



DEPARTAMENTO  
DE ANÁLISIS  
MATEMÁTICO y  
MATEMÁTICA  
APLICADA



# COLLOQUIUM DE ANÁLISIS MATEMÁTICO

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### Sharp inequalities for moduli of smoothness and K-functionals

We discuss the following question stated in 1960s: obtain sharp inequalities between the moduli of smoothness

$$\mathcal{W}_\alpha(f, t)_{L^q(\mathbb{T}^d)} \text{ and } \mathcal{W}_\beta(f, t)_{L^p(\mathbb{T}^d)}$$

for  $0 < p < q \leq \infty$ . We present the full solution of this problema. The main tool is new Hardy-Littlewood-Nikol'skii inequalities for polynomials.

Joint work with Yurii Kolomoitsev.

Organizado por el Departamento de Análisis Matemático y Matemática Aplicada y el Instituto de Matemática Interdisciplinar (IMI)

**Fecha: Jueves 22 de febrero de 2018**

**Hora: 13:00 horas**

**Lugar: Aula 222**

**Facultad de CC Matemáticas, UCM**