



Universiteit
Leiden
The Netherlands

The parabolic Anderson model on Galton-Watson trees

Wang, D.

Citation

Wang, D. (2024, May 28). *The parabolic Anderson model on Galton-Watson trees*. Retrieved from <https://hdl.handle.net/1887/3754826>

Version: Publisher's Version

[Licence agreement concerning inclusion of doctoral](#)

License: [thesis in the Institutional Repository of the University of](#)
[Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3754826>

Note: To cite this publication please use the final published version (if applicable).

Bibliography

- [1] P. W. Anderson. Absence of diffusion in certain random lattices. *Phys. Rev.*, 109:1492–1505, Mar 1958.
- [2] E. Archer and A. Pein. Parabolic Anderson model on critical Galton-Watson trees in a Pareto environment. *Stochastic Process. Appl.*, 159:34–100, 2023.
- [3] A. Astrauskas. From extreme values of i.i.d. random fields to extreme eigenvalues of finite-volume Anderson Hamiltonian. *Probab. Surv.*, 13:156–244, 2016.
- [4] K. B. Athreya. Large deviation rates for branching processes. I. Single type case. *Ann. Appl. Probab.*, 4(3):779–790, 1994.
- [5] L. Avena, O. Gün, and M. Hesse. The parabolic Anderson model on the hypercube. *Stochastic Process. Appl.*, 130(6):3369–3393, 2020.
- [6] J. D. Biggins and N. H. Bingham. Large deviations in the supercritical branching process. *Adv. in Appl. Probab.*, 25(4):757–772, 1993.
- [7] M. Biskup and W. König. Long-time tails in the parabolic Anderson model with bounded potential. *Ann. Probab.*, 29(2):636–682, 2001.
- [8] M. Biskup and W. König. Eigenvalue order statistics for random Schrödinger operators with doubly-exponential tails. *Comm. Math. Phys.*, 341(1):179–218, 2016.
- [9] M. Biskup, W. König, and R. S. dos Santos. Mass concentration and aging in the parabolic Anderson model with doubly-exponential tails. *Probab. Theory Related Fields*, 171(1-2):251–331, 2018.
- [10] R. A. Carmona and S. A. Molchanov. *Parabolic Anderson problem and intermittency*, volume 108 of *Mem. Amer. Math. Soc.* American Mathematical Society, Providence, RI, 1994.
- [11] F. den Hollander. *Large deviations*, volume 14 of *Fields Institute Monographs*. American Mathematical Society, Providence, RI, 2000.
- [12] F. den Hollander, W. König, and R. S. dos Santos. The parabolic Anderson model on a Galton-Watson tree. In *In and out of equilibrium 3. Celebrating Vladas Sidoravicius*, volume 77 of *Progr. Probab.*, pages 591–635. Birkhäuser/Springer, 2021.

Bibliography

- [13] F. den Hollander and D. Wang. The parabolic Anderson model on a Galton-Watson tree revisited. *J. Stat. Phys.*, 189(1):Paper 8, 2022.
- [14] F. den Hollander and D. Wang. Annealed parabolic Anderson model on a regular tree. *Markov Process. Related Fields*, 30:105–147, 2024.
- [15] M. D. Donsker and S. R. S. Varadhan. Asymptotic evaluation of certain Markov process expectations for large time. I. II. *Comm. Pure Appl. Math.*, 28:1–47; 279–301, 1975.
- [16] K. Fleischmann and S. A. Molchanov. Exact asymptotics in a mean field model with random potential. *Probab. Theory Related Fields*, 86(2):239–251, 1990.
- [17] J. Gärtner, F. den Hollander, and G. Maillard. Intermittency on catalysts. In *Trends in stochastic analysis*, volume 353 of *London Math. Soc. Lecture Note Ser.*, pages 235–248. Cambridge Univ. Press, Cambridge, 2009.
- [18] J. Gärtner and W. König. Moment asymptotics for the continuous parabolic Anderson model. *Ann. Appl. Probab.*, 10(1):192–217, 2000.
- [19] J. Gärtner, W. König, and S. Molchanov. Geometric characterization of intermittency in the parabolic Anderson model. *Ann. Probab.*, 35(2):439–499, 2007.
- [20] J. Gärtner, W. König, and S. A. Molchanov. Almost sure asymptotics for the continuous parabolic Anderson model. *Probab. Theory Related Fields*, 118(4):547–573, 2000.
- [21] G. Grüninger and W. König. Potential confinement property of the parabolic Anderson model. *Ann. Inst. Henri Poincaré Probab. Stat.*, 45(3):840–863, 2009.
- [22] J. Gärtner. On large deviations from an invariant measure. *Theory Probab. Appl.*, 22:24–39, 1977.
- [23] J. Gärtner and F. den Hollander. Correlation structure of intermittency in the parabolic Anderson model. *Probab. Theory Related Fields*, 114(1):1–54, 1999.
- [24] J. Gärtner and S. Molchanov. Parabolic problems for the Anderson model I. intermittency and related problems. *Comm. Math. Phys.*, 132(3):613–655, 1990.
- [25] J. Gärtner and S. Molchanov. Parabolic problems for the Anderson model. II. second-order asymptotics and structure of high peaks. *Probab. Theory Related Fields*, 111(1):15–55, 1998.
- [26] G. H. Hardy, J. E. Littlewood, and G. Pólya. *Inequalities*. Cambridge University Press, 1952.
- [27] J. Jost and M. P. Joy. Spectral properties and synchronization in coupled map lattices. *Phys. Rev. E (3)*, 65(1):016201, 9, 2002.

-
- [28] W. König, H. Lacoin, P. Mörters, and N. Sidorova. A two cities theorem for the parabolic Anderson model. *Ann. Probab.*, 37(1):347–392, 2009.
 - [29] W. König. *The parabolic Anderson model*. Pathways in Mathematics. Birkhäuser/Springer, 2016.
 - [30] R. Lyons and Y. Peres. *Probability on trees and networks*, volume 42 of *Cambridge Series in Statistical and Probabilistic Mathematics*. Cambridge University Press, New York, 2016.
 - [31] M. Mariani and L. Zambotti. Large deviations for the empirical measure of heavy-tailed Markov renewal processes. *Adv. in Appl. Probab.*, 48(3):648–671, 2016.
 - [32] B. Schmidt. On a semilinear variational problem. *ESAIM Control Optim. Calc. Var.*, 17(1):86–101, 2011.
 - [33] F. Spitzer. *Principles of random walk*, volume 34 of *Graduate Texts in Mathematics*. Springer-Verlag, New York-Heidelberg, 1976.
 - [34] A.-S. Sznitman. *Brownian motion, obstacles and random media*. Springer Monographs in Mathematics. Springer-Verlag, Berlin, 1998.
 - [35] R. van der Hofstad, W. König, and P. Mörters. The universality classes in the parabolic Anderson model. *Comm. Math. Phys.*, 267(2):307–353, 2006.
 - [36] D. Wang. The parabolic Anderson model on a Galton-Watson tree with normalised Laplacian, 2023. Preprint, arXiv:2310.05602.