

Yunxiang Zhang

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RESEARCH INTERESTS

I am currently a Ph.D. student researching computer graphics at New York University, with over two years of experience in developing advanced graphics algorithms and systems. My research interests are at the intersection of real-time rendering, perceptual computer graphics, and virtual/augmented reality. I enjoy combining theoretical insights from physical, biological, and cognitive sciences with machine learning tools to solve challenging real-world problems.

EDUCATION

New York University Brooklyn, NY 11201, USA
Doctor of Philosophy in Computer Science and Engineering Sep 2022 – Present

Advisor: Prof. Qi Sun

The Chinese University of Hong Kong Hong Kong SAR, China
Master of Philosophy in Information Engineering Aug 2020 – Aug 2022

Thesis: Towards Physically Realistic Human-Environment Interaction in Virtual and Augmented Reality

Advisor: Prof. Dahua Lin

Shanghai Jiao Tong University Shanghai, China
Master of Engineering in Electronics and Communication Engineering Sep 2017 – Mar 2020

Thesis: Similarity-Based Approach to Neural Network Pruning

Advisor: Prof. Bingbing Ni

École Polytechnique Palaiseau 91128, France
Diplôme d'Ingénieur in Computer Science (double-degree program between SJTU and EP) Apr 2016 – Aug 2018

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

EXPERIENCE

Research Intern, Vector Institute Toronto, ON M5G 1M1, Canada
Supervisor: Prof. Nicolas Papernot Mar 2020 – Jun 2020

Research Intern, LTCI Télécom Paris Paris 75013, France
Supervisor: Prof. Samy Blusseau, Prof. Santiago Velasco-Forero, Prof. Isabelle Bloch, and Prof. Jesús Angulo Apr 2018 - Aug 2018

Software Development Intern, SNCF Saint Denis 93200, France
Supervisor: Loïc Hamelin Jun 2017 - Sep 2017

PUBLICATIONS

- **Toward Optimized VR/AR Ergonomics: Modeling and Predicting User Neck Muscle Contraction**
SIGGRAPH 2023 Conference Proceedings [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 | 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) |

PROFESSIONAL SERVICES

Review for AAAI 2021, IEEE ISMAR 2022, IEEE VR 2023, IEEE ISMAR 2023

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

- **Programming:** C/C++, Python, C#, Java, CUDA, Matlab
- **Tools:** PyTorch, TensorFlow, OpenGL, Libigl, Eigen, Git, CMake, OpenMP
- **Software:** Blender, Unity, Photoshop, Premiere Pro, Illustrator, Matlab, Mathematica, MeshLab
- **Language:** Mandarin, English, French