SPDEs driven by Lévy process and their numerical approximation

TUE/BE01
17:30–17:50

Erika Hausenblas (Univ. Salzburg)

First, I would like to introduce Levy processes and stochastic integration with respect to Levy processes, in particular, stochastic integration in Banach spaces. The second part of the talk will be about existence and uniqueness of SPDEs. Here, I will point out the techniques which are used and present some results. In the third and last part of the talk I will speak abut the numerical approximation of SPDEs, in particular, of SPDEs driven by Levy processes. The talk will base on the following works [1–3].

[1] E. HAUSENBLAS: Existence, uniqueness and regularity of parabolic SPDEs driven by Poisson random measure. *Electron. J. Probab.*, **10**, (2005), 1496–1546.

[2] E. HAUSENBLAS: Finite element approximation of stochastic partial differential equations driven by Poisson random measures of jump type. *SIAM J. Numer. Anal.* **46** (2007/08), 437–471.

[3] E. HAUSENBLAS, T. DUNST: Numerical experiments concerning Finite element approximation of stochastic partial differential equations driven by Poisson random measures . *in preparation*, (2009)