

Limiting spectral distribution of random linear combination of representations at positive root system of classical Coxeter groups

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Recently there has been lots of interest in random matrices having natural but more complicated structure. In this talk we will consider random matrices of the form $A = \sum a_i Z_i \rho(\sigma_i)$ where a_i 's are coefficients satisfying certain "sparseness" conditions, Z_i 's are i.i.d. Gaussian r.v.s, $\{\sigma_i\}$'s correspond to positive root system of classical Coxeter groups and ρ is a unitary irreducible representation of the group. We will show that under very general conditions the limiting spectral distribution of A , as the size of the group goes to infinity, is Gaussian with a random mean. I will give intuitive ideas why this kind of limit is expected and then will prove it rigorously.

This is a joint work with Steve Evans.

List of invited speakers

Schedule for December 14