FACULTAD DE CIENCIAS
FÍSICAS Y MATEMÁTICAS
UNIVERSIDAD DE CHILE

CMM
Center for
Mathematical
Modeling

cmm.uchile.cl

Beauchef 851, edificio norte, Piso 7
Santiago, Chile
CP 837 0456

Tel. +56-2 2978 4870

Seminar EDPs

Speaker: Iván Naumkin (Universidad Nacional Autónoma de México).

Título: Modified scattering for the nonlinear Schrödinger equation in an external field.

Abstract: In this talk, we consider the cubic nonlinear Schrödinger equation with an external potential. We prove the existence of modified scattering for this model, that is, linear scattering modulated by a phase. Our approach is based on the spectral theorem for the perturbed linear Schrödinger operator and a factorization technique, which allows us to control the resonant nonlinear term. This approach requires a detailed and subtle study of the low-energy properties of the scattering data. Therefore, we study the cases of generic and exceptional potentials separately. The exceptional case is more delicate: we need some parity assumptions in order to control the small-energy behavior of the scattering coefficients and of the wave functions.

Martes 27 de octubre a las 4pm, en el link zoom
https://uchile.zoom.us/j/88121344517?pwd=aHYreWIyWDBGcVUxdGNMZjN2SzNFZz09
pass: **962768**

CONICYT
Ministerio de Educación
Gobierno de Chile

cnrs