AN EXTENSION OF SUB-FRACTIONAL BROWNIAN MOTION

Aissa Sghir

Abstract: In this paper, firstly, we introduce and study a self-similar Gaussian process with parameters $H \in (0,1)$ and $K \in (0,1]$ that is an extension of the well known sub-fractional Brownian motion introduced by Bojdecki et al. [4]. Secondly, by using a decomposition in law of this process, we prove the existence and the joint continuity of its local time.

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Key words: Sub-fractional Brownian motion, bifractional Brownian motion, fractional Brownian motion, local time, local nondeterminism. independent.