

# Zijie Zhuang

zijie123@wharton.upenn.edu

## Education

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

## Research interests

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Probability theory with focus on statistical mechanics and random geometry.

## Articles

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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

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|---|---------|
| 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)