YIQING LIANG

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RESEARCH AND WORK EXPERIENCE

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

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

[1] Zero-shot Monocular Scene Flow Estimation in the Wild
Yiqing Liang, Abhishek Badki*, Hang Su*, James Tompkin, Orazio Gallo
[Oral] *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] GauFRe: 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

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

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

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

TECHNICAL AND PERSONAL SKILLS

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