

Mês de: DEZEMBRO 2014

**SEMINÁRIO DE ANÁLISE E EQUAÇÕES
DIFERENCIAIS**

Dia 4 de Dezembro (quinta-feira), às 14:30h, na Sala B3-01

Stochastic transport equation in bounded domains

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Abstract:

This talk is concerned with the initial-boundary value problems for stochastic transport equation in bounded domains. For a given stochastic perturbation of the drift vector field, and the initial-boundary data in L^∞ , we prove existence and uniqueness of weak L^∞ solutions with non-regular coefficients. The existence result, which is by no means a trivial adaptation, relies on a strong stochastic trace theorem established in this paper. Moreover, the uniqueness of weak solutions is obtained under suitable conditions, which allow vacuum.

References

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- [4] F. Flandoli, M. Gubinelli, E. Priola, *Well-posedness of the transport equation by stochastic perturbation*, Invent. Math., 180, 1-53, 2010.
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- [6] W. Neves, C. Olivera *Wellposedness for stochastic continuity equations with Ladyzhenskaya-Prodi-Serrin condition*, arXiv:1307.6484v1, 2013.
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Joint work with: Christian Olivera (Universidade Estadual de Campinas).

