A MULTI-LAYER EXTENSION OF THE KPZ EQUATION

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The Airy process describes the evolution of the largest eigenvalue of Hermitian Brownian motion, and extends to the so called multi-layer Airy process which describes the kth largest eigenvalues for $k = 1, 2, 3, \ldots$. On the other hand we know that the KPZ equation, starting from the wedge initial condition is a finite temperature analogue of the largest eigenvalue, which converges as time goes to infinity to the Airy process. Thus it is natural to try to construct an extension of the KPZ to capture the analogues of the other eigenvalues.This extension will be described in the talk together with some of its properties.