

# SEMINARIO DE ANÁLISIS Y APLICACIONES

Miércoles, 24 de octubre de 2018

15:00 h., Módulo 17 - Aula 520 (Depto. Matemáticas UAM)

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Recovery of Singularities in Inverse  
Scattering

## Resumen:

In this talk we will introduce the backscattering problem, one of the main problems in inverse scattering for the Schrödinger equation with an electrostatic potential. The main objective in inverse scattering is to reconstruct the potential from the scattering data, which in this case is essentially the knowledge of how incident waves are reflected by the potential. In this inverse problem even the question of uniqueness is still unknown, but it has been already shown that at least the main singularities of the potential can be recovered from the scattering data. In this talk we will present new results of recovery of singularities in the Sobolev scale that in certain instances can be shown to be optimal. We will also see that there are certain limitations that in general prevent more than a one derivative gain or less, depending on the a priori regularity of the potential.

Presentación previa a la defensa de tesis doctoral

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