

# YoonHaeng Hur

## Curriculum Vitae

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### Education

- 2019– **University of Chicago**, United States.  
Ph.D. in Statistics
- 2012–2019 **Seoul National University**, Korea.  
B.S. in Mathematical Sciences, B.A. in Economics  
Temporary leave (2016–2018) due to military service

### Honors and Awards

- 2024 **Rising Stars in Data Science**.  
Selected and hosted by University of California San Diego, University of Chicago, Stanford University
- 2022 **DeepMind Student Travel Grant**.  
Awarded to 42 selected students for Conference on Learning Theory 2022
- 2019– **Overseas PhD Scholarship**.  
Grant by Korea Foundation for Advanced Studies (KFAS)
- 2012–2019 **Presidential Science Scholarship**.  
Full-tuition and grant by Korea Student Aid Foundation (KOSAF)

### Research

#### Research Interests

Statistical inference, optimization, matching, optimal transport

#### Working Papers

- **A Convexified Matching Approach to Imputation and Individualized Inference.**  
with T. Liang [arXiv:2407.05372](https://arxiv.org/abs/2407.05372)
- **Learning When the Concept Shifts: Confounding, Invariance, and Dimension Reduction.**  
with K. Dharmakeerthi, T. Liang [arXiv:2406.15904](https://arxiv.org/abs/2406.15904)
- **Robust Point Matching with Distance Profiles.**  
with Y. Khoo [arXiv:2312.12641](https://arxiv.org/abs/2312.12641)

#### Publications

- **Detecting Weak Distribution Shifts via Displacement Interpolation.**  
with T. Liang [arXiv:2305.15609](https://arxiv.org/abs/2305.15609)  
*Journal of Business & Economic Statistics*, 2024
- **Reversible Gromov-Monge Sampler for Simulation-Based Inference.**  
with W. Guo, T. Liang [arXiv:2109.14090](https://arxiv.org/abs/2109.14090)  
*SIAM Journal on Mathematics of Data Science*, 2024
- **Generative Modeling via Tree Tensor Network States.**  
with X. Tang, Y. Khoo, L. Ying [arXiv:2209.01341](https://arxiv.org/abs/2209.01341)  
*Research in the Mathematical Sciences*, 2023

- **Generative Modeling via Tensor Train Sketching.**  
with J. G. Hoskins, M. Lindsey, E.M. Stoudenmire, Y. Khoo [arXiv:2202.11788](https://arxiv.org/abs/2202.11788)  
*Applied and Computational Harmonic Analysis*, 2023
- **Online Learning to Transport via the Minimal Selection Principle.**  
with W. Guo, T. Liang, C.T. Ryan [arXiv:2202.04732](https://arxiv.org/abs/2202.04732)  
*Conference on Learning Theory*, 2022

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## Professional Service

- 2021– **Journal and Conference Referee.**
- **Probability and Statistics:** *Bernoulli*
  - **Learning Theory:** *Conference on Learning Theory (COLT)*
  - **Information Theory:** *IEEE Transactions on Information Theory*

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## Teaching Experience

- 2019– **Teaching Assistant**, *University of Chicago.*
- Distribution Theory (Fall 2024)
  - Statistical Methods and Applications (Winter 2020, Spring 2020, Fall 2020)
  - Introduction to Mathematical Probability (Spring 2021)
  - Multivariate Statistical Analysis: Applications and Techniques (Spring 2022)
  - Introduction to Random Matrices (Winter 2023)
  - Introduction to Stochastic Processes I (Fall 2023)
- 2012–2019 **Undergraduate Tutor**, *Seoul National University.*
- Calculus 1 (Spring 2013, Spring 2018)
  - Calculus 2 (Fall 2018)
  - Calculus for Life Science (Spring 2015, Spring 2019)