A reaction-diffusion model

Claudio Landim[1]

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We consider the superposition of a symmetric simple exclusion dynamics, speeded-up in time, with a spin-flip dynamics in a one-dimensional interval with periodic boundary conditions. We prove the large deviations principle for the empirical measure under the stationary state. We deduce from this result that the stationary state is concentrated on the stationary solutions of the hydrodynamic equation which are stable.