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Packing density of convex bodies and the Delsarte bound

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I will present the Delsarte linear programming bound developed by Cohn and Elkies for estimating the density of packing by translates of a convex body in d-dimensional Euclidean space. I will then discuss a recent result joint with Kolountzakis and Matolcsi showing that this method always provides a nontrivial packing bound if the convex body cannot tile the space by translations.