

Combinatorics and Probability Seminar

Equiangular lines with a fixed angle

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Abstract: A set of lines through the origin in a Euclidean space is called equiangular if they are pairwise separated by the same angle. It is known that the maximum size of an equiangular set of lines grows quadratically as the dimension of the Euclidean space grows. However, when the angle is held fixed, a very different yet intricate behavior of the maximum size emerges. In this talk, I will explain how the determination of this behavior connects to some central notions in spectral graph theory, namely, the maximum eigenvalue of a graph and the multiplicity of the second largest eigenvalue. Joint work with Jonathan Tidor, Yuan Yao, Shengtong Zhang and Yufei Zhao.

Note the unusual time. There will be two C&P seminars on 10/14.

Monday, October 14 at 1:00 PM in 612 SEO