

Equipartitions and the Mahler Conjecture

Edgardo Roldán-Pensado

(Universidad Nacional Autónoma de México)

Abstract

The Mahler volume of a symmetric convex body is the product of its volume and the volume of its dual. There is a conjecture stating the hypercubes have the smallest possible Mahler volume. In 2017, Iriyeh and Shibata published a very long proof in dimension three of this conjecture. I want to discuss a simpler proof in which one of the steps involves solving an interesting equipartition problem. This work is joint with M. Fradelizi, A. Hubard, M. Meyer and A. Zvavitch.