

Front progression in Kinetically Constrained Spin Models

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In Kinetically Constrained Spin Models (KCSM), each site of a lattice refreshes with rate one its occupation variable to empty (respectively occupied) with probability q (respectively $p = 1 - q$), provided some of its neighbors are empty. Here, we study the non equilibrium dynamics of two one-dimensional KCSM started from a configuration entirely occupied on the left half-line and focus on the evolution of the front, namely the position of the leftmost zero. We prove, for q larger than a threshold $\bar{q} < 1$, a law of large numbers and a central limit theorem for the front, as well as the convergence to an invariant measure of the law of the process seen from the front.

References

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