Orthogonal polynomials and eigenvalues of random matrices

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Eigenvalues of random matrices are identically distributed but not independent random variables. Orthogonal polynomials are useful to give the explicite form of the mean eigenvalue density, the limit of the density function, and the maximal eigenvalue. The applied orthogonal polynomials depend on the distribution on the random matrix sequence, for example Hermite polynomials in the case of self-adjoint Gaussian random matrices with zero mean, Laguerre polynomial in case of Wishart matrices or chiral random matrices. I would like to present the different kind of random matrices and give an overview about these results.