Directionally convex ordering in multidimensional jump diffusions models

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Abstract

The purpose of the present article is to use the so-called the propagation of directional convexity property and a general version of the Kolmogorov equation to obtain ordering results in $n$-dimensional jump diffusion model. We give some conditions to prove the comparison inequality for directional convex function, and if this conditions are true for any class $\mathcal{F}$ of the directionally convex order then we obtain also comparison result between two multidimensional jump diffusion in the directionally convex order.

Keywords. Convex ordering, directional convexity, Concentration and deviation inequalities, Propagation of directional convexity, Jump diffusion processes.

References


