

Seminario de análisis matemático y aplicaciones  
Analisi matematikoa eta aplikazioak mintegia

Endpoint sparse bounds for  
Walsh-Fourier multipliers of  
Marcinkiewicz type.

Francesco Di Plinio

University of Virginia

**ABSTRACT:** We prove endpoint-type sparse bounds for Walsh-Fourier Marcinkiewicz multipliers and Littlewood-Paley square functions. These results are motivated by conjectures of Lerner in the Fourier setting. As a corollary, we obtain novel quantitative weighted norm inequalities for these operators. Among these, we establish the sharp growth rate of the  $L^p$  weighted operator norm in terms of the  $A_p$  characteristic in the full range for Walsh-Littlewood-Paley square functions, and a restricted range for Marcinkiewicz multipliers. Zygmund's inequality is the core of our lacunary multi-frequency projection proof. We use the Walsh setting to avoid extra complications in the arguments.

Joint with A. Culiuc, M. Lacey and Y. Ou.

**LUGAR / LEKUA:**

Sala de seminarios de la sección de matemáticas  
Matematika ataleko mintegi gela

**DÍA Y HORA / EGUNA ETA ORDUA:**

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