

# Estimates for the radial part of jump-diffusion processes on manifolds and their applications

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Applebaum (1995) obtained a jump-diffusion process on a Riemannian manifold by the Elles-Elworthy-Malliavin construction. Since the generator of the jump-diffusion process is a kind of extension of a Lévy process on the Euclidean space, we can regard such process as a Lévy process on a Riemannian manifold. In this talk, we will show that under suitable conditions, the jump-diffusion process is transient, conservative, and has the  $C_0$ -property. In order to show these properties, I will present some estimates for the radial part of the jump-diffusion process.