Seminario de Análisis y Aplicaciones
Seminario de Análisis Complejo

Viernes, 1 de junio de 2012

11:30 h., Módulo 17 (antiguo C-XV) - Aula 520 (Depto. Matemáticas UAM)

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Two Weight Inequality for the Hilbert Transform: A Real Variable Characterization

Resumen:

The two weight inequality for the Hilbert transform arises in the settings of analytic function spaces, operator theory, and spectral theory, and what would be most useful is a characterization in the simplest real-variable terms.

In joint work with Lacey, Sawyer and Shen, we show that the L^2 to L^2 inequality holds if and only if two L^2 to weak-L^2 inequalities hold. This is a corollary to a characterization in terms of a two-weight Poisson inequality, and a pair of testing inequalities on bounded functions.