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JUMPS OF STOCHASTIC PROCESSES WITH VALUES IN A TOPOLOGICAL GROUP

Eberhard Siebert

Abstract: We consider a stochastic process X taking its values in a Polish group G and having independent increments. First we investigate the jump measures v_t on G associated with the process X. Then we identify the measures v_t with the Lévy measures of certain convolution semigroups on G closely connected with X. Finally we show that for a submultiplicative function φ on G the integrability with respect to the process X is essentially equivalent with the integrability of φ with respect to the jump measures v_t of X.

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