

# Potential theory of 1-dimensional subordinate Brownian motions with continuous components

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## Abstract

Suppose that  $S$  is a subordinator with a nonzero drift and  $W$  is an independent 1-dimensional Brownian motion. We study the subordinate Brownian motion  $X$  defined by  $X_t = W(S_t)$ . We give sharp bounds for the Green function of the process  $X$  killed upon exiting a bounded open interval and prove a boundary Harnack principle. In the case when  $S$  is a stable subordinator with a positive drift, we prove sharp bounds for the Green function of  $X$  in  $(0, \infty)$ , and sharp bounds for the Poisson kernel of  $X$  in a bounded open interval.