

Abstract :

The process of distribution functions of a one-dimensional super-Lévy process is characterized as the pathwise unique solution of a stochastic integral equation driven by Gaussian and Poisson time-space noises, which generalizes the recent work of Xiong (AOP, 2013) on super-Brownian motion. To prove the pathwise uniqueness of the solution we establish a connection of the stochastic integral equation with some backward doubly stochastic equation with jumps. This is based on a joint work with Hui He and Xu Yang.