

# Seminário de sistemas dinâmicos e estocásticos

Departamento de Matemática - IMECC - UNICAMP

## Stochastic transport equation in bounded domains

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### Resumo:

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  $L^\infty$ , we prove existence and uniqueness of weak  $L^\infty$  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. Joint work with: Christian Olivera (Universidade Estadual de Campinas).

### **References**

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- [5] P. L. Lions, P. Benoit, P. E. Souganidis Scalar conservation laws with rough (stochastic) fluxes, *Stochastic Partial Differential Equations: Analysis and Computations*, 1, 4, 664-686, 2013.
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**Data:** Sexta-feira, 28 de novembro de 2014, 14:00hs.

**Local:** Sala 321 do IMECC.

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