Qianqian Wang

University of California, Berkeley
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Education

Cornell University, Cornell Tech 2018 – 2023
Ph.D. in Computer Science
Thesis: Modeling the 3D World and its Motion
Advisors: Noah Snavely, Bharath Hariharan

Zhejiang University 2014 – 2018
B.E. in Information Engineering
Advisor: Xiaowei Zhou

Academic Position

University of California, Berkeley 2023 – Present
Postdoctoral Scholar
Advisors: Angjoo Kanazawa, Alexei A. Efros

Publications

Representative Publications

[1] Qianqian Wang*, Yifei Zhang*, Aleksander Holynski, Alexei A. Efros, Angjoo Kanazawa, "Continuous 3D Perception Model with Persistent State", in Submission.

[2] Qianqian Wang*, Vickie Ye*, Hang Gao*, Jake Austin, Zhengqi Li, Angjoo Kanazawa, "Shape of Motion: 4D Reconstruction from a Single Video", *ArXiv*, 2024.

[3] Yuxi Xiao*, Qianqian Wang*, Shangzhan Zhang, Nan Xue, Sida Peng, Yujun Shen, Xiaowei Zhou, "SpatialTracker: Tracking Any 2D Pixels in 3D Space", *Computer Vision and Pattern Recognition (CVPR)*, 2024. (**Spotlight**)

[4] Qianqian Wang, Yen-Yu Chang, Ruojin Cai, Zhengqi Li, Bharath Hariharan, Aleksander Holynski, Noah Snavely, "Tracking Everything Everywhere All at Once", *International Conference on Computer Vision (ICCV)*, 2023. (**Best Student Paper**)

[5] Zhengqi Li, Qianqian Wang, Forrester Cole, Richard Tucker, Noah Snavely, "DynIBaR: Neural Dynamic Image-Based Rendering", *Computer Vision and Pattern Recognition (CVPR)*, 2023. (**Best Paper Honorable Mention**)

[6] Qianqian Wang, Zhicheng Wang, Kyle Genova, Pratul Srinivasan, Howard Zhou, Jon Barron, Ricardo Martin-Brualla, Noah Snavely, Thomas Funkhouser, "IBRNet: Learning Multi-View Image-Based Rendering", *Computer Vision and Pattern Recognition (CVPR)*, 2021.

All Other Publications

[7] Nan Huang, Wenzhao Zheng, Chenfeng Xu, Kurt Keutzer, Shanghang Zhang, Angjoo Kanazawa, Qianqian Wang, "Segment Any Motion in Videos", in Submission.

[8] Zhengqi Li, Richard Tucker, Forrester Cole, Qianqian Wang, Linyi Jin, Vickie Ye, Angjoo Kanazawa, Aleksander Holynski, Noah Snavely, "MegaSaM: Accurate, Fast, and Robust Structure and Motion from Casual Dynamic Videos", *ArXiv*, 2024.

[9] Justin Kerr, Chung Min Kim, Mingxuan Wu, Brent Yi, Qianqian Wang, Ken Goldberg, Angjoo Kanazawa, "Robot See Robot Do: Imitating Articulated Object Manipulation with Monocular 4D Reconstruction", *Conference on Robot Learning (CoRL)*, 2024. (**Oral**)

[10] Luming Tang*, Menglin Jia*, Qianqian Wang*, Cheng Perng Phoo, Bharath Hariharan, "Emergent Correspondence from Image Diffusion", *Neural Information Processing Systems (NeurIPS)*, 2023.

[11] Ruojin Cai, Joseph Tung, Qianqian Wang, Hadar Averbuch-Elor, Bharath Hariharan, Noah Snavely, "Doppelgangers: Learning to Disambiguate Images of Similar Structures", *International Conference on Computer Vision (ICCV)*, 2023. (**Oral**)

[12] Haotong Lin, Qianqian Wang, Ruojin Cai, Sida Peng, Hadar Averbuch-Elor, Xiaowei Zhou, Noah Snavely, "Neural Scene Chronology", *Computer Vision and Pattern Recognition (CVPR)*, 2023.

[13] Zhengqi Li, Qianqian Wang, Noah Snavely, Angjoo Kanazawa, "InfiniteNature-Zero: Learning Perpetual View Generation of Natural Scenes from Single Images", *European Conference on Computer Vision (ECCV)*, 2022. (**Oral**)

[14] Jiaming Sun, Xi Chen, Qianqian Wang, Zhengqi Li, Hadar Averbuch-Elor, Xiaowei Zhou, Noah Snavely, "Neural 3D Reconstruction in the Wild", *SIGGRAPH*, 2022.

[15] Qianqian Wang, Zhengqi Li, David Salesin, Noah Snavely, Brian Curless, Janne Kontkanen, "3D Moments from Near Duplicate Photos", *Computer Vision and Pattern Recognition (CVPR)*, 2022.

[16] Haoyu Guo, Sida Peng, Haotong Lin, Qianqian Wang, Guofeng Zhang, Hujun Bao, Xiaowei Zhou, "Neural 3D Scene Reconstruction with the Manhattan-world Assumption", *Computer Vision and Pattern Recognition (CVPR)*, 2022. (**Oral**)

[17] Yuan Liu, Sida Peng, Lingjie Liu, Qianqian Wang, Peng Wang, Christian Theobalt, Xiaowei Zhou, Wenping Wang, "Neural Rays for Occlusion-aware Image-based Rendering", *Computer Vision and Pattern Recognition (CVPR)*, 2022.

[18] Sida Peng*, Junting Dong*, Qianqian Wang, Shangzhan Zhang, Qing Shuai, Hujun Bao, Xiaowei Zhou, "Animatable Neural Radiance Fields for Human Body Modeling", *International Conference on Computer Vision (ICCV)*, 2021.

[19] Kai Zhang*, Fujun Luan*, Qianqian Wang, Kavita Bala, Noah Snavely, "Inverse Rendering with Spherical Gaussians for Physics-based Material Editing and Relighting", *Computer Vision and Pattern Recognition (CVPR)*, 2021.

[20] Sida Peng, Yuanqing Zhang, Yinghao Xu, Qianqian Wang, Qing Shuai, Hujun Bao, Xiaowei Zhou, "Neural Body: Implicit Neural Representations with Structured Latent Codes for Novel View Synthesis of Dynamic Humans", *Computer Vision and Pattern Recognition (CVPR)*, 2021. (**Best Paper Finalist**)

[21] Qianqian Wang, Xiaowei Zhou, Bharath Hariharan, Noah Snavely, "Learning Feature Descriptors using Camera Pose Supervision", *European Conference on Computer Vision (ECCV)*, 2020. (**Oral**)

[22] Jin Sun, Hadar Averbuch-Elor, Qianqian Wang, Noah Snavely, "Hidden Footprints: Learning Contextual Walkability from 3D Human Trails", *European Conference on Computer Vision (ECCV)*, 2020.

[23] Qianqian Wang, Xiaowei Zhou, Kostas Daniilidis, "Multi-Image Semantic Matching by Mining Consistent Features", *Computer Vision and Pattern Recognition (CVPR)*, 2018.

Selected Awards and Honors

Cornell CIS Dissertation Award	2024
ICCV Best Student Paper Award	2023
CVPR Best Paper Honorable Mention Award	2023
EECS Rising Stars	2022
Google PhD Fellowship	2022
Cornell TA Outstanding Award	2019
Samsung Scholarship	2016
National Scholarship	2015

Invited Talks

Perceiving and Understanding the Dynamic 3D World
UIUC Vision Seminar 2024

Recovering the Structure of the Dynamic 3D World
Michigan AI Symposium 2024

Recovering the 4D World Behind Any Video
Stanford Vision and Learning Lab (SVL), Stanford University 2024

Toward Dense and Long-Range Motion Estimation in Videos
Stanford Vision and Learning Lab (SVL), Stanford University 2024
NVIDIA Toronto AI Lab 2023

Modeling the 3D World and its Motion
Berkeley Artificial Intelligence Research (BAIR) Lab, UC Berkeley 2024
Scene Representation Group, MIT CSAIL 2023
CAIR, Chinese Academy of Sciences 2023

Generalizable Neural Rendering for Novel View Synthesis
Visual Informatics Group, University of Texas at Austin 2022
GAMES Webinar 2022

Services and Professional Activities

Conference Reviewer: CVPR, ICCV, ECCV, NeurIPS, ICRA 2019 – Present
Journal Reviewer: SIGGRAPH, SIGGRAPH Asia, IJCV 2019 – Present
Volunteer: CVPR Travel Grants Reviewer 2022
Area Chair: WACV 2024

Teaching

Guest Lecturer, UC Berkeley
CS180: Intro to Computer Vision and Computational Photography 2024

Teaching Assistant, Cornell University, Cornell Tech
CS 5670: Introduction to Computer Vision 2019 – 2023

Teaching Assistant, Cornell University, Cornell Tech
CS 5781: Machine Learning Engineering 2021

Teaching Assistant, Cornell University, Cornell Tech
CS 5787: Deep Learning 2020

Teaching Assistant, Cornell University
CS 4700: Artificial Intelligence 2018

Research and Industry Experience

Google DeepMind, Research Consultant 2024 – Present

Google Research

- Visiting Researcher 2023 – 2024
- Student Researcher, Advisor: Aleksander Holynski 2023
- Research Intern, Advisors: Brian Curless, Janne Kontkanen 2022
- Research Intern, Advisors: Thomas Funkhouser, Zhicheng Wang 2021

University of Pennsylvania, Research Intern, Advisor: Kostas Daniilidis 2017