Hunting vector spaces inside non-linear objects

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In this talk we shall report on a work in progress with Paolo Leonetti and Jacopo Somaglia, concerning lineability in some classical Banach spaces. A subset M of a vector space X is *lineable* if $M \cup \{0\}$ contains an infinite-dimensional vector space. After a brief review of some results from the literature, we shall focus on lineability of certain subset of the Banach space ℓ_∞ of all scalar-valued, bounded sequences.