
STEPHANIE MUI, NYU Courant

On the L^p dual Minkowski problem for $-1 < p < 0$

The L^p dual curvature measure was introduced by Lutwak, Yang, and Zhang in 2018. The associated Minkowski problem, known as the L^p dual Minkowski problem, asks about existence of a convex body with prescribed L^p dual curvature measure. This question unifies the previously disjoint L^p Minkowski problem with the dual Minkowski problem, two famous open questions in convex geometry. We prove the existence of a solution to the L^p dual Minkowski problem for the case of $q < 1 + p$, $-1 < p < 0$, and $p \neq q$ for even measures.