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The size of a pond in 2D invasion percolation

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Abstract

We consider invasion percolation on the square lattice. van den Berg, Peres, Sidoravicius and Vares have proved that the probability that the radius of a so-called pond is larger than n, differs at most a factor of order log n from the probability that in critical Bernoulli percolation the radius of an open cluster is larger than n. We show that these two probabilities are, in fact, of the same order. Moreover, we prove an analogous result for the volume of a pond.

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