

# YIQING LIANG

1575 Harbor Blvd, Apt 3525, Weehawken, NJ 07086

(+1) 617-784-0224 ◊ yiqing\_liang@brown.com ◊ <https://lyn7130.github.io> ◊ [Github](#)

## RESEARCH AND WORK EXPERIENCE

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- Research Scientist Intern**, *NVIDIA Research, Santa Clara, CA, USA* *Jun 2024 - Nov 2024*  
Advisors: Abhishek Badki, Hang Su, Orazio Gallo  
Topics: Generalizable Scene Flow Prediction given Large-Scale Data Curation
- AI Research Scientist Intern**, *Meta Reality Labs, Redmond, WA, USA* *Jun 2023 - Nov 2023*  
Advisors: Numair Khan, Lei Xiao, Douglas Lanman  
Topics: Gaussian Deformation Fields for real-time Dynamic Novel View Synthesis
- Research Assistant**, *Brown University, Providence, RI, USA* *Sep 2021-*  
Advisor: James Tompkin  
Topic: 3D Multimodal Generative AI for Dynamic Scenes
- Research Assistant**, *Columbia University, New York, NY, USA* *Sep 2019-May 2021*  
Advisors: Shuran Song, Shih-Fu Chang  
Topic: RL-based Embodied Navigation Agent, Vision-Language Commonsense Reasoning
- Research Intern**, *SenseTime, Shanghai, Shanghai, China* *Aug 2018-Mar 2019*  
Advisor: Cheng Li  
Topic: AI Education for Computer Vision
- Research Assistant**, *MIT CSAIL, Cambridge, MA, USA* *Feb 2018-May 2018*  
Advisors: Xavier Puig, Bolei Zhou, Antonio Torralba  
Topic: VirtualHome Action Space Extension

## EDUCATION

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- Ph.D. in Computer Science**, *Sept 2021 -*  
Department of Computer Science, Brown University, RI, USA
- M.S. in Computer Science**, *Aug 2019 - May 2021*  
Department of Computer Science, Columbia University, NY, USA
- Special Student Program**, *Feb 2018 - Jun 2018*  
Department of Electrical Engineering and Computer Science, MIT, MA, USA
- B.S. in Computer Science**, *Sept 2015 - June 2019*  
School of Computer Science, Fudan University, Shanghai, China

## SELECTED PUBLICATIONS & PREPRINTS

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- [1] **Zero-shot Monocular Scene Flow Estimation in the Wild**  
Yiqing Liang, Abhishek Badki\*, Hang Su\*, James Tompkin, Orazio Gallo  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2025.*
- [2] **Monocular Dynamic Gaussian Splatting is Fast and Brittle but Smooth Motion Helps**  
Yiqing Liang, Mikhail Okunev, Mikaela Angelina Uy, Runfeng Li, Leonidas J. Guibas, James Tompkin, Adam Harley  
*Under Review, 2024*
- [3] **GauFRé: Gaussian Deformation Fields for Real-time Dynamic Novel View Synthesis**  
Yiqing Liang, Numair Khan, Zhengqin Li, Thu Nguyen-Phuoc, Douglas Lanman, James Tompkin, Lei Xiao  
*IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2025*

#### [4] Semantic Attention Flow Fields for Monocular Dynamic Scene Decomposition

Yiqing Liang, Eliot Laidlaw, Alexander Meyerowitz, Srinath Sridhar, James Tompkin  
*IEEE/CVF International Conference on Computer Vision (ICCV), 2023*

#### [5] Scene Graph Enhanced Image-Text Learning for Visual Commonsense Reasoning

Zhecan Wang, Haoxuan You, Liunian Harold Li, Alireza Zareian, Suji Park, Yiqing Liang, Kai-Wei Chang, Shih-Fu Chang  
*The AAAI Conference on Artificial Intelligence (AAAI), 2022*

#### [6] SSCNav: Confidence-Aware Semantic Scene Completion for Visual Semantic Navigation

Yiqing Liang, Boyuan Chen, Shuran Song  
*IEEE International Conference on Robotics and Automation (ICRA), 2021*

### ACADEMIC SERVICES

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#### *Reviewing:*

**Conference** IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)  
IEEE/CVF International Conference on Computer Vision (ICCV)  
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)  
Annual Conference of the European Association for Computer Graphics (Eurographics)  
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)  
IEEE International Conference on Robotics and Automation (ICRA)

**Journal** Transactions on Pattern Analysis and Machine Intelligence (TPAMI)  
IEEE Robotics and Automation Letters (RA-L)  
The Visual Computer: International Journal of Computer Graphics (TVCJ)

### INVITED TALKS & ACTIVITIES

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**Zero-shot Monocular Scene Flow Estimation in the Wild** Feb 2025  
*Lightning talk* NYC Computer Vision Day 2025, NYU, USA

**Gaussian Deformation Fields for Real-time Dynamic Novel View Synthesis** Nov 2023  
*Oral presentation* The New England Computer Vision Workshop (NECV) 2023, Dartmouth, USA

**Semantic Attention Flow Fields for Monocular Dynamic Scene Decomposition** Feb 2023  
*Long Talk* Invited Talk at Northeastern University, Hosted by Prof. Huaizu Jiang, USA

**Semantic Attention Flow Fields for Monocular Dynamic Scene Decomposition** Dec 2022  
*Oral presentation* The New England Computer Vision Workshop (NECV) 2022, MIT, USA

### HONORS

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- Outstanding Undergraduate Thesis, Fudan University, 2019
- Excellent Student Scholarship, Fudan University, 2016
- Excellent Student Leader, Fudan University, 2016

### TECHNICAL AND PERSONAL SKILLS

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**Programming Languages** Python, Java, JavaScript, HTML, C/C++/C#, MATLAB, CUDA,  $\LaTeX$ , TensorFlow, JAX, Bash, SQL, Markdown

**Softwares & Tools** WSL, Vim, Tmux, Pytorch, Keras, Caffe, Pytorch-Lightning, Slurm, SSH, HuggingFace, Wandb, Anaconda, Docker, DeepSpeed, FSDP, LangChain, PEFT, ONNX, TensorRT, vLLM, SGLang, Blender, Unity

**Human Languages** English, Mandarin, Shanghai Dialect, Japanese