

SEMINAR EDP

Expositor

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Título

Well-posedness and long time behavior for the Schrödinger-Korteweg-de Vries interactions on the half-Line

Abstract:

In this talk we discuss about the initial-boundary value problem for the Schrödinger-Korteweg-de Vries system on the left and right half-line for a wide class of initial-boundary data, including the energy regularity $H^1(\mathbb{R}^\pm) \times H^1(\mathbb{R}^\pm)$ for initial data. Assuming homogeneous boundary conditions it is shown for positive coupling interactions that local solutions can be extended globally in time for initial data in the energy space; furthermore, for negative coupling interactions it was proved, for a certain class of regular initial data, the following result: if the respective solution does not exhibits finite time blow-up in $H^1(\mathbb{R}^-) \times H^1(\mathbb{R}^-)$, then the norm of the weighted space $L^2(\mathbb{R}^-, |x| dx) \times L^2(\mathbb{R}^-, |x| dx)$ blows-up at infinity time with super-linear rate, this is obtained by using a satisfactory algebraic manipulation of a new global virial type identity associated to the system. This is a joint work with Adán Corcho.

Lunes 19 de Noviembre a contar de las 17:00 hrs, Sala de Seminarios Jacques L Lions CMM, Torre Norte, Piso 7, de Beauchef 851.