SEMINÁRIO DE EQUAÇÕES DIFERENCIAIS

Two homoclinic solutions for second-order perturbed Hamiltonian systems

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Resumo: This paper is concerned with the existence of homoclinic orbits for a class of some second order Hamiltonian systems considering a sublinear perturbation near zero. By considering an auxiliary problem, we show the existence of two different approximative sequences of periodic solutions, one of mountain pass type and the second of local minima. We obtain two different homoclinics orbits by passing to the limit in such sequences.

Joint work with Patricio Cerda, Luiz Fernando de Oliveira Faria and Eduard Toon.