

Document details

[< Back to results](#) | 1 of 1
[Export](#)
[Download](#)
[Print](#)
[E-mail](#)
[Save to PDF](#)
[Add to List](#)
[More... >](#)
[Full Text](#)
[View at Publisher](#)

AIP Conference Proceedings

Volume 2012, 2 October 2018 Article number 020032

International Conference on Mathematics, Engineering and Industrial Applications 2018, ICoMEIA 2018; Menara Razak Universiti Teknologi Malaysia (UTM)Kuala Lumpur; Malaysia; 24 July 2018 through 26 July 2018; Code 140025

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

2 (Conference Paper)

Mukhamedov, F.^a [✉](#), Pah, C.H.^b [✉](#), Jamil, H.^b [✉](#) [👤](#)^aDepartment of Mathematical Sciences, College of Sciences, United Arab Emirates University, P.O. Box, 15551, Al Ain, Abu Dabi, United Arab Emirates^bDepartment of Computational and Theoretical Sciences, Faculty of Science, International Islamic University Malaysia, P.O. Box, 141, Kuantan, 25710, Malaysia

Abstract

[View references \(18\)](#)

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).

ISSN: 0094243X

ISBN: 978-073541729-8

Source Type: Conference Proceeding

Original language: English

DOI: 10.1063/1.5054231

Document Type: Conference Paper

Volume Editors: Zin S.M., Rusdi N.A., Khazali K.A.B.M., Abdullah N., Roslan N., Zain N.A.M., Saad R.M., Yazid N.M.

Sponsors:

Publisher: American Institute of Physics Inc.

References (18)

[View in search results format >](#)
 All
 [Export](#)
[Print](#)
[E-mail](#)
[Save to PDF](#)
[Create bibliography](#)

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)

Metrics [?](#)

0 Citations in Scopus

0 Field-Weighted

Citation Impact

PlumX Metrics [v](#)

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)[Set citation feed >](#)

Related documents

Ground States and Phase Transition of the λ -Model on the Cayley TreeMukhamedov, F. , Pah, C.H. , Jamil, H. (2018) *Theoretical and Mathematical Physics (Russian Federation)*On Ground States of λ -Model on the Cayley Tree of order twoMukhamedov, F. , Pah, C.H. , Jamil, H. (2017) *Journal of Physics: Conference Series*Periodic and Weakly Periodic Ground States for the λ -Model on Cayley TreeMukhamedov, F. , Pah, C.H. , Rahimatullaev, M. (2018) *Journal of Physics: Conference Series*

View all related documents based on references

Find more related documents in Scopus based on:

-
- 4 Minlos, R.A.
(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
[View at Publisher](#)
-
- 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
[View at Publisher](#)
-