

THE BRUNN – MINKOWSKI INEQUALITY IN GAUSS SPACE

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Let γ_n be the standard Gaussian measure on \mathbb{R}^n . In this talk, we will present a complete proof of the following inequality. For every symmetric convex sets K, L in \mathbb{R}^n and every $\lambda \in (0, 1)$,

$$\gamma_n(\lambda K + (1 - \lambda)L)^{\frac{1}{n}} \geq \lambda \gamma_n(K)^{\frac{1}{n}} + (1 - \lambda) \gamma_n(L)^{\frac{1}{n}}.$$

This settles a problem raised by Gardner and Zvavitch (2010) and is the Gaussian analogue of the classical Brunn-Minkowski inequality for the Lebesgue measure. Joint work with G. Moschidis.

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