

Seminario CAPDE

Expositor
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Título:

Asymptotic Stability of solitons of the high dimensional Zakharov-Kuznetsov equation

Abstract:

In this talk I will discuss a recent work with R. Cote, D. Pilod and G. Simpson, where we consider solitons of the high dimensional Zakharov-Kuznetsov equation, a model of plasma ions in Physics. In particular, we prove that solitons are strongly asymptotically stable in the energy space, in a particular region of the plane determined by natural geometrical and dispersive constraints. To prove this result we extend to the high dimensional case several tools coming from the one-dimensional setting (generalized KdV equations), introduced by Martel and Merle. However, some new difficulties arise when consider the dimension greater than two, in particular when proving required spectral properties, decay estimates, and the compactness in time of the asymptotic solution.

Lunes 24 de Agosto del 2015, a las 16:00 hrs, Sala de Seminarios DIM, 5to piso, Torre Norte, Beauchef 851.

