Departamento de Matemática Aplicada

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Instituto de Matemática Interdisciplinar

Seminario de Matemática Aplicada

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Existence and nonexistence of compactons by Pohozaev's identity

Abstract

We will discuss the existence and nonexistence of compactons for the problems of type

$$\begin{cases} -\Delta_p u = f(\lambda, u) \quad \text{in } \Omega \\ \\ u = 0 \quad \text{on } \partial\Omega. \end{cases} \tag{0.1}$$

Here Ω is a bounded domain in $\mathbb{R}^n$ with a smooth boundary $\partial\Omega$, $n \geq 1$ and the term *compacton* is used for a weak solution $u \in C^1(\overline{\Omega})$ of (0.1) such that $\frac{\partial u}{\partial \nu} = 0$ on $\partial\Omega$, where ν denotes the unit outward normal to $\partial\Omega$.

It is our purpose to present a new approach in the investigation of the existence of the compactons to (0.1). The basic idea consists in using Pohozaev's identity and the spectral analysis with respect to the fibering method. This talk is partly based on joint works with Y.Egorov and P.Takac.

Organizado por el Instituto de Matemática Interdisciplinar (IMI), el grupo Momat y el Departamento de Matemática Aplicada.

Martes 8 de octubre de 2013, a las 12:00 horas.

Seminario Alberto Dou (209)
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