XIAOMING ZHAO

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INTERESTS **Computer vision**, **generative models**, and **machine learning**.

EDUCATION

University of Illinois Urbana-Champaign, Urbana, IL, USA

Doctor of Philosophy in Computer Science	08/2019 - 12/2024

Advisor: Prof. Alexander Schwing
Thesis: Harnessing Data Priors to Mitigate 3D Data Scarcity

Master of Science in Computer Science	08/2017 - 05/2019

Advisor: Prof. Jian Peng

University of Science and Technology of China, Hefei, Anhui, China

Bachelor of Science in Statistics	09/2012 - 07/2016

EMPLOYMENTS

Machine Learning Research (MLR), Apple, Cupertino, CA, USA

Research Scientist	12/2024 - present

Google, San Francisco, CA, USA

Research Intern (*with Keunhong Park, Philipp Henzler, Pratul Srinivasan, Dor Verbin, Ricardo Martin-Brualla*)   09/2023 - 08/2024

Apple, Seattle, WA, USA

Research Intern (*with Alexander Schwing and Alex Colburn*)   02/2023 - 09/2023

Reality Labs, Meta, Seattle, WA, USA

Research Scientist Intern (*with Shunsuke Saito, Minh P. Vo, Jia-Bin Huang*) 05/2022 - 12/2022

Apple, Seattle, WA, USA

Machine Learning Research Intern (*with Alex Colburn and Fangchang Ma*) 05/2021 - 05/2022

Kuaishou US R&D Center, Bellevue, WA, USA

Research Intern (*with Ji Liu*)   05/2019 - 08/2019

Tencent AI Lab, Bellevue, WA, USA

Machine Learning Researcher Intern (*with Boqing Gong*)   05/2018 - 08/2018

PUBLICATIONS

[11] IllumiNeRF: 3D Relighting without Inverse Rendering.
Xiaoming Zhao, Pratul P. Srinivasan, Dor Verbin, Keunhong Park, Ricardo Martin Brualla, Philipp Henzler.
In *Neural Information Processing Systems (**NeurIPS**)*, 2024.

[10] GoMAvatar: Efficient Animatable Human Modeling from Monocular Video Using Gaussians-on-Mesh.
Jing Wen, **Xiaoming Zhao**, Zhongzheng Ren, Alexander G. Schwing, Shenlong Wang.
In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)*, 2024.

[9] NeRFDeformer: NeRF Transformation from a Single View via 3D Scene Flows.
Zhenggang Tang, Zhongzheng Ren, **Xiaoming Zhao**, Bowen Wen, Jonathan Tremblay, Stan Birchfield, Alexander G. Schwing.
In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**)*, 2024.

[8] Pseudo-Generalized Dynamic View Synthesis from a Video.
Xiaoming Zhao, Alex Colburn, Fangchang Ma, Miguel Ángel Bautista, Joshua M. Susskind, Alexander G. Schwing.
In *International Conference on Learning Representations (**ICLR**)*, 2024.

[7] Occupancy Planes for Single-view RGB-D Human Reconstruction.
Xiaoming Zhao, Yuan-Ting Hu, Zhongzheng Ren, Alexander G. Schwing.
In *AAAI Conference on Artificial Intelligence (**AAAI**)*, 2023.

[6] Generative Multiplane Images: Making a 2D GAN 3D-Aware.
Xiaoming Zhao, Fangchang Ma, David Güera, Zhile Ren, Alexander G. Schwing, Alex Colburn.
In *European Conference on Computer Vision (**ECCV**)*, 2022. **(Oral)**.

[5] Initialization and Alignment for Adversarial Texture Optimization.
Xiaoming Zhao, Zhizhen Zhao, Alexander G. Schwing.
In *European Conference on Computer Vision (**ECCV**)*, 2022.

[4] Class-agnostic Reconstruction of Dynamic Objects from Videos.
Zhongzheng Ren*, **Xiaoming Zhao***, Alexander G. Schwing.
(* indicates equal contribution)
In *Neural Information Processing Systems (**NeurIPS**)*, 2021.

[3] The Surprising Effectiveness of Visual Odometry Techniques for Embodied PointGoal Navigation.
Xiaoming Zhao, Harsh Agrawal, Dhruv Batra, Alexander G. Schwing.
In *International Conference on Computer Vision (**ICCV**)*, 2021.

[2] Mitigating Data Scarcity in Protein Binding Prediction Using Meta-Learning.
Yunan Luo*, Jianzhu Ma*, **Xiaoming Zhao**, Yufeng Su, Yang Liu, Trey Ideker, Jian Peng.
(* indicates equal contribution)
In *Research in Computational Molecular Biology (**RECOMB**)*, 2019.

[1] Integrating Thermodynamic and Sequence Contexts Improves Protein-RNA Binding Prediction.
Yufeng Su, Yunan Luo, **Xiaoming Zhao**, Yang Liu, Jian Peng.
PLOS Computational Biology, 2019.

WORKSHOPS

[2] Learning from Synthesized Demonstrations.
Xiaoming Zhao, Yang Liu, Jian Peng.
In *ICML Workshop on Learning in Artificial Open Worlds (**ICML-W**)*, 2020.

[1] Approximation Gradient Error Variance Reduced Optimization.
Wei-Ye Zhao, Yang Liu, **Xiaoming Zhao**, Jie-Lin Qiu, Jian Peng.
In *AAAI Workshop on Reinforcement Learning in Games (**AAAI-W**)*, 2019.

TALKS

Harnessing "Dark" Data

Waymo Research, Adobe, Figma, xAI, Amazon, Google	09/2024
Microsoft Applied Science, Apple Machine Learning Research, ByteDance	08/2024
Google DeepMind	07/2024

IllumiNeRF: 3D Relighting without Inverse Rendering

Google	07/2024

Towards Automatic 3D-Consistent Content Generation

Adobe Research	03/2024

Pseudo-Generalized Dynamic View Synthesis from a Video

Apple	06/2024
Google	01/2024

Generative Multiplane Images

Meta	08/2022

TEACHING

University of Illinois Urbana-Champaign

CS588: Autonomous Vehicle System Engineering	Fall 2021
CS446/ECE449: Machine Learning	Spring 2021
CS440/ECE448: Artificial Intelligence	Fall 2020
CS498AML: Applied Machine Learning	Spring 2019
CS598BL: Special Topics on Adversarial Machine Learning	Fall 2018

AWARDS AND HONORS

University of Illinois Urbana-Champaign

University nomination (one of three) for 2023 Apple Scholars in AI/ML	2022
Graduate Student SSBG Fellowship	2020

University of Science and Technology of China

Outstanding Graduates	2016
Outstanding Undergraduate Scholarship	2013, 2015
Seagate Scholarship	2014
Outstanding Freshman Scholarship	2012

Ministry of Education, China

Honorably received waiver for the National College Entrance Exam	2012

Chinese Chemical Society

Silver Medalist nation-wide, the 25th Chinese Chemistry Olympiad	2011

SERVICES

Reviewing for Journals

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)	2023 - present
IEEE Transactions on Visualization and Computer Graphics (TVCG)	2024 - present
International Journal of Computer Vision (IJCV)	2023 - present
ACM Computing Surveys	2024 - present

Reviewing for International Conferences

IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)	2022 - present
International Conference on Computer Vision (ICCV)	2023 - present
European Conference on Computer Vision (ECCV)	2024 - present
Neural Information Processing Systems (NeurIPS)	2022 - present
International Conference on Machine Learning (ICML)	2022 - present
International Conference on Learning Representations (ICLR)	2023 - present
Annual Conference of the European Association for Computer Graphics (EG)	2024 - present
AAAI Conference on Artificial Intelligence (AAAI)	2023
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)	2024