



**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium

Quadratic BSDE systems and applications

by

Dr. Xing Hao

London School of Economics and Political Science

Abstract

In this talk, we will establish existence and uniqueness for a wide class of Markovian systems of backward stochastic differential equations (BSDE) with quadratic nonlinearities. This class is characterized by an abstract structural assumption on the generator, an a-priori local-boundedness property, and a locally-Hölder-continuous terminal condition. We present easily verifiable sufficient conditions for these assumptions and treat several applications, including stochastic equilibria in incomplete financial markets, stochastic differential games, and martingales on Riemannian manifolds.

Date : 16 May, 2016 (Monday)

Time : 11a.m. – 12noon

Venue : Y303, The Hong Kong Polytechnic University

*** * * ALL ARE WELCOME * * ***