DISTRIBUTION-VALUED ITERATED GRADIENT AND
CHAOTIC DECOMPOSITIONS OF POISSON JUMP
TIMES FUNCTIONALS

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Abstract

We define a class of distributions on Poisson space which allows to iterate a modification of the gradient of $[1]$. As an application we obtain, with relatively short calculations, a formula for the chaos expansion of functionals of jump times of the Poisson process.

2000 Mathematics Subject Classification. 60J75, 60H05.

Key words. Poisson process, stochastic analysis, chaotic decompositions.