



YMC 2006



Young Mathematicians Conference 2006

August 4th-6th at The Ohio State University.

KAZHDAN'S PROPERTY (T) FOR GRAPHS

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Abstract of Report Talk: Expander graphs are finite graphs that have very strong connectivity properties that have numerous applications in computer science and in the theory of networks. Their existence is easily demonstrated, but explicit construction is far more difficult. Most constructions of expanders involve an analytic property of groups, called property (T), first introduced by D. A. Kazhdan. In this talk we define an analogue of property (T) for regular graphs. We then prove the basic combinatorial, spectral, and metric properties of Kazhdan groups in this context and use our methods to construct infinite families of expanders.[BC12093438]
[Joint work with Ryan E Grady]

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Received: July 19, 2006