Yunxiang Zhang

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Research Interests

My current research focuses on neural graphics and generative models, with a particular emphasis on real-time generative rendering. My broader interests span computer graphics, virtual and augmented reality (VR/AR), human–AI interaction, display technologies, and the psychophysics of human perception.

Work Experience

Member of Technical Staff, AMD — Toronto, Canada
Advanced Rendering Research Team — *Sep 2026 – Present*

Research Intern, Meta Reality Labs — Sunnyvale, USA
Mentor: Dr. Alexandre Chapiro — *Aug 2025 – Jan 2026*

Research Intern, Adobe Research — San Francisco, USA
Mentors: Dr. Cuong Nguyen and Dr. Long Mai — *Apr 2025 – Jul 2025*

Research Intern, Intel Graphics Research — Bellevue, USA
Mentors: Dr. Alexandr Kuznetsov and Dr. Akshay Jindal — *May 2023 – Aug 2023*

Education

New York University — New York City, USA
Doctor of Philosophy in Computer Science — *Sep 2022 – May 2026*
Dissertation: Perceptually Driven Methods for Multimodal Interactive Graphics Systems
Advisor: Prof. Qi Sun

The Chinese University of Hong Kong — Hong Kong SAR, China
Master of Philosophy in Information Engineering — *Aug 2020 – Aug 2022*
Advisor: Prof. Dahua Lin

Shanghai Jiao Tong University — Shanghai, China
Master of Engineering in Electronics and Communication Engineering — *Sep 2017 – Mar 2020*
Advisor: Prof. Bingbing Ni

École Polytechnique — Palaiseau, France
Diplôme d'Ingénieur in Computer Science — *Apr 2016 – Aug 2018*

Shanghai Jiao Tong University — Shanghai, China
Bachelor of Engineering in Information Engineering — *Sep 2013 – Aug 2017*

Publications

- **Hue's the Boss? Perceptual Color Experience on Conventional and AR Displays across Color Gamut and Ambient Luminance**
  ACM SIGGRAPH Asia 2026 Paper
  Yunxiang Zhang, Yuta Asano, Thomas Wan, Qi Sun, Alexandre Chapiro
- **Physically Grounded Monocular Depth via Nanophotonic Wavefront Encoding**
  European Conference on Computer Vision (ECCV 2026) Paper | Project | Video | Code
  Bingxuan Li*, Jiahao Wu*, Yuan Xu*, Zezheng Zhu, **Yunxiang Zhang**, Kenneth Chen, Yanqi Liang, Nanfang Yu, Qi Sun
- **Perceptually Guided 3DGS Streaming and Rendering for Mixed Reality**
  IEEE/CVF Winter Conference on Applications of Computer Vision (WACV 2026) Paper | Video | 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, 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, Jesús 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	Tandon School of Engineering PhD 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

Reviewer: SIGGRAPH, SIGGRAPH Asia, TOG, TVCG, Eurographics, AAAI, CHI, UIST, IEEE VR, ISMAR, PG, JPI