

# Yunxiang Zhang

✉ [yunxiang.zhang@nyu.edu](mailto:yunxiang.zhang@nyu.edu)   <https://yunxiangzhang.github.io>

## RESEARCH INTERESTS

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

## EDUCATION

<b>New York University</b> <i>Doctor of Philosophy in Computer Science and Engineering</i> <b>Advisor:</b> Prof. Qi Sun	New York City, USA <i>Sep 2022 – Dec 2025 (expected)</i>
<b>The Chinese University of Hong Kong</b> <i>Master of Philosophy in Information Engineering</i> <b>Thesis:</b> Towards Physically Realistic Human-Environment Interaction in Virtual and Augmented Reality <b>Advisor:</b> Prof. Dahua Lin	Hong Kong SAR, China <i>Aug 2020 – Aug 2022</i>
<b>Shanghai Jiao Tong University</b> <i>Master of Engineering in Electronics and Communication Engineering</i> <b>Thesis:</b> Similarity-Based Approach to Neural Network Pruning <b>Advisor:</b> Prof. Bingbing Ni	Shanghai, China <i>Sep 2017 – Mar 2020</i>
<b>École Polytechnique</b> <i>Diplôme d'Ingénieur in Computer Science (double-degree program between SJTU and EP)</i>	Palaiseau, France <i>Apr 2016 – Aug 2018</i>
<b>Shanghai Jiao Tong University</b> <i>Bachelor of Engineering in Information Engineering</i>	Shanghai, China <i>Sep 2013 – Aug 2017</i>

## RESEARCH EXPERIENCE

<b>Research Intern, Intel Graphics Research</b> <i>Mentors: Dr. Alexandr Kuznetsov and Dr. Akshay Jindal</i>	Bellevue, USA <i>May 2023 - Aug 2023</i>
<b>Research Intern, Vector Institute</b> <i>Mentor: Prof. Nicolas Papernot</i>	Toronto, Canada <i>Mar 2020 – Jun 2020</i>
<b>Research Intern, LTCI Télécom Paris</b> <i>Mentors: Prof. Samy Blusseau, Prof. Santiago Velasco-Forero, Prof. Isabelle Bloch, and Prof. Jesús Angulo</i>	Paris, France <i>Apr 2018 - Aug 2018</i>

## PUBLICATIONS

- **Accelerating Saccadic Response through Spatial and Temporal Cross-Modal Misalignments**  
SIGGRAPH 2024  
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)  
Hyunjong Song, Gabriel Bronfman, **Yunxiang Zhang**, Qi Sun, Joo H. Kim
- **Toward Optimized VR/AR Ergonomics: Modeling and Predicting User Neck Muscle Contraction**  
SIGGRAPH 2023 [Paper](#)  
**Yunxiang Zhang**, Kenneth Chen, Qi Sun
- **Force-Aware Interface via Electromyography for Natural VR/AR Interaction**  
ACM Transactions on Graphics (SIGGRAPH Asia 2022) [Paper](#)  
**Yunxiang Zhang**, Benjamin Liang, Boyuan Chen, Paul M. Torrens, S. Farokh Atashzar, Dahua Lin, Qi Sun
- **CaPC Learning: Confidential and Private Collaborative Learning**  
International Conference on Learning Representations (ICLR 2021) [Paper](#)  
Christopher A. Choquette-Choo\*, Natalie Dullerud\*, Adam Dziedzic\*, **Yunxiang Zhang\***, Somesh Jha, Nicolas Papernot, Xiao Wang
- **Exploiting Channel Similarity for Network Pruning**  
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT 2023) [Paper](#)  
Chenglong Zhao, **Yunxiang Zhang**, Bingbing Ni

- **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](#)  
**Yunxiang Zhang**, Samy Blusseau, Santiago Velasco-Forero, Isabelle Bloch, Jesus Angulo  
\* Equal contributions, authors ordered alphabetically

## AWARDS

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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

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Conference Reviewer: SIGGRAPH, SIGGRAPH Asia, TVCG, AAAI, IEEE VR, ISMAR

## TEACHING EXPERIENCE

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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

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