Minisymposium 3 - Stochastic Processes with Jumps: Theory and applications

On continuity properties of the law of integrals of Lévy processes

ALEXANDER LINDNER (TU MÜNCHEN)

For a bivariate Lévy process (ξ, η) consider the integral $\int_0^\infty e^{-\xi_{t-}}\, d\eta_t$, which appears as a stationary solution of certain generalised Ornstein-Uhlenbeck processes. We characterise, in terms of the bivariate characteristic triplet, when the above integral has atoms (provided it converges). We then turn attention to sufficient conditions ensuring the absence of atoms of distributions of the form $\int_0^\infty g(\xi_t)\, dt$, where ξ is a one-dimensional Lévy process and g is some deterministic function. The talk is based on joint work with Jean Bertoin and Ross Maller.