

1079-60-134

Qi Zhang* (qzh@fudan.edu.cn), School of Mathematical Sciences, Fudan University, Shanghai, 200433, Peoples Rep of China. *The Stationary Solutions of Parabolic SPDEs via Backward Doubly SDEs.*

In this talk, i would like to introduce our work on the stationary solutions of parabolic SPDEs. Our method utilizes the connection between parabolic SPDEs and backward doubly SDEs. To get the existence of stationary solutions of parabolic SPDEs, we first prove the existence and uniqueness of weak solutions of parabolic SPDEs by their connection with backward doubly SDEs. Then we study the stationary property of the solutions of backward doubly SDEs, which can be transferred to the corresponding SPDEs so as to construct the stationary solutions of SPDEs. This is a joint work with Huaizhong Zhao at Loughborough University. (Received January 07, 2012)