Potential Theory of Some Subordinate Brownian Motions

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Abstract

The aim of the thesis is to study the potential theory of some subordinate Brownian motions. More precisely, we establish the asymptotic behaviour of the Green function and the Lévy density of some subordinate Brownian motions. We study the tools and techniques used in a research paper known as Potential Theory of Geometric Stable Processes and use similar methods to prove the asymptotic behaviour of the Green function and the Lévy density of two new subordinated Brownian motions. We also try to compute the asymptotic behaviour using an alternative approach.