In this note, we study the asymptotic behaviour of Lévy processes with no positive jumps conditioned to stay positive and some related processes. In particular, we establish an integral test for the lower envelope at 0 and at $+\infty$ and an analogue of Khintchin's law of the iterated logarithm at 0 and at $+\infty$, for the upper envelope of the reflected process at its future infimum.

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