Combinatorics Seminar

Are there sparse codes with large convex embedding dimension?

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Abstract: How can you arrange a collection of convex sets in Euclidean space? This question underpins the study of "convex codes," a vein of research that began in 2013 motivated by the study of hippocampal place cells in neuroscience. Classifying convex codes is exceedingly difficult, even in the plane, and gives rise to a number of striking examples and neat geometric theorems. We will focus on a particular open question about how the sparsity of a code relates to its embedding dimension, and some recent partial progress.

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