MATHEMATICAL STATISTICS

Vol. 40, Fasc. 2 (2020), pp. 205–223 Published online 18.6.2020 doi:10.37190/0208-4147.40.2.2

ON ADJOINT ADDITIVE PROCESSES

BY

KRISTIAN P. EVANS (SWANSEA) AND NIELS JACOB (SWANSEA)

Abstract. Starting with an additive process $(Y_t)_{t \ge 0}$, it is in certain cases possible to construct an adjoint process $(X_t)_{t \ge 0}$ which is itself additive. Moreover, assuming that the transition densities of $(Y_t)_{t \ge 0}$ are controlled by a natural pair of metrics $d_{\psi,t}$ and $\delta_{\psi,t}$, we can prove that the transition densities of $(X_t)_{t \ge 0}$ are controlled by the metrics $\delta_{\psi,1/t}$ replacing $d_{\psi,t}$ and $d_{\psi,1/t}$ replacing $\delta_{\psi,t}$.

2020 Mathematics Subject Classification: 60J30, 60J35, 60E07, 60E10, 47D03, 47D06.

Key words and phrases: additive processes, Lévy processes, adjoint densities, transition functions, metric measure spaces.

THE FULL TEXT IS AVAILABLE HERE