

A spectral proof of Kleitman's diametric theorem

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Abstract

A classical theorem of Kleitman in extremal combinatorics states that a collection of binary vectors in $\{0, 1\}^n$ with diameter d has cardinality at most that of a Hamming ball of radius $d/2$. In this talk, we present a new proof of Kleitman's diametric theorem via spectral methods, and discuss some extensions and generalizations of Kleitman's Theorem, as well as a few other related extremal problems.

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