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STANDING WAVES FOR 2D ALMOST CUBIC NLS

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Abstract

In this talk we are going to discuss the existence of standing waves mainly for the generalized Davey-Stewartson (GDS) system introduced by C. Babaoglu and S. Erbay. We will compare two approaches to this problem. The first one is the work done with S. Erbay where we minimize a non-linear functional following an idea of Weinstein for the 2D cubic NLS. In the second approach we consider a constrained minimization problem in the spirit of Beretsycki, Gallouet and Kavian, this is a joint work with my masters student I.A. Topaloglu. These two methods require different conditions on the underlying parameters in the GDS system and we compare these conditions. Both of the methods do apply to a class of equations that we call almost cubic NLS. In this general setting we also discuss the role of the standing waves for the global existence of subminimal mass solutions.

Date: Friday, October 19, 2007

Time: 15:00

Place: IMBM Seminar Room, Boğaziçi University