

Extreme Value Statistics of Normal Random Matrices and Coulomb Gases

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Random normal matrices, were first introduced in the context of fractional quantum Hall effect [1, 2]. Here, we first derive the Gumbel distribution as the probability distribution of the eigenvalue with largest modulus of Gaussian normal matrix ensemble, based on a method of orthogonal polynomials [3]. Subsequently, we discuss the universality of this result for a normal matrix ensemble with arbitrary radially symmetric potential which meets certain constraints, at the (finite) inner and outer edge of spectral density support [2].

References

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