

On the Asymptotic Stability and Numerical Analysis of Solutions to Stochastic Differential Equations with Jumps

Wei MAO *Jiangsu Second Normal University, China*, E-mail: mwzy365@126.com

Abstract: This talk concerns the stability and numerical analysis of solution to highly nonlinear stochastic differential equations with jumps (SDEwJs). The classical linear growth condition is replaced by polynomial growth conditions, under which there exists a unique global solution and the solution is asymptotic stable in the p th moment and almost sure exponential stable. In addition, we study the Euler-Maruyama approximate solutions of SDEwJs. By applying some useful lemmas, we establish a new criterion on the convergence in probability of the Euler-Maruyama approximate solutions.