

MINICURSO:

The Hilbert matrix on spaces of analytic functions

Prof. Aristomenis Siskakis (Univ. de Tesalónica)

Aula: 520 (Módulo 17, Ciencias, UAM)

Horario: Lunes, 7 de mayo de 2012, de 11:30 a 13:00

Mircoles, 9 de mayo de 2012, de 11:30 a 12:30

The Hilbert matrix is the infinite matrix

$$H = \left(\frac{1}{i+j+1} \right)_{i,j=0}^{\infty}.$$

If H is let to multiply Taylor coefficients then it transforms formally analytic functions of the unit disc to power series. By restricting its domain, one obtains a bounded operator \mathcal{H} on such spaces as Hardy and Bergman spaces, with the representation

$$\mathcal{H}(f)(z) = \int_0^1 f(t) \frac{1}{1-tz} dt.$$

We will review results concerning boundedness and evaluation of the norm of \mathcal{H} . We will also mention recent developments and generalizations.