Instituto Universitario de Investigación de Matemáticas y Aplicaciones Universidad Zaragoza
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Seminario Rubio de Francia

Conferencia

por

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Título:

Maximal interpolation in matrix algebras

Resumen:

The strong maximal function is a well known object in classical harmonic analysis whose study goes back to the pioneering work of Jessen, Marcinkiewicz and Zygmund. It was proved independently by Cordoba-Feffermann and by de Guzman that, in two variables, the strong maximal function is of weak Orlicz type (Φ, Φ), where $\Phi(s) = s \log s$. In this talk we will introduce a matrix analogue of the strong maximal function whose optimal weak Orlicz type is not yet known. In previous work with Jose Conde and Javier Parcet, we proved that such a matrix maximal operator is of weak Orlicz type $s \log^{2+\varepsilon} s$, for every $\varepsilon > 0$. In this talk we will present a recent result that implies that weak Orlicz type can not be improved below $O(s \log^2 s)$. This is built on recent results of Léonard Cadilhac and Éric Ricard and it is joint work with Javier Parcet and Jorge Pérez García.

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