Universität Hamburg

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Kolloquium über Mathematische Statistik und Stochastische Prozesse

Freitag, den 11.05.2012, 16.15 Uhr, Hörsaal 5

DR. JAN NAGEL (Technische Universität München)[1]

"CLTs for spectral measure moments of classical ensembles
(joint work with Holger Dette)"

Zusammenfassung/Abstract

For the classical distributions of Hermitian matrices, the Hermite, Laguerre and Jacobi ensemble, the spectral measure is a weighted version of the empirical eigenvalue distribution. We show that the vector of the first k moments of these spectral measures satisfies a CLT when the matrix size tends to infinity. The essential step in the proof is a transformation to independent auxiliary variables which are related to polynomials orthogonal with respect to the spectral measures. We discuss also an interesting relation between the moment spaces of general measures on the real line and the finite dimensional convergence of the classical ensembles.

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