Gowers, W. T.; **Maurey, B.**

Banach spaces with small spaces of operators. (English) Zbl 0876.46006

Math. Ann. 307, No. 4, 543-568 (1997).

For a certain class of algebras $\mathcal{A}$ we give a method for constructing Banach spaces X such that every operator on X is close to an operator in $\mathcal{A}$. This is used to produce spaces with a small amount of structure. We present several applications. Amongst them are constructions of a new prime Banach space, a space isomorphic to its subspaces of codimension two but not to its hyperplanes and a space isomorphic to its cube but not to its square.

Reviewer: B.Maurey (Paris)

MSC:

46B03 Isomorphic theory (including renorming) of Banach spaces
46B20 Geometry and structure of normed linear spaces
47A53 (Semi-) Fredholm operators; index theories
47A99 General theory of linear operators

Keywords:

constructions of a new prime Banach space; space isomorphic to its subspaces of codimension two but not to its hyperplanes; space isomorphic to its cube but not to its square

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