

Some two-dimensional finite energy percolation processes

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Abstract

Some examples of translation invariant site percolation processes on the \mathbb{Z}^2 lattice are constructed, the most far-reaching example being one that satisfies uniform finite energy (meaning that the probability that a site is open given the status of all others is bounded away from 0 and 1) and exhibits a.s. the coexistence of an infinite open cluster and an infinite closed cluster. Essentially the same example shows that coexistence is possible between an infinite open cluster and an infinite closed cluster that are both robust under i.i.d. thinning.

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