

Random commuting matrices

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Abstract: The study of the eigenvalue distribution of random matrices is a well-established field, which started with the work of Wigner in the 1950's. What can one say about random d -tuples of commuting matrices? What does it even mean?

We will describe one possible approach to defining a random d -tuple of commuting matrices. We shall show that in the Hermitian case, the description of their eigenvalue distribution parallels to some extent the single matrix theory, but in the non-self adjoint case it does not.