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Curriculum Vitae

Yuancheng Xu

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Education

University of Maryland, College Park
Ph.D. in Applied Mathematics & Statistics, and Scientific Computation *2020-2025*
Advisor: Furong Huang

Southern University of Science and Technology, China *2016-2020*
B.S. in Mathematics and Applied Mathematics
GPA 3.94/4.00 (1/909), Summa Cum Laude (1%)

Work and Research Experience

- **Netflix Eyeline Lab** *June 2025 - Present*

  Research Scientist

  - Building Netflix video foundation model
  - Developing multimodal models with advanced understanding, reasoning, interaction, and generative capabilities

- **Netflix Eyeline Lab** *Sept 2024 - March 2025*

  AI Research Intern

  - Motion control and 3D consistency in video generation model

- **JPMorgan Chase & Co.** *June – Sept 2024.*

  AI Research Intern

  - Test-time alignment of large language model

- **Comcast Applied AI** *June – Sept 2023*

  Machine Learning Research Intern

  - Scene-text understanding via vision-language models

- **University of California, Los Angeles** *May – Sept 2019*

  Cross-disciplinary Scholars in Science and Technology (CSST) Program

  - Tree-based methods for longitudinal analysis

- **New York University** *May – Sept 2018*

Undergraduate Research Program

  o   Topics on computational neuroscience regarding working memory

Publications and Preprints

1. **Yuancheng Xu**, Wenqi Xian, Li Ma, Julien Philip, Ahmet Taşel, Yiwei Zhao, Ryan Burgert, Mingming He, Oliver Hermann, Oliver Pilarski, Rahul Garg, Paul Debevec, Ning Yu. "Virtually Being: Customizing Camera-Controllable Video Diffusion Models with Volumetric Performance Captures". In *SIGGRAPH Asia,* 2025.

2. Baijiong Lin, Weisen Jiang, **Yuancheng Xu**, Hao Chen, Ying-Cong Chen. "Parm: Multi-objective Test-time Alignment via Preference-aware Autoregressive Reward Model". In *International Conference on Machine Learning (ICML)*, 2025.

3. Xiyao Wang, Zhengyuan Yang, Linjie Li, Hongjin Lu, **Yuancheng Xu**, Chung-Ching Lin, Kevin Lin, Furong Huang, Lijuan Wang. "Scaling Inference-time Search with Vision Value Model for Improved Visual Comprehension". In *International Conference on Computer Vision (ICCV),* 2025.

4. **Yuancheng Xu**, Udari Madhushani Sehwag, Alec Koppel, Sicheng Zhu, Bang An, Furong Huang, Sumitra Ganesh. "GenARM: Reward Guided Generation with Autoregressive Reward Model for Test-Time Alignment". In *International Conference on Learning Representations (ICLR)*, 2025.

5. Ryan D Burgert, **Yuancheng Xu**, Wenqi Xian, Oliver Pilarski, Pascal Clausen, Mingming He, Li Ma, Yitong Deng, Lingxiao Li, Mohsen Mousavi, Michael S Ryoo, Paul Debevec, Ning Yu. "Go-with-the-Flow: Motion-Controllable Video Diffusion Models Using Real-Time Warped Noise Flow". In *The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)* (Oral Presentation), 2025.

6. Michael-Andrei Panaitescu-Liess, Zora Che, Bang An, **Yuancheng Xu**, Pankayaraj Pathmanathan, Souradip Chakraborty, Sicheng Zhu, Tom Goldstein, Furong Huang. "Can Watermarking Large Language Models Prevent Copyrighted Text Generation and Hide Training Data?". In *AAAI Conference on Artificial Intelligence (AAAI)*, 2025. In *New Frontiers in Adversarial Machine Learning Workshop at Neural Information Processing Systems (NeurIPS)* (Best Paper Award), 2024.

7. **Yuancheng Xu**, Jiarui Yao, Manli Shu, Yanchao Sun, Zichu Wu, Ning Yu, Tom Goldstein, Furong Huang. " Shadowcast: Stealthy Data Poisoning Attacks Against Vision-Language Models". In *Neural Information Processing Systems (NeurIPS),* 2024.

8. Bang An, Sicheng Zhu, Ruiyi Zhang, Michael-Andrei Panaitescu-Liess, **Yuancheng Xu**, Furong Huang. "Automatic Pseudo-Harmful Prompt Generation for Evaluating False Refusals in Large Language Models". In *Conference on Language Modeling (COLM),* 2024

9. **Yuancheng Xu**, Chenghao Deng, Yanchao Sun, Ruijie Zheng, Xiyao Wang, Jieyu Zhao, Furong Huang. "Adapting Static Fairness to Sequential Decision-Making: Bias Mitigation Strategies towards Equal Long-term Benefit Rate". In *International Conference on Machine Learning (ICML),* 2024.

10. Bang An, Mucong Ding, Tahseen Rabbani, Aakriti Agrawal, **Yuancheng Xu**, Chenghao Deng, Sicheng Zhu, Abdirisak Mohamed, Yuxin Wen, Tom Goldstein, Furong Huang. "Benchmarking the Robustness of Image Watermarks". In *International Conference on Machine Learning (ICML),* 2024.

11. Xiyao Wang, Yuhang Zhou, Xiaoyu Liu, Hongjin Lu, **Yuancheng Xu**, Feihong He, Jaehong Yoon, Taixi Lu, Gedas Bertasius, Mohit Bansal, Huaxiu Yao, Furong Huang. "Mementos: A Comprehensive Benchmark for Multimodal Large Language Model Reasoning over Image Sequences". In *Association for Computational Linguistics (ACL),* 2024.

12. Mucong Ding, Bang An, **Yuancheng Xu**, Anirudh Satheesh, Furong Huang. "SAFLEX: Self-Adaptive Augmentation via Feature Label Extrapolation". In *International Conference on Learning Representations (ICLR)*, 2024.

13. Xiaoyu Liu, Jiaxin Yuan, Bang An, **Yuancheng Xu**, Yifan Yang, Furong Huang. "C-Disentanglement: Discovering Causally-Independent Generative Factors under an Inductive Bias of Confounder". In *Neural Information Processing Systems (NeurIPS),* 2023.

14. **Yuancheng Xu**, Yanchao Sun, Micah Goldblum, Tom Goldstein, Furong Huang. "Exploring and Exploiting Decision Boundary Dynamics for Adversarial Robustness". In *International Conference on Learning Representations (ICLR)*, 2023.

15. **Yuancheng Xu**, Yanchao Sun, and Furong Huang. "Everyone Matters: Customizing the Dynamics of Decision Boundary for Adversarial Robustness". In *International Conference on Machine Learning (ICML) Workshop on Continuous Time Perspectives in Machine Learning*, 2022.

16. **Yuancheng Xu**, Athanasse Zafirov, R. Michael Alvarez, Dan Kojis, Min Tan, and Christina M. Ramirez. "FREEtree: a Tree-Based Approach for High Dimensional Longitudinal Data with Correlated Features". *Preprint,* 2020.

Awards

Dean's fellowship, University of Maryland, College Park	2020,2021
Summa Cum Laude at Southern University of Science and Technology (10/1000)	2020
China National Scholarship (0.2%, Highest honor of Chinese undergraduate students)	2019
National Mathematical Olympiad (National Second Prize)	2015