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Zhu, Guangxian

The centro-affine Minkowski problem for polytopes. (English) Zbl 1331.53016

J. Differ. Geom. 101, No. 1, 159-174 (2015).

Let μ be a discrete measure on the unit sphere S^{n-1}. A finite subset U of S^{n-1} is said to be in general position if any k elements of U, $1 \leq k \leq n$, are linearly independent. The author proves that μ is the centro-affine surface area measure of a polytope whose outer unit normals are in general position if and only if the support of μ is in general position and not contained in a closed hemisphere.

Reviewer: Gabriela Cristescu (Arad)

MSC:

53A15 Affine differential geometry
52B11 n-dimensional polytopes

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