

Zijie Zhuang

zijie123@wharton.upenn.edu

Education

University of Pennsylvania Ph.D. student in Statistics Advisors: Jian Ding and Xin Sun	2021–2026 (expected)
Peking University B.S. in Mathematics	2017–2021

Research interests

Probability theory with focus on statistical mechanics and random geometry.

Articles

1. **Percolation of thick points of the log-correlated Gaussian field in high dimensions**, with Jian Ding and Ewain Gwynne. Preprint, arXiv:2410.22075.
2. **Dynamical random field Ising model at zero temperature**, with Jian Ding and Peng Yang. Preprint, arXiv:2410.20457.
3. **The bulk one-arm exponent for the $CLE_{\kappa'}$ percolations**, with Haoyu Liu, Xin Sun and Pu Yu. Preprint, arXiv:2410.12724.
4. **Backbone exponent and annulus crossing probability for planar percolation**, with Pierre Nolin, Wei Qian and Xin Sun. Preprint, arXiv:2410.06419.
5. **Annulus crossing formulae for critical planar percolation**, with Xin Sun and Shengjing Xu. Preprint, arXiv:2410.04767.
6. **Tightness of exponential metrics for log-correlated Gaussian fields in arbitrary dimension**, with Jian Ding and Ewain Gwynne. Preprint, arXiv:2310.03996.
7. **Backbone exponent for two-dimensional percolation**, with Pierre Nolin, Wei Qian and Xin Sun. Preprint, arXiv:2309.05050.
8. **Boundary touching probability and nested-path exponent for non-simple CLE**, with Morris Ang, Xin Sun and Pu Yu. *Annals of Probability*, to appear.
9. **Sharp asymptotics for arm probabilities in critical planar percolation**, with Hang Du, Yifan Gao and Xinyi Li. *Comm. Math. Phys.*, 405(8):Paper No. 182, 51, 2024.
10. **On large deviations and intersection of random interlacements**, with Xinyi Li. *Bernoulli*, 30(3):2102–2126, 2024.
11. **Long range order for random field Ising and Potts models**, with Jian Ding. *Comm. Pure Appl. Math.*, 77(1):37–51, 2024.
12. **On the percolative properties of the intersection of two independent interlacements**. *ALEA Lat. Am. J. Probab. Math. Stat.*, 18, 1061-1084 (2021).

Talks

1. Two-Dimensional Random Geometry Workshop 7/2024
2. UW Madison Probability Seminar 4/2024
3. KPZ meets KPZ Workshop 3/2024
4. UChicago Probability Seminar 2/2024
5. Percolation Today Webinar 11/2023
6. BICMR Summer School on Probability 6/2023
7. Random Geometry and Statistical Physics Workshop 10/2022
8. Penn Local Probability Seminar 4/2022
9. THU-PKU-BNU Joint Probability Webinar 12/2021
10. Percolation Today Webinar 10/2021

(Last updated: Oct 29, 2024)