Rectangular Young tableaux and the Jacobi ensemble

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Abstract

It has been shown by Pittel and Romik that the random surface associated with a large rectangular Young
tableau converges to a deterministic limit. We study the fluctuations from this limit along the edges of the rectangle.
We show that in the corner, these fluctuations are gaussian whereas, away from the corner and when the rectangle is
a square, the fluctuations are given by the Tracy-Widom distribution. Our method is based on a connection with the
Jacobi ensemble.

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