

1093-60-15

Triet M Pham* (pmtriet00@yahoo.com). *Non-Markovian zero-sum stochastic differential games and path dependent Bellman-Isaacs equations.*

We present our recent results on non-Markovian two person zero-sum stochastic differential games where both players use feedback controls. In the literature, stochastic control and game problems have been studied extensively. A very useful technique there is to characterize the value process as the viscosity solution of the corresponding HJB equation (in a control problem) or Bellman Isaacs equation (in a game problem). But in order to apply this technique, the problem has to be Markovian in nature. From recent work on viscosity solutions of path dependent PDEs, a notion recently introduced by Ekren-Keller-Touzi-Zhang and Ekren-Touzi-Zhang, non-Markovian problems can be investigated in a similar way. In this talk, we will present the main definitions and results of viscosity solutions to path dependent PDEs. Finally we will go back to the game problem, and show that the game has value by the characterization technique. This is joint work with Jianfeng Zhang. (Received June 02, 2013)