FANGTAO ZHAO

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EDUCATION

University of Southern California, Los Angeles, US **08/2023 - Present**

M.Sc. in Computer Science (Game Development)

Xi'an Jiaotong-Liverpool University, Suzhou, China **09/2019 - 07/2023**

B.Eng. in Computer Science and Technology, First Class (Honors)

RESEARCH EXPERIENCE

Research Assistant **05/2024 – 08/2024**

APEX Group, Hong Kong University of Science and Technology, Guangzhou, China

- Advisor: Mingming Fan

Research Assistant **08/2023 - Present**

HaRVI Lab, University of Southern California, Los Angeles, US

- Advisor: Heather Culbertson

Research Assistant **06/2022 – 07/2023**

X-CHI Lab, Xi'an Jiaotong-Liverpool University, Suzhou, China

- Advisor: Hai-Ning Liang

PUBLICATIONS

Xiaoying Wei, **Fangtao Zhao**, Yingna Wang, Zeyu Xiong, Mingming Fan. (2025), "XiquVR: Facilitating Inter-Generational Communication and Connection through Traditional Chinese Opera (Xiqu) with Virtual Reality", *ACM CHI 2025* (Under Review)

Fangtao Zhao, Yiming Luo, Ziming Li, Yue Li, Hai-Ning Liang. (2024), "AirWhisper: Enhancing Virtual Reality Experience via Visual-Airflow Multimodal Feedback.", *Journal on Multimodal User Interfaces*

SELECTED PROJECTS

XiquVR: Facilitating Intergenerational Communication through Traditional Chinese Opera in VR **06/2024 – 09/2024**

HCI + VR + Social Computing | HKUST APEX Group

Adviser: Mingming Fan

- Develop VR scenario in Unity3D.
- Assist with evaluation design and paper writing.

Mitigating Cybersickness in VR through Stochastic Resonance. **12/2023 - Present**

HCI + VR + Haptics | USC HaRVI Lab

Advisor: Heather Culbertson

- Assist with experimental design and VR scene building.
- Conduct user study.

AirWhisper: Enhancing Virtual Reality Experience via Visual-Airflow Multimodal Feedback **09/2022 - 06/2023**

HCI + VR + Haptics | XJTLU X-CHI Lab

Advisor: Hai-Ning Liang

- Conduct a user perception study to investigate user's distinguishability of airflow changes, and conduct a prototype based on Oculus Quest Pro to provide designed airflow feedback.
- Conduct a comparison study to evaluate the prototype with multi-sensory information, and design VR applications that demonstrate the usefulness of the prototype in different scenarios.
- Paper Writing.

Exploring the Impacts of Using VR on Postgraduates' Interactions in Group Discussions **06/2022 - 03/2023**

HCI + VR + Linguistics | XJTLU X-CHI Lab & XJTLU Language Center

Principal Advisor: Hai Ning Liang, Co-Advisor: Airong Wang

Funding: XJTLU Summer Undergraduate Research Fellowships (SURF)

- Build an online English-learning platform in virtual reality that enables synchronous audio communication for users in different locations and evaluates its impact on students in group discussions.
- Work in a group of three and was mainly responsible for database interfacing, VR scene establishing, cloud server management, web development (using Flask).
- Assist with experiments, including training lectures and students on Oculus Quest 2, and update VR scenarios weekly based on teaching topics, also responding to emergencies during the class.

ACADEMIC SERVICE

Student Volunteer in 21st IEEE ISMAR 2022 conference (online)

Student Volunteer in 5th IEEE AIVR 2022 conference (online)

SKILLS

- **Programming Languages:** Java, Python, C#, C++/C, SQL, R, Verilog
- **Tools:** Unity3D, Arduino, SPSS, LaTeX, Notion