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Non-local Potts model on random lattice and chromatic number of a plane

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Statistical models are widely used for investigation of complex system's behaviour. Most of the models considered in the literature are formulated on regular lattices with nearest neighbour interactions. The models with non-local interaction kernels have been less studied. In this article we investigate an example of such a model – non-local q -color Potts model on a random $d = 2$ lattice. Only the same color spins at unit distance (within some small margin δ) interact. We study the vacuum states of this model and present the results of numerical simulations and discuss qualitative features of the corresponding patterns. Conjectured relation with the chromatic number of a plane problem is discussed.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

Maybe

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