

# Jerry Lingjie Mei

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## EDUCATION

### Princeton University

*Ph.D. candidate in Computer Science*

GPA: 3.85/4.0

Princeton, New Jersey

Sept. 2022 - May 2027

### Massachusetts Institute of Technology

*M.Eng. in Computer Science*

GPA: 4.7/5.0

Cambridge, Massachusetts

Sept. 2020 - May 2022

*B.Sc. in Computer Science (6-3), and Mathematics (18)*

GPA: 4.9/5.0

Sept. 2017 - May 2020

### Peking University

*B.Sc. candidate in Mathematics*

GPA: 3.84/4.00

Beijing, China

Sept. 2016 - Jun. 2017

## RESEARCH INTEREST

Procedural Generation, 3D vision, Generative AI.

## PUBLICATIONS

- Jack Nugent, Siyang Wu, Zeyu Ma, Beining Han, Meenal Parakh, Abhishek Joshi, **Lingjie Mei**, Alexander Raistrick, Xinyuan Li, and Jia Deng. Evaluating Robustness of Monocular Depth Estimation with Procedural Scene Perturbations. *Advances in Neural Information Processing Systems (NeurIPS)*, 2025.
- Alexander Raistrick\*, **Lingjie Mei\***, Karhan Kayan\*, David Yan, Yiming Zuo, Beining Han, Hongyu Wen, Meenal Parakh, Stamatis Alexandropoulos, Lahav Lipson, Zeyu Ma, and Jia Deng. Infinigen Indoors: Photorealistic Indoor Scenes using Procedural Generation. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.
- Shari Liu, Kirsten Lydic, **Lingjie Mei**, and Rebecca Saxe. Violations of physical and psychological expectations in the human adult brain. *Imaging Neuroscience, 2024*; *Proceedings of the 45th Annual Meeting of the Cognitive Science Society (CogSci)*, 2023.
- Alexander Raistrick\*, Lahav Lipson\*, Zeyu Ma\*, **Lingjie Mei\***, Mingzhe Wang, Yiming Zuo, Karhan Kayan, Hongyu Wen, Beining Han, Yihan Wang, Alejandro Newell, Hei Law, Ankit Goyal, Kaiyu Yang, and Jia Deng. Infinite Photorealistic Worlds Using Procedural Generation. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.
- **Lingjie Mei\***, Jiayuan Mao\*, Ziqi Wang, Chuang Gan, and Joshua B. Tenenbaum. FALCON: Fast Visual Concept Learning by Integrating Images, Linguistic descriptions, and Conceptual Relations. *The Tenth International Conference on Learning Representations (ICLR)*, 2022.
- Kevin Smith, **Lingjie Mei**, Shunyu Yao, Jiajun Wu, Elizabeth S. Spelke, Josh Tenenbaum, and Tomer D. Ullman. The fine structure of surprise in intuitive physics: when, why, and how much? *Proceedings of the 42th Annual Meeting of the Cognitive Science Society (CogSci)*, 2020.
- Kevin Smith, **Lingjie Mei\***, Shunyu Yao, Jiajun Wu, Elizabeth S. Spelke, Josh Tenenbaum, and Tomer D. Ullman. Modeling Expectation Violation in Intuitive Physics with Coarse Probabilistic Object Representations. *Advances in Neural Information Processing Systems (NeurIPS)*, 2019.

## SERVICES

- Teaching Assistant/Preceptor for MIT 6.036, Princeton COS 324 and COS 423.
- Reviewers for NeurIPS 2024, EECV 2024, NeurIPS 2025, ICCV 2025, CVPR 2026.

## OTHER MISC PROJECTS Paper projects

- princeton-vl/infinigen: core contributor to Princeton VL's flagship procedural scene generator (6.9k ★).
- ADEPT-Model-Release: model code for the ADEPT intuitive-physics project (NeurIPS 2019).
- ADEPT-Dataset-Release: dataset generation code for ADEPT.
- FALCON-Release: PyTorch reference implementation for the FALCON visual concept learner (ICLR 2022).
- princeton-vl/cvdpack: contributor to tooling for reorganizing/compressing RGB/Depth/Flow/Normal frame datasets.

## Non-paper projects

- blocher/dailyoffice2019: contributor via pull requests to the Daily Office 2019 website codebase.
- WinogradConvolution: Julia + CUDA implementation of Winograd convolution kernels.
- NonlinearPDE: multigrid-based iterative solver for nonlinear PDEs.
- BayesianLanguageLearningPython: compositional language evolution from a Bayesian perspective.
- Contour3D: 3D contour reconstruction and visualization experiments.
- FastMultipleMethod: implementation of 1D fast multipole method.

- StarRailCopilot: maintained fork for Honkai: Star Rail automation tooling.
- ece475-proj: RISC-V 32I processor with vectorization support.
- Competitive\_SIR: simulation of competing rumor dynamics with compartmental models.
- AtariRepresentation: experiments on representation generalization in Atari games.

#### **ACTIVITIES**

- Prior to coming to MIT, I won the Gold Medal at the 2016 International Mathematical Olympiad (IMO).
- During my years at MIT, I am involved with MIT ATS, MIT Asian dance team, MIT CUCN and MIT Technique. I was also top 25 individual at 2017 Putnam; and won the Boston Dragon Boat Race.
- During my years at Princeton, I am involved with Princeton ECP. I was also a member of the IEEE-Eta Kappa Nu Honor Society.