

INTERSECTION BODIES AND L_p -SPACES.

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Abstract: In this talk we discuss a new connection between convex geometry and the theory of L_p -spaces. It appears that intersection bodies, one the main objects of convex geometry, are directly related to the concept of embedding of normed spaces in L_p with $p < 0$. This allows to get new geometric results by extending different facts about L_p -spaces to negative values of p . We present several applications of this approach. In particular, in joint work with N.Kalton, the factorization theorem of Maurey and Nikishin was extended to negative p , which implies that intersection bodies are isomorphically equivalent to subspaces of L_q for each $0 < q < 1$.

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