Mathematics > Functional Analysis

A remark on the slicing problem

Apostolos Giannopoulos, Grigoris Paouris, Beatrice-Helen Vritsiou

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The purpose of this article is to describe a reduction of the slicing problem to the study of the parameter I_1(K,Z_q^o(K))=\int_K ||< :, x> ||_{L_q(K)}dx. We show that an upper bound of the form I_1(K,Z_q^o(K))\leq C_1q^s\sqrt{n}L_K^2, with 1/2\leq s\leq 1, leads to the estimate L_n\leq \frac{C_2 \sqrt[4]{n}log(n)} {q^{(1-s)/2}}, where L_n:= max {L_K : K is an isotropic convex body in R^n}.

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