Alexander Koldobsky, University of Missouri-Columbia

Intersection bodies and L_p -spaces.

The concept of embedding of normed spaces in L_p with p < 0 has recently been introduced. It was shown that k-intersection bodies, one of the most important class of bodies in convex geometry, are the unit balls of normed spaces that embed in L_{-k} . This connection allows to get new geometric results by extending to negative p well-known results from the classical theory of L_p -spaces, p > 0.