OPTIMAL WEAK PARALLELOGRAM CONSTANTS FOR $L^p$ SPACES

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Abstract. Inspired by Clarkson’s inequalities for $L^p$ and continuing work from [5], this paper computes the optimal constant $C$ in the weak parallelogram laws

$$\|f + g\|^p + C\|f - g\|^p \leq 2^{p-1} (\|f\|^p + \|g\|^p),$$

$$\|f + g\|^p + C\|f - g\|^p \geq 2^{p-1} (\|f\|^p + \|g\|^p)$$

for the $L^p$ spaces, $1 < p < \infty$.


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REFERENCES


