

Renewal series and square-root boundaries for Bessel processes

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Abstract

We show how a description of Brownian exponential functionals as a renewal series gives access to the law of the hitting time of a square-root boundary by a Bessel process. This extends classical results by Breiman and Shepp, concerning Brownian motion, and recovers by different means, extensions for Bessel processes, obtained independently by DeLong and Yor.

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