



**Mês de: Julho 2009**

## **SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS**

**Dia 1 de Julho (quarta-feira), às 14h15, na Sala B3-01**

“Fully non linear equations for nonlocal diffusions”

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**Abstract:**

Fully non linear equations arise in optimal control and game theory, when one is able to optimize a (continuous) diffusion process ( or has incomplete information about it).

A complete theory of existence and regularity for these equations was developed in the eighties thanks to the remarkable contributions of Krylov and Safanov ( the Harnack inequality) and of Evans- Krylov (the Evans\_ Krylov regularity theorem) In a series of papers , in collaboration with Luis Silvestre, we developed the parallel theory in the case of discontinuous (Levy type) diffusion. I plan to present the main steps of the theory, and give an idea of our proof of the Evans Krylov theorem in this case.

Parcialmente suportado pela FCT ao abrigo do Financiamento Base

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