

G. Blower and T. J. Ransford, **Complex Uniform Convexity and Riesz Measures**, *Canad. J. Math.*, 56 (2004), 225–245.

Abstract

The norm on a Banach space gives rise to a subharmonic function on the complex plane for which the distributional Laplacian gives a Riesz measure. This measure is calculated explicitly here for Lebesgue L^p spaces and the von Neumann-Schatten trace ideals. Banach spaces that are q -uniformly PL -convex in the sense of Davis, Garling and Tomczak-Jaegermann are characterized in terms of the mass distribution of this measure. This gives a new proof that the trace ideals \mathcal{C}^p are 2-uniformly PL -convex for $1 \leq p \leq 2$.