Asymptotics for orthogonal polynomials: a Riemann-Hilbert approach

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There are various ways to find asymptotic behaviour of orthogonal polynomials. For instance, one may use the Liouville-Green (or WKB) approximation in differential equation theory, the steepest descent method for contour integrals, or three-term recurrence relations. In this lecture, I will mention a new approach based on two-dimensional Riemann-Hilbert problems.