

Centro de Investigação em Matemática e Aplicações Departamento de Matemática

Seminário

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On a Problem by N. Kalton

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Resumo

We obtain the answer to a Problem by N. Kalton in the affirmative. The title has obviously to see with the fact that the finite-dimensional subspaces of the vector spaces which you usually deal in Analysis are, in fact, very particular in the class determined by all subspaces (this follows immediately by a cardinality argument). The setting is, a generalization of Banach space namely, the quasi-Banach spaces where we seek analogous properties concerning the geometry of the space and, which have applications to function spaces and interpolation, in particular. We prove that each infinite-dimensional quasi-Banach space has a proper, closed infinite dimensional subspace and some applications follow.