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On Second Order Fluctuations for Some Classes of Random Matrices.

The talk presents several recent results, joint work with J. A. Mingo and Y. Jiao, concerning asymptotic behaviors of certain classes of random matrices. We have obtained the asymptotic real second order freeness for Haar Orthogonal random matrices, asymptotic freeness between a Haar unitary random matrices and its transpose as well as properties of certain random matrices with non-commuting entries. (Received September 17, 2013)