

The asymptotic behaviour of zeros of orthogonal polynomials*

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Zeros of orthogonal polynomials are important in numerical quadrature and interpolation. They also describe the equilibrium position in an electrostatic model of repelling charges. The asymptotic distribution of zeros of certain orthogonal polynomials is also important because it corresponds to the distribution of eigenvalues of certain random matrices. We will explain how the asymptotic distribution of zeros of orthogonal polynomials can be obtained from the three-term recurrence relation for these orthogonal polynomials, as eigenvalues of tridiagonal matrices, and as a solution of an equilibrium problem in logarithmic potential theory.

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