

Section Mathématiques

SEMINAIRE D'ANALYSE

➤ **VENDREDI 09 mars 2012 à 15h15 à la salle MA A112**

Monsieur **Ireneo PERAL** (*Universidad Autonoma de Madrid, Espagne*) donnera une conférence sur le thème:

Some remarks on elliptic problems related to the porous media equations with a growth term

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We will consider the problem

$$(P) \quad \begin{cases} -\Delta u = u^{q\alpha} |\nabla u|^q + \lambda f(x) & \text{in } \Omega \\ u = 0 & \text{on } \partial\Omega, \end{cases}$$

where $\Omega \subset \mathbb{R}^N$ is a bounded domain with smooth boundary, $1 < q \leq 2$, $\alpha \in \mathbb{R}$ and $f \geq 0$.

We prove some existence, nonexistence, regularity and multiplicity results, according with the parameters and the summability of the data.

The results are contained in the reference below.

REFERENCE

B. Abdellaoui, D. Giachetti, I. Peral, M. Walias, *Non-linear elliptic problems with dependence on the gradient and singular on the boundary*, *Nonlinear Analysis* 74 (2011) 1355-1371

Lausanne, le 24 février 2012
BD/VL

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<http://memento.epfl.ch/sb/>