

SEMINARIO DE ANÁLISIS Y APLICACIONES

Viernes, 13 de septiembre de 2013

11:00 h., Módulo 17 (antiguo C-XV) - Aula 520 (Depto. Matemáticas UAM)

Miren Zubeldia

Helsingin Yliopisto / University of Helsinki

The forward problem for the
electromagnetic Helmholtz equation
with critical singularities

Resumen:

In this talk we show recent results related to the uniform resolvent estimates and Sommerfeld radiation condition for solutions $u \in H_A^1(\mathbb{R}^d)$ ($d \geq 3$) of the electromagnetic Helmholtz equation

$$(\nabla + iA(x))^2 u + V(x)u + \lambda u + i\varepsilon u = f$$

with singular potentials. We then deduce the limiting absorption principle, existence and uniqueness of the scattering cross-section and some spectral properties of the magnetic Schrödinger operator. We use a multiplier method and integration by parts as a main tools.