



DEPARTAMENTO DE
MATEMÁTICA APLICADA



Seminario de Matemática Aplicada

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“Large time behavior in a viscous Hamilton-Jacobi equation with degenerate diffusion”

The large time behavior of nonnegative solutions to the quasi-linear degenerate diffusion equation $\partial_t u - \Delta_p u = |\nabla u|^q$ is investigated for $p > 2$ and $q > 0$ in a bounded domain. Qualitative properties of the solutions vary greatly according to the relative strength of the diffusion and the source term. In particular, we show how the relation between the parameters influences the existence of nontrivial steady states and the existence of solutions which are global in time. Moreover, we study the convergence of global solutions towards steady states and characterize the stationary solutions.

**Organizado por el Departamento de Matemática Aplicada de la UCM,
el Grupo MOMAT y el IMI**

Fecha: 19 de octubre de 2010, a las 11.00 horas
Seminario Alberto Dou (aula 209)
Facultad de CC. Matemáticas, UCM