

Yuqi Zhou

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OBJECTIVE

Ph.D. CS student seeking an internship in Extended Reality, Haptics, Computer Vision/Graphics

EDUCATION

CGV Lab, Department of Computer Science, Purdue University

West Lafayette, IN

Advisor: Dr. Voicu Popescu

Jan. 2021 – Present

Ph.D. in Computer Science, GPA: 3.97

Department of Computer Science, Rose-Hulman Institute of Technology

Terre Haute, IN

B.E. in Computer Science, GPA: 3.73

Sep. 2016 – May. 2020

PUBLICATIONS

- Zhou, Yuqi, and Voicu Popescu. "CloVR: Fast-Startup Low-Latency Cloud VR." Accepted by IEEE VR 2024 journal track.
- Zhou, Yuqi, and Voicu Popescu, "Look-Over-There: Real-World Co-Located Cross-Referencing Using Augmented Reality", Accepted by VISIGRAPP 2024.
- Zhou, Yuqi, and Voicu Popescu, "Meet Me Half Way: Concerted Physical and Virtual World Manipulations for Effective Haptic Feedback in VR", Accepted by IEEE VR 2024 workshop.
- Zhou, Yuqi, and Voicu Popescu. "Dynamic Redirection for VR Haptics with a Handheld Stick." IEEE Transactions on Visualization and Computer Graphics 29.5 (2023): 2753-2762. Presented at IEEE VR 2023.
- Shuqi Liao, Yuqi Zhou, and Voicu Popescu. "AR Interfaces for Disocclusion-A Comparative Study." 2023 IEEE Conference Virtual Reality and 3D User Interfaces (VR). IEEE, 2023.
- Zhou, Yuqi, and Voicu Popescu. "Tapping with a handheld stick in VR: Redirection detection thresholds for passive haptic feedback." 2022 IEEE Conference on Virtual Reality and 3D User Interfaces (VR). IEEE, 2022.
- Zhou, Y. (2020). Improving micro-expression recognition with shift matrices and database combination.

RESEARCH EXPERIENCE

Haptic Feedback in Virtual Reality

Purdue University, West Lafayette, IN

Advisor: Dr. Voicu Popescu

Jan. 2021 – Present

- Extended the opportunity for grounded passive haptic feedback with a handheld stick and VariStick/DriftingHand algorithms.
- Enhanced the reliability of haptics through geometry mapping and dynamic reset points with continuous dynamic redirection.
- Built a Cartesian Robot that moves in a large 3d space and provides haptic feedback to a player wearing the VR headset.

Distributed Virtual Reality

Purdue University, West Lafayette, IN

Advisor: Dr. Voicu Popescu

Jun. 2022 – Present

- Reduced the server burden of multiplayer VR cloud games by sending gridded mesh instead of real-time rendered panoramas.
- Reduced the amount of local rendering by using novel morphing algorithm to fill the gap between near-far partitioning in VR.

Attention Guidance with Augmented Reality

Purdue University, West Lafayette, IN

Advisor: Dr. Voicu Popescu

Nov. 2021 – May. 2022

- Enabled real-time co-located collaboration by transferring SIFT features and annotations wirelessly instead of whole images.
- Improved the directional guidance with a transparent display and stabilized annotations on both mentor's and mentees' tablets.

Micro-expression Recognition

Rose-Hulman Institute of Technology, Terre Haute, IN

Advisor: Dr. Jason Yoder

Sep. 2019 – Apr. 2020

- Received a larger f1 score than the state-of-the-art on the task of micro-expression recognition using deep learning and CNN
- Developed a method of combining existing and future micro-expression datasets under Facial Action Coding System (FACS)

WORK EXPERIENCE

Bubble Magic Festival

Hangzhou Paomian Network Technology, Hangzhou, China

Game Developer Intern

Jun. 2018 – Aug. 2018

- Developed mobile games with Laya engine and JavaScript

VR/AR Course and Graphics Courses

Purdue University, West Lafayette, IN

Teaching Assistant

Sep. 2021 – present

LANGUAGE AND TOOLS

Languages: C#, Python, C++, Java

Tools: Unity, Arduino, ARCore, OpenCV