

Pastur, L.

From random matrices to quasi-periodic Jacobi matrices via orthogonal polynomials. (English) Zbl 1118.15023

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The author discusses asymptotic formulas for ordinary polynomials orthogonal with respect to weights whose support is a union of q disjoint intervals, presents asymptotics for orthogonal polynomials with respect to varying weights, then introduces quasi-periodic Jacobi matrices associated with the both asymptotics and discusses links between the matrices, and gives a collection of facts on asymptotic eigenvalue distributions of random matrices, that can be written in the terms of the above Jacobi matrices.

Reviewer: [Shuhuang Xiang \(Changsha\)](#)

MSC:

[15B52](#) Random matrices (algebraic aspects)

[47B36](#) Jacobi (tridiagonal) operators (matrices) and generalizations

[58J53](#) Isospectrality

[42C05](#) Orthogonal functions and polynomials, general theory of nontrigonometric harmonic analysis

[15A18](#) Eigenvalues, singular values, and eigenvectors

Cited in **5** Documents

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[orthogonal polynomials](#); [quasi-periodic Jacobi matrices](#); [random matrices](#); [asymptotic formulas](#); [asymptotic eigenvalue distributions](#)

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