Mês de: Março 2011

## SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

## Dia 17 de Março (quinta-feira), às 13h30, na Sala B3-01

"Quasi-variational solutions for scalar conservation laws with gradient constraint"

## José Francisco Rodrigues

(CMAF/Univ.Lisboa)

## **Abstract:**

We prove the existence of variational solutions for an evolution quasi-variational inequality with a first order quasilinear operator and a variable convex set which is characterized by a constraint on the absolute value of the gradient that depends on the solution itself. The only required assumption on the nonlinearity of this constraint is its continuity and positivity. The method relies on an appropriate parabolic regularization and suitable "a priori" estimates and allow us to obtain also the existence of stationary solutions, by studying the asymptotic behaviour in time. This is joint work with Lisa Santos.

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