

Schechtman, Gideon

Fine embeddings of finite dimensional subspaces of L_p , $1 \leq p < 2$, into ℓ_1^m . (English)

Zbl 0597.46019

Proc. Am. Math. Soc. 94, 617-623 (1985).

This paper answers the following basic and interesting Banach space structure question. Let m be an integer, $\epsilon > 0$, and $2 > p > 1$. How large must n be for all m dimensional subspaces of L_p to $(1 + \epsilon)$ -embed in ℓ_1^n . He shows that the embedding property is satisfied if n exceeds $\nu m(1 + 1/p)(\log m)^{-1}$ where ν depends on p and ϵ . An estimate (larger) is also found for $p = 1$.

Reviewer: D.Wulbert

MSC:

[46B25](#) Classical Banach spaces in the general theory

[46B20](#) Geometry and structure of normed linear spaces

[46E30](#) Spaces of measurable functions (L^p -spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)

Cited in **3** Documents

Keywords:

fine embeddings; L_p -spaces; Banach space structure; embedding property

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