

FRACTIONAL DERIVATIVES OF LOCAL TIMES OF STABLE LÉVY
PROCESSES AS THE LIMITS OF THE OCCUPATION TIME PROBLEM IN
BESOV SPACE

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Abstract: In this paper, we firstly study the Besov regularity of the local time of symmetric stable processes and of its fractional derivative. Secondly, we establish limit theorems for occupation times of α -symmetric stable processes with $1 < \alpha \leq 2$ in some Besov spaces. Finally, we give the strong approximation version of our limit theorems.

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