

# On the Nash Equilibrium of an Evolving Random Network

**Dong HAN** *School of Mathematical Sciences, Shanghai Jiao Tong University, China,*  
E-mail: donghan@sjtu.edu.cn

**Abstract:** It is known that somebody's behavior (decision) in a social network may be influenced by that of his (or her) friends. In this talk, we will discuss on two game models on evolving random network, which can be defined respectively by two different utility functions. Some sufficient conditions for the existence of Nash equilibrium (NE) in the two network game models are obtained by analyzing the different effort relation between a player and his (or her) neighbors.