

YIDONG OUYANG

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EDUCATION

University of California, Los Angeles

August 2024 - Dec 2026

Ph.D. major in Statistics, Department of Statistics & Data Science

Advised by Guang Cheng

Los Angeles

The Chinese University of Hong Kong, Shenzhen

September 2021 - June 2024

M.Phil. major in Data Science, School of Data Science

Advised by Liyan Xie, co-advised by Guang Cheng

Shenzhen

Central University of Finance and Economics

September 2017 - June 2021

Bachelor major in Management Information Systems (GPA 90.48/100) top4/52

Beijing

- Honors: **National Scholarship 2018** (only the top 1% of students can be entitled)

RESEARCH INTERESTS

- Guidance for Diffusion Models / Flow Matching / Discrete Flow Matching
- Predictor–Corrector for Masked Diffusion Models and Discrete Flow Matching
- Post-training for Masked Diffusion Models and Discrete Flow Matching

RESEARCH EXPERIENCE

- **Google AI innovation and research**, Research Intern, Acceleration of video Diffusion Model, 2026.4-2026.7, Mountain View.
- **Google AI innovation and research**, Research Intern, Acceleration of Diffusion Language Model, 2026.1-2026.4, Mountain View.
- **Amazon AWS bedrock**, Applied Scientist Intern, Multimodal Masked Diffusion Model, 2025.6 - 2025.9, Arlington.

PUBLICATIONS

Research Highlight

- [C1] Discrete Guidance Matching: Exact Guidance for Discrete Flow Matching. **Yidong Ouyang***, Zhengyan Wan*, Liyan Xie, Fang Fang, Hongyuan Zha, Guang Cheng, ICLR 2026.
- [C2] Transfer Learning for Diffusion Models. **Yidong Ouyang**, Liyan Xie, Hongyuan Zha, Guang Cheng, Neural Information Processing Systems (NeurIPS) 2024.
- [C3] Improving Adversarial Robustness by Sample-Efficient Synthetic Data Generation. **Yidong Ouyang**, Liyan Xie, Guang Cheng, International Conference on Machine Learning (ICML) 2023.
- [C4] Error Analysis of Discrete Flow with Generator Matching. Zhengyan Wan, **Yidong Ouyang**, Qiang Yao, Liyan Xie, Fang Fang, Hongyuan Zha, Guang Cheng, ICML 2026.
- [C5] Corrected Samplers for Discrete Flow Models. Zhengyan Wan, **Yidong Ouyang**, Liyan Xie, Fang Fang, Hongyuan Zha, Guang Cheng, ICML 2026.

- [P1] Training-Free Self-Correction for Multimodal Masked Diffusion Models. **Yidong Ouyang**, Panwen Hu, Zhengyan Wan, Zhe Wang, Liyan Xie, Dmitriy Bespalov, Ying Nian Wu, Guang Cheng, Hongyuan Zha, Qiang Sun. arXiv:2602.02927
- [P2] Alignment of Diffusion Model and Flow Matching for Text-to-Image Generation. **Yidong Ouyang**, Liyan Xie, Hongyuan Zha, Guang Cheng. arXiv:2602.00413
- [P3] dFlowGRPO: Rate-Aware Policy Optimization for Discrete Flow Models. Zhengyan Wan, **Yidong Ouyang**, Panwen Hu, Qiang Sun. arXiv:2605.09291.
- [P4] MissDiff: Training Diffusion Models on Tabular Data with Missing Values. **Yidong Ouyang**, Liyan Xie, Chongxuan Li, Guang Cheng. arXiv:2307.00467. (Presented in part in International Conference on Machine Learning (ICML) 2023 workshop on Structured Probabilistic Inference & Generative Modeling).

Journal Articles

- [J1] Generalizing to Unseen Domains: A Survey on Domain Generalization. Jindong Wang, Cuiling Lan, Chang Liu, **Yidong Ouyang**, Tao Qin, Wang Lu, Yiqiang Chen, Wenjun Zeng, Philip S. Yu. IEEE Transactions on Knowledge and Data Engineering (TKDE) 2022.
- [J2] Learning Efficient Convolutional Networks through Irregular Convolutional Kernels. Weiyu Guo, Jiabin Ma, **Yidong Ouyang**, Liang Wang, Yongzhen Huang. Neurocomputing 2022.

Conference Proceedings

- [C6] Generalizing to Unseen Domains: A Survey on Domain Generalization. Jindong Wang, Cuiling Lan, Chang Liu, **Yidong Ouyang**, Tao Qin. International Joint Conference on Artificial Intelligence (IJCAI) 2021 survey track.

Preprints

- [P5] Acceleration of Diffusion Language Model through Discrete Average Generator. **Yidong Ouyang**, Zhengyan Wan, Themis Haris, Tan Tian, Liqian Peng, Henry Li, Ziqian Lin, JianHang Chen, Alec Go, George Michailidis.
- [P6] Reinforcing the Generation Order of Multimodal Diffusion Language Models. **Yidong Ouyang**, Zhe Wang, Dmitriy Bespalov, Guang Cheng. Under review.
- [P7] Learning What Not to Impute: An Uncertainty-Aware Diffusion Framework for Meaningful Missingness. Lixing Zhang, **Yidong Ouyang**, Weifu Li, Guang Cheng, Shixiang Zhu, Liyan Xie. Under review.
- [P8] Continual Density Ratio Estimation for Online Time Series with Applications in Change Detection. **Yidong Ouyang**, Liyan Xie.
- [P9] Attention Enables Zero Approximation Error. Zhiying Fang, **Yidong Ouyang**, Ding-Xuan Zhou, Guang Cheng, arXiv:2202.12166.

HONORS AND AWARDS

- Graduate Dean's Scholars Award, UCLA, 2024.
- NeurIPS Travel Award, 2024.
- Duan Yong Ping Meritorious Research Award, CUHKSZ, 2023.
- The 4th TBSI Workshop on Learning Theory, Best Poster Award, Second Place, 2022.
- The Second Doctoral and Postdoctoral Academic Forum, Poster Runner Up, 2022.

- Excellence in Academic Research and Innovation Scholarship, CUFE, 2018.
- Comprehensive Development Scholarship, first prize, CUFE, 2018.

TEACHING EXPERIENCES

- Teaching Assistant, STATS 100C, Spring 2026.
- Teaching Assistant, STATS 10, Fall 2025.
- Graduate Student Instructor for 2022 SDS new PhD student bootcamp, Summer 2022.
- Teaching Assistant, DDA4010 Bayesian Statistics, Spring 2022.
- Teaching Assistant, STA3020 Statistical Inference, Fall 2021.

PROFESSIONAL SERVICE

- Journal reviewer: IEEE Transactions on Neural Networks and Learning Systems (TNNLS), IEEE Transactions on Knowledge and Data Engineering (TKDE).
- Conference reviewer: NeurIPS 2023-2025, ICLR 2024-2026, ICML 2024-2026, AAAI 2025, AISTATS 2025