

Last Passage Percolation in Macroscopically Inhomogeneous Media

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Abstract

In this note we investigate the last passage percolation model in the presence of macroscopic inhomogeneity. We analyze how this affects the scaling limit of the passage time, leading to a variational problem that provides an ODE for the deterministic limiting shape of the maximal path. We obtain a sufficient analytical condition for uniqueness of the solution for the variational problem. Consequences for the totally asymmetric simple exclusion process are discussed.

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