

SEMINAR

CAPDE de EDPs

Expositor

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Title

Dynamics of strongly interacting 2-solitons for dispersive equations

Abstract:

The theory of linear dispersive equations predicts that waves should spread out and disperse over time. However, it is a remarkable phenomenon, observed both in theory and practice, that once there are nonlinear effects, many nonlinear dispersive equations (for example: NLS, gKdV, coupled NLS,...) admit special "compact" solutions, called solitary wave or solitons, whose shape does not change in time. A multi-soliton is a solution which is close to a superposition of several solitons. The problem we address is the one of the dynamics of relative distance for 2-solitary wave solutions. In particular, we are interested in the construction of strongly interacting regimes, where the interaction between solitons change the behavior. Then, from the construction, we discuss the similarity and the difference of the dynamics between the integrable case, known before by scattering theory and the nonintegrable case.

Lunes 20 de Agosto a las 17:00 hrs, en la sala de Seminario Felipe Álvarez Daziano, piso 5, DIM, Beauchef 851, Torre Norte.