



Mês de: Maio 2011

SEMINÁRIO DE SISTEMAS DINÂMICOS

Dia 11 de Maio (quarta-feira), às 15h, na Sala B3-01

“Some results on Hamiltonian and on conservative dynamics”

Célia Ferreira

(Universidade do Porto)

Abstract:

In this seminar we will briefly discuss some recent results on Hamiltonian dynamics and on conservative dynamics. Let H be a Hamiltonian on a 4-dimensional symplectic manifold M , $\mathcal{E} \subset H^{-1}(e)$ a connected component of $H^{-1}(e)$ without singularities. Define a star system as a system having a neighborhood in which any system has any closed orbit and any singularity hyperbolic. The first result shows that a Hamiltonian star system, on a 4-dimensional symplectic manifold, is Anosov. Now, let X be a divergence-free vector field defined on a closed, connected Riemannian manifold. We will discuss the equivalence between the following conditions:

X is a C^1 -star vector field

X is in the C^1 -interior of the set of expansive divergence-free vector fields.

X is in the C^1 -interior of the set of divergence-free vector fields which satisfy the shadowing property.

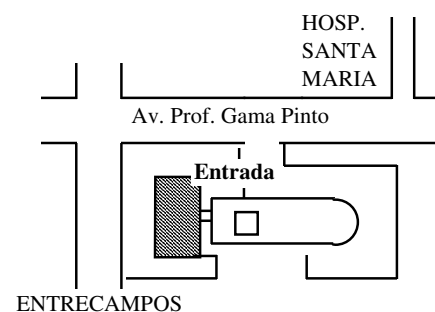
X is in the C^1 -interior of the set of divergence-free vector fields which satisfy the Lipschitz shadowing property.

X has no singularities and X is Anosov.

To finish the seminar, we will discuss the generalization for Hamiltonian dynamics of a result proved by Bonatti and Crovisier for diffeomorphisms, whereby a C^1 -generic conservative diffeomorphism is transitive.

Parcialmente suportado pela FCT ao abrigo do Financiamento Base

Local:
COMPLEXO INTERDISCIPLINAR
Av. Prof. Gama Pinto, 2
1649-003 Lisboa





UNIVERSIDADE DE LISBOA

CENTRO DE MATEMÁTICA E APLICAÇÕES FUNDAMENTAIS

Av. Prof. Gama Pinto 2, 1649-003 LISBOA, PORTUGAL Tel. (351) 217 904 700 FAX (351) 217 954 288

Local:

COMPLEXO INTERDISCIPLINAR

Av. Prof. Gama Pinto, 2
1649-003 Lisboa

