Kaiyuan Hu

kaiyuanhu@link.cuhk.edu.cn · M.Phil · RI: Volumetric Video|3D Reconstruction|Wireless Sensing

Education

The Chinese University of Hong Kong, Shenzhen Computer and Information Engineering
Master of Philosophy 2022.9 – 2024.7

Queen Mary University of London Telecommunications Engineering with Management
Bachelor of Engineering 2018.9 – 2022.6

Publish

- Yixuan Wu*, **Kaiyuan Hu***, Danny.Z.Chen, Jian Wu. AI-Enhanced Virtual Reality in Medicine: A Comprehensive Survey, IJCAI 2024 (Oral).
- Yixuan Wu*, **Kaiyuan Hu***, Qian Shao, Jintai Chen, Danny.Z.Chen, Jian Wu. TeleOR: Real-time Remote Operating Room, MICCAI 2024 (Oral).
- **Kaiyuan Hu**, Haowen Yang, Yili Jin, Yongting Chen, Fangxin Wang. *Understanding User Behavior in Volumetric Video Watching: Dataset, Analysis and Prediction*, ACM MM 2023 (Oral).
- **Kaiyuan Hu**, Yili Jin, Haowen Yang, Junhua Liu, Fangxin Wang. *FSVVD: A Dataset of Full Scene Volumetric Video*, ACM MMSys 2023 (Oral).
- **Kaiyuan Hu**, Hongjie Liao, Mingxiao Li, Fangxin Wang. *mmCount: Stationary Crowd Counting System Based on Commodity Millimeter-wave Radar*, IEEE ICASSP 2024 (Oral).
- Haipeng Liu, Kening Cui, **Kaiyuan Hu**, Yuheng Wang, Anfu Zhou, Liang Liu, Huadong Ma. *mTransSee: Enabling Environment-Independent mmWave Sensing Based Gesture Recognition via Transfer Learning*, Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (UbiComp/IMWUT) .
- Yili Jin, Xize Duan, **Kaiyuan Hu**, Fangxin Wang, Steve(Xue) Liu. *IVORY: Immersive VR Video Conferencing via On-hand Devices*, TCSVT.
- Yili Jin*, Junhua Liu*, **Kaiyuan Hu***, Fangxin Wang. *A Networking Perspective of Volumetric Video Service: Architecture, Opportunities and Case Study*, IEEE Network 2023.
- **Kaiyuan Hu**, Yongting Chen, Kaiying Han, Junhua Liu, Haowen Yang, Yili Jin, Boyan Li, Fangxin Wang. *Hulk: Human-Centered Live Volumetric Video Streaming System*, Preprint.
- Yili Jin*, **Kaiyuan Hu***, Junhua Liu, Fangxin Wang, Xue Liu. *From Capture to Display: A Survey on Volumetric Video*, under review in ACM Computing Surveys.

Research

The Chinese University of Hong Kong Supervisor: Fangxin Wang 2022.9-2024.3

- Research topics include multimedia systems and wireless perception, oriented to video transmission, user behavior analysis, and volumetric video related topics.
- With the guidance of my supervisor, Prof.Fangxin Wang, I accomplished four research papers as the first author during my postgraduate period, including two ACM MM, one ACM MMSys, and one IEEE ICASSP. In addition, I collaborated with my colleagues to complete another two research papers on IEEE Network and ACM Computing Surveys.

Beijing University of Posts and Telecommunications Supervisor: Anfu Zhou 2020.6-2022.6

- My research was conducted on topics related to millimeter-wave wireless sensing, with a specific focus on using transfer learning to overcome the challenge of poor generalization ability in millimeter-wave radar-based action recognition tasks. Additionally, efforts were made to expand the application scenarios of millimeter-wave wireless sensing, including static crowd localization and counting.
- Under the guidance of my supervisor, I collaborated with my colleagues and completed one research paper on UbiComp/IMWUT.

Skills

- **English**: IELTS:7.5, CET-6: 578, CET-4: 630
- **Programming**: Python, C, Java, JavaScript, Matlab
- **Sports**: 100-meter sprint: 11.8s