

On hydrodynamic limits of Young diagrams

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Abstract

We consider a family of stochastic models of evolving two-dimensional Young diagrams, given in terms of certain energies, with Gibbs invariant measures. ‘Static’ scaling limits of the shape functions, under these Gibbs measures, have been shown by several authors over the years. In this talk we study corresponding ‘dynamical’ limits of which less is understood. We show that the hydrodynamic scaling limits of the diagram shape functions may be described by different types of parabolic PDEs, depending on the energy structure. It is a joint work with Ibrahim Fatkullin and Sunder Sethuraman.