The Banach-Saks property of a set and its convex hull

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The Banach-Saks property of a set is the corresponding sequential compactess notion relative to the Cesàro convergence in a Banach space. In contrast with (norm-)compactess and weakly-compactness, we will see that there are sets with the Banach-Saks property whose convex hull does not possesses the Banach-Saks property. Interestingly, our example is based on a classical construction by Erdos and Hajnal in abstract measure theory.

Joint work with C. Ruiz and P. Tradacete.