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Ball-polytopes and 1-convexity

For points $p, q \in R^n$, $[p, q]_1$ denotes the intersection of all the unit balls that contain p and q . A set of diameter at most two is called 1-convex if, for any pair p, q of its points, it contains $[p, q]_1$. The intersection of finitely many unit balls is called a ball-polytope. In this talk we examine which properties of convex sets and convex polytopes can be translated to the language of 1-convex sets and ball-polytopes.

This is joint work with K. Bezdek, M. Naszodi and P. Papez.