On the edge and the extreme point universality of the local eigenvalue statistics of matrix models

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Abstract

The asymptotic of the Jacoby matrix coefficients in the random matrix model with an even analytic potential is studied in the case when the limiting eigenvalue distribution density $\rho(\lambda)$ has no zeros inside the spectrum or has one zero of the second order at the point $z = 0$. This asymptotic allows us to prove the universality of the eigenvalue statistics in the velocity of the edges or of the extreme point $z = 0$.