



CONGRESO DE JÓVENES INVESTIGADORES

Real Sociedad Matemática Española

Universidad de Murcia, del 7 al 11 de Septiembre de 2015

On the connection between the asymmetry of Minkowski, the completion and the Jung constant

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In this talk we tackle the relationship between three classic concepts of Convex Geometry: the asymmetry of Minkowski, the inequality of Jung, and the completeness. To do so we will make emphasis in the use of the asymmetry of Minkowski to strengthen and smoothen different geometric inequalities, as in [2].

This relationship can be summed up in a single equation, which we will motivate and prove in detail (see [1]). Finally we will show several consequences derived from this result, showing also some connections with other well known geometric measurements, such as the Banach-Mazur distance or the Helly dimension.

Referencias

- [1] R. Brandenberg, B. González Merino: The asymmetry of complete and constant width bodies in general normed spaces and the Jung constant, *ArXiv:1412.8693*.
- [2] R. Brandenberg, S. König, Sharpening well known geometric inequalities using computable symmetry coefficients, *Mathematika* 2014, doi:10.1112/S0025579314000291.

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