



Speaker: Ionel Popescu
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Thursday, March 1, 2012
2:00 PM
125 Hayes-Healy Hall

Title: Free Functional Inequalities on the Circle

Abstract:

On one hand there are several functional inequalities on Riemannian manifolds, several in terms of the lower bounds on Ricci curvature. On the other hand using some of these inequalities for large unitary matrices, more precisely for the case of $SU(n)$ with n very large, one can get some interesting inequalities for the limiting distribution of eigenvalues on the circle. These are the free functional inequalities on the circle. The purpose of this talk is to show that these inequalities can be understood independently of the random matrix approximation and sometimes get new ones which are hard or almost impossible using random matrices.