

Mês de: JULHO 2014

(Atenção à mudança de dia deste seminário que estava inicialmente marcado para 3 de Julho)

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 24 de Julho (quinta-feira), às 13:30h, na Sala B3-01

Multiplicity of solutions of BVP associated to asymptotically
linear second order equations

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Abstract:

In this talk we will discuss some multiplicity results associated to asymptotically linear second order equations in \mathbb{R}^n .

We consider the problem

$$\begin{cases} x'' + A(t, x)x = 0 \\ \text{Boundary conditions} \end{cases}$$

where $A : [0, \pi] \times \mathbb{R}^n \rightarrow GL_s(\mathbb{R}^n)$ is a continuous function. We will consider Neumann and periodic boundary conditions when $n = 1$ (see Margheri, Rebelo and Torres, 2014, JMAA) and Dirichlet conditions when $n = 2$ or n larger and odd (see Dalbono, Rebelo, 2009, Proc. Edinburgh Math. Society and Margheri, Rebelo in preparation). We assume that there are paths of matrices $A_0, A_\infty : [0, \pi] \rightarrow GL_s(\mathbb{R}^n)$ such that

$$\begin{aligned} \lim_{|x| \rightarrow 0} A(t, x) &= A_0(t) \text{ uniformly in } t \in [0, \pi], \\ \lim_{|x| \rightarrow \infty} A(t, x) &= A_\infty(t) \text{ uniformly in } t \in [0, \pi]. \end{aligned}$$

The number of solutions we get will depend on the indexes of A_0 and A_∞ .