

# Yunxiang Zhang

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## RESEARCH INTERESTS

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My current research revolves around mixed reality, computer graphics, human-AI interaction, and generative models, with a particular focus on AI-powered multimodal interaction experiences and human-AI co-creation systems. More broadly, I enjoy combining insights from human perception research with deep learning tools to solve challenging real-world problems.

## EDUCATION

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<b>New York University</b> <i>Doctor of Philosophy in Computer Science</i> Advisor: Prof. Qi Sun	New York City, USA Sep 2022 – May 2026
<b>The Chinese University of Hong Kong</b> <i>Master of Philosophy in Information Engineering</i> Advisor: Prof. Dahua Lin	Hong Kong SAR, China Sep 2020 – Aug 2022
<b>Shanghai Jiao Tong University</b> <i>Master of Engineering in Electronics and Communication Engineering</i> Advisor: Prof. Bingbing Ni	Shanghai, China Sep 2017 – Mar 2020
<b>École Polytechnique</b> <i>Diplôme d'Ingénieur in Computer Science (double-degree program between SJTU and EP)</i>	Palaiseau, France Apr 2016 – Aug 2018
<b>Shanghai Jiao Tong University</b> <i>Bachelor of Engineering in Information Engineering</i>	Shanghai, China Sep 2013 – Aug 2017

## WORK EXPERIENCE

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<b>Research Intern, Meta Reality Labs</b> Mentor: Dr. Alexandre Chapiro	Sunnyvale, USA Aug 2025 - Jan 2026
<b>Research Intern, Adobe Research</b> Mentors: Dr. Cuong Nguyen and Dr. Long Mai	San Francisco, USA Apr 2025 - Jul 2025
<b>Research Intern, Intel Graphics Research</b> Mentors: Dr. Alexandr Kuznetsov and Dr. Akshay Jindal	Bellevue, USA May 2023 - Aug 2023
<b>Research Intern, Vector Institute</b> Mentor: Prof. Nicolas Papernot	Toronto, Canada Mar 2020 – Jun 2020
<b>Research Intern, LTCI Télécom Paris</b> Mentors: Prof. Samy Blusseau, Prof. Santiago Velasco-Forero, Prof. Isabelle Bloch, and Prof. Jesús Angulo	Paris, France Apr 2018 - Aug 2018

## PUBLICATIONS

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- **Perceptually Guided 3DGS Streaming and Rendering for Mixed Reality**  
IEEE/CVF Winter Conference on Applications of Computer Vision (WACV 2026) [Paper](#) | [Code](#)  
Yunxiang Zhang\*, Sai Harsha Mupparaju\*, Kenneth Chen, Jenna Kang, Xinyu Zhang, Maito Omori, Kazuyuki Arimatsu, Qi Sun
- **Image-GS: Content-Adaptive Image Representation via 2D Gaussians**  
ACM SIGGRAPH 2025 [Paper](#) | [Video](#) | [Code](#)  
[📺 Two Minute Papers](#) [🔗 LearnOpenCV](#)  
Yunxiang Zhang\*, Bingxuan Li\*, Alexandr Kuznetsov, Akshay Jindal, Stavros Diolatzis, Kenneth Chen, Anton Sochenov, Anton Kaplanyan, Qi Sun
- **Nano-3D: Metasurface-based Neural Depth Imaging**  
ACM SIGGRAPH 2025 Emerging Technologies [Paper](#)  
Bingxuan Li, Jiahao Wu, Yuan Xu, Zezheng Zhu, Yunxiang Zhang, Yanqi Liang, Nanfang Yu, Qi Sun
- **Novel View Synthesis for 3D Computer-Generated Holograms Using Deep Neural Fields**  
Optics Express 2025 [Paper](#)  
Kenneth Chen, Anzhou Wen, Yunxiang Zhang, Praneeth Chakravarthula, and Qi Sun

- **GazeFusion: Saliency-guided Image Generation**  
ACM Transactions on Applied Perception (ACM SAP 2024) [Paper](#) | [Video](#) | [Code](#)  
🏆 **Best Paper Award** 🏆 **Best Presentation Award**  
Yunxiang Zhang, Nan Wu, Connor Lin, Gordon Wetzstein, Qi Sun
- **Measuring and Predicting Multisensory Reaction Latency: A Probabilistic Model for Visual-Auditory Integration**  
IEEE Transactions on Visualization and Computer Graphics (IEEE ISMAR 2024) [Paper](#) | [Video](#)  
Xi Peng, Yunxiang Zhang, Daniel Jiménez Navarro, Ana Serrano, Karol Myszkowski, Qi Sun
- **May the Force Be with You: Dexterous Finger Force-Aware VR Interface**  
IEEE International Symposium on Mixed and Augmented Reality (IEEE ISMAR 2024) [Paper](#) | [Code](#)  
Fengze Zhang\*, Yunxiang Zhang\*, Xi Peng, Sky Achitoff, Paul M. Torrens, Qi Sun
- **Toward User-Aware Interactive Virtual Agents: Generative Multi-Modal Avatar Behaviors in VR**  
IEEE International Symposium on Mixed and Augmented Reality (IEEE ISMAR 2024) [Paper](#)  
Bhasura Gunawardhana, Yunxiang Zhang, Qi Sun, Zhigang Deng
- **Accelerating Saccadic Response through Spatial and Temporal Cross-Modal Misalignments**  
ACM SIGGRAPH 2024 [Paper](#)  
Daniel Jiménez Navarro, Xi Peng, Yunxiang Zhang, Karol Myszkowski, Hans-Peter Seidel, Qi Sun, Ana Serrano
- **Mixed Reality Interface for Whole-Body Balancing and Manipulation of Humanoid Robot**  
International Conference on Ubiquitous Robots (UR 2024) [Paper](#)  
Hyunjong Song, Gabriel Bronfman, Yunxiang Zhang, Qi Sun, Joo H. Kim
- **Toward Optimized VR/AR Ergonomics: Modeling and Predicting User Neck Muscle Contraction**  
ACM SIGGRAPH 2023 [Paper](#) | [Video](#) | [Code](#)  
Yunxiang Zhang, Kenneth Chen, Qi Sun
- **Force-Aware Interface via Electromyography for Natural VR/AR Interaction**  
ACM Transactions on Graphics (ACM SIGGRAPH Asia 2022) [Paper](#) | [Video](#) | [Code](#)  
Yunxiang Zhang, Benjamin Liang, Boyuan Chen, Paul M. Torrens, S. Farokh Atashzar, Dahua Lin, Qi Sun
- **Exploiting Channel Similarity for Network Pruning**  
IEEE Transactions on Circuits and Systems for Video Technology (IEEE TCSVT 2023) [Paper](#)  
Chenglong Zhao, Yunxiang Zhang, Bingbing Ni
- **CaPC Learning: Confidential and Private Collaborative Learning**  
International Conference on Learning Representations (ICLR 2021) [Paper](#) | [Video](#) | [Code](#)  
Christopher A. Choquette-Choo\*, Natalie Dullerud\*, Adam Dziedzic\*, Yunxiang Zhang\*, Somesh Jha, Nicolas Papernot, Xiao Wang
- **Max-plus Operators Applied to Filter Selection and Model Pruning in Neural Networks**  
International Symposium on Mathematical Morphology and Its Application to Signal and Image Processing (ISMM 2019) [Paper](#) | [Code](#)  
Yunxiang Zhang, Samy Blusseau, Santiago Velasco-Forero, Isabelle Bloch, Jesus Angulo

\* Equal contributions

## AWARDS

ACM Symposium on Applied Perception	Best Paper Award, Best Presentation Award (2024)
New York University	Deborah Rosenthal MD Award (2024)
New York University	SoE Fellowship (2022 – 2023)
The Chinese University of Hong Kong	Postgraduate Scholarship (2020 – 2022)
Shanghai Jiao Tong University	SPEIT Academic Excellence Scholarship (2015 – 2016)
Shanghai Jiao Tong University	Ardian Scholarship (2014 – 2015)

## ACADEMIC SERVICES

Conference/Journal Reviewer: SIGGRAPH, SIGGRAPH Asia, TOG, TVCG, AAI, IEEE VR, ISMAR, PG, JPI

## TEACHING EXPERIENCE

Teaching Assistant, Virtual and Augmented Reality (CS-GY 9223), New York University	2022 Fall
Teaching Assistant, Final Year Project (IERG 4998/4999), The Chinese University of Hong Kong	2020 – 2022

## SKILLS

- **Programming:** Python, C/C++, C#, Matlab, Java
- **Software:** PyTorch, CUDA, OpenGL, Blender, Unity, PsychToolbox
- **Language:** Chinese, English, French