University of Macau

Faculty of Science and Technology

Department of Mathematics

FST-SEM/00055/2015

On a class of stochastic partial differential equations

By

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Date: **27 May 2015 (Wednesday)**

Time: **10:00 a.m. - 11:00 a.m.**

Venue: **E11- 1040**

Abstract

This paper concerns the stochastic partial differential equation with multiplicative noise $\frac{\partial u}{\partial t} = \mathcal{L}u + u\dot{W}$, where $\mathcal{L}$ is the generator of a symmetric Lévy process X, $\dot{W}$ is a Gaussian noise and $u\dot{W}$ is understood both in the senses of Stratonovich and Skorohod. The Feynman-Kac type of representations for the solutions and the moments of the solutions are obtained, and the Hölder continuity of the solutions is also studied. As a byproduct, when $\gamma(x)$ is a nonnegative and nonngetive-definite function, a sufficient and necessary condition for $\int_0^t \int_0^t |r-s|^{-\beta_0}\gamma(X_r - X_s)drds$ to be exponentially integrable is obtained.

Biography

Dr. Jian Song obtained his Ph.D. at University of Kansas and is now an assistant professor at University of Hong Kong. He has published high quality papers in top journals.

All are Welcome!

Reminder - FST Seminar - MAT – “On a class of stochastic partial differential equations” at 10:00am on 27 May 2015 (Wednesday), E11-1040