Early Career Talk

The Bochner--Riesz problem for convex domains

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We consider the Bochner--Riesz operators associated with convex planar domains. Universal bounds for these operators were obtained by Seeger--Ziesler in terms of the affine dimension of the convex domain. Using ideas from additive combinatorics, we construct domains that provide stronger bounds for the Bochner--Riesz over the universal bounds of Seeger--Ziesler.