

Random Tilings, Random Partitions and Stochastic Growth Processes
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A particle dynamics related to the shuffling algorithm for the Aztec diamond

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Abstract

The shuffling algorithm (introduced by Elkies *et al.*) for sampling a tiling of the Aztec diamond uniformly at random can be seen as a certain dynamics on a set of interacting particles. This is a discretization of a model of interlacing Brownian motions recently studied by Warren. As an application of these results, I will sketch a new proof of that fact that, in a suitable scaling limit of large Aztec diamonds, one can recover the distribution of the eigenvalues of a GUE matrix and its principal minors.

This is closely related to some recent work by Borodin and Ferrari.