

1151-60-43

Reza Gheissari* (reza@cims.nyu.edu). *Random-cluster dynamics in two dimensions.*

The random-cluster model is a model of random graphs that generalizes independent bond-percolation and provides a unifying framework for the Ising and Potts models. On $n \times n$ subsets of the integer lattice \mathbb{Z}^2 , the model has seen tremendous attention due to its rich phase transition. We consider the dynamical evolution of random-cluster configurations under canonical MCMC samplers (Glauber, Metropolis, Swendsen–Wang) and analyze their time to equilibrate as a function of n . We discuss recent progress filling in its dynamical phase diagram on \mathbb{Z}^2 as its various parameters are varied. (Received August 03, 2019)