

INTERLACED VARIABLES RELATING TO RANDOM MATRIX THEORY

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It is a classical result that the eigenvalues of successive minors of an Hermitian matrix are interlaced. In the case of Gaussian complex Hermitian random matrices, the joint probability density of the eigenvalues and its successive minors can be computed, as can the corresponding correlation functions. The resulting process is relevant to a certain class of queueing problems. Some of the considerations leading to this result can be generalized, and lead to a construction of so called beta ensembles. Concepts relating to interlaced eigenvalues can also be used to inter-relate beta ensembles with different values of beta.