

Yunxiang Zhang

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RESEARCH INTERESTS

My current research revolves around virtual/augmented/mixed reality, human-computer interaction, perceptual computer graphics, and generative AI, with a particular focus on multimodal interface design and AI-assisted content creation that bridge the gap between immersive virtual experience and real-world physicality. More broadly, I enjoy combining theoretical insights from physical, perceptual, and cognitive sciences with machine learning tools to solve challenging real-world problems.

EDUCATION

New York University

Doctor of Philosophy in Computer Science

Advisor: Prof. Qi Sun

New York City, USA
Sep 2022 – Dec 2025 (expected)

The Chinese University of Hong Kong

Master of Philosophy in Information Engineering

Advisor: Prof. Dahua Lin

Hong Kong SAR, China
Aug 2020 – Aug 2022

Shanghai Jiao Tong University

Master of Engineering in Electronics and Communication Engineering

Advisor: Prof. Bingbing Ni

Shanghai, China
Sep 2017 – Mar 2020

École Polytechnique

Diplôme d'Ingénieur in Computer Science (double-degree program between SJTU and EP)

Palaiseau, France
Apr 2016 – Aug 2018

Shanghai Jiao Tong University

Bachelor of Engineering in Information Engineering

Shanghai, China
Sep 2013 – Aug 2017

WORK EXPERIENCE

Research Intern, Intel Graphics Research

Mentors: Dr. Alexandr Kuznetsov and Dr. Akshay Jindal

Bellevue, USA
May 2023 - Aug 2023

Research Intern, Vector Institute

Mentor: Prof. Nicolas Papernot

Toronto, Canada
Mar 2020 – Jun 2020

Research Intern, LTCI Télécom Paris

Mentors: Prof. Samy Blusseau, Prof. Santiago Velasco-Forero, Prof. Isabelle Bloch, and Prof. Jesús Angulo

Paris, France
Apr 2018 - Aug 2018

PUBLICATIONS

- **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 TVCG 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. Torrrens, 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
- **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. Torrrens, 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, authors ordered alphabetically

AWARDS

ACM Symposium on Applied Perception (ACM SAP 2024)	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 Reviewer: SIGGRAPH, SIGGRAPH Asia, TVCG, AAAI, IEEE VR, IEEE ISMAR, PG

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 (primary), C#, C/C++
- **Tools:** PyTorch, TensorFlow, OpenGL, Libigl
- **Software:** Blender, Unity, Matlab, MeshLab
- **Language:** Mandarin, English, French