



ESTIMATION OF SET-INDEXED BROWNIAN MOTION ON INCREASING PATHS

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Abstract

In this article, we consider the problem of estimating the future value X_B of a set indexed Brownian motion $X = \{X_A : A \in \mathbf{A}\}$ in terms of its past X_{C_i} , for all $C_i \subset B$, $\{C_i\}_{i=1}^{k-1}$, $B \in \mathbf{C}$ or for all $C = \{C_i\}_{i=1}^{\infty}$ increasing sequences in \mathbf{A} such that $C \uparrow B$. The proof is performed by “characterization of set-indexed Brownian motion by flow” (see [E. Merzbach and A. Yosef, Set-indexed Brownian motion on increasing paths, J. Theor. Probab. 22 (2009), 883-890]).

Keywords and phrases: estimation set indexed Brownian motion, flow, increasing path.

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