Closed convex sets with Minkowski and strongly Minkowski slices

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Abstract

We consider the closed convex subsets of $\mathbb{R}^n$ which can be represented as the convex hull of their lowest dimensional faces. The Minkowski sets are obviously particular examples of such closed convex sets. The complete class of such closed convex sets is given by the so called orthogonally Minkowski sets. The family of strongly Minkowski sets is also considered and it is actually a subfamily of the Minkowski sets when the involved closed convex sets conatain no lines. We provide a characterization of strongly Minkowski sets, which contain no lines, in terms of compactness of their proper faces.

This talk is based on a joit work with Juan Enrique Martinez Legaz