Random matrix ensembles with a power law density

I will talk about a class of rotationally invariant unitary random matrix ensembles where the eigenvalue density falls off as an inverse power law. Under a new scaling appropriate for such power law densities (different from scaling in the well-known Gaussian random matrix ensembles), the two-level kernel that determines all eigenvalue correlations can be calculated exactly. I will show that such ensembles belong to the class of critical ensembles.

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