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 λ -model with competing Potts interactions on Cayley tree of order

2 (Conference Paper)

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Abstract

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In this paper, we consider the λ -model on Cayley tree for order two with Potts competing nearest-neighbor and prolonged next-nearest neighbor interactions. We described the construction of the Gibbs measure for the considered model. We proved the existence of the translation-invariant limiting Gibbs measures for the model. © 2018 Author(s).

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- 1 Georgii, H.O. (1988) *Gibbs Measures and Phase Transitions (De Gruyter Studies in Mathematics Vol 9)*. Cited 831 times. (Berlin: de Gruyter)

- 2 Baxter, R.J. (1982) *Exactly Solved Models in Statistical Mechanics*. Cited 924 times. (New York: Academic.)

- 3 Sinai, Y.G. (1982) *Theory of Phase Transitions: Rigorous Results*. Cited 422 times. (Pergamon Press, Oxford)

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(2000) *Introduction to Mathematical Statistical Physics*. Cited 32 times.
(Amer. Math. Soc., Providence, RI)
-
- 5 Vannimenus, J.
Modulated phase of an ising system with competing interactions on a Cayley tree
(1981) *Zeitschrift für Physik B Condensed Matter*, 43 (2), pp. 141-148. Cited 97 times.
doi: 10.1007/BF01293605
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-
- 6 Pah, C.H., Ganikhodjaev, N.N., Mukhamedov, F.
(2008) *Physics Letters A*, 373 (33).
-
- 7 Ganikhodjaev, N.N., Rodzhan, M.H.M.
(2016) *J Korean Phys Soc.*, 66 (1200).
-
- 8 Potts, R.B.
Some generalized order-disorder transformations
(1952) *Mathematical Proceedings of the Cambridge Philosophical Society*, 48 (1), pp. 106-109. Cited 1547 times.
doi: 10.1017/S0305004100027419
[View at Publisher](#)
-
- 9 Peruggi, F., Di Liberto, F., Monroy, G.
The Potts model on Bethe lattices. I. General results
(1983) *Journal of Physics A: General Physics*, 16 (4), art. no. 018, pp. 811-827. Cited 50 times.
doi: 10.1088/0305-4470/16/4/018
[View at Publisher](#)
-
- 10 Peruggi, F., di Liberto, F., Monroy, G.
Phase diagrams of the q-state potts model on Bethe lattices
(1987) *Physica A: Statistical Mechanics and its Applications*, 141 (1), pp. 151-186. Cited 27 times.
doi: 10.1016/0378-4371(87)90267-6
[View at Publisher](#)
-
- 11 Ganikhodzhaev, N.N.
Pure phases of the ferromagnetic Potts model with three states on a second-order Bethe lattice
(1990) *Theoretical and Mathematical Physics*, 85 (2), pp. 1125-1134. Cited 27 times.
doi: 10.1007/BF01086840
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-