Xiang Li

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Education

Sept. 2018 – June 2022 **Xi'an Jiaotong-Liverpool University**, Suzhou, China.
B.Sc. (Expected) in Information and Computing Science

GPA: 3.5/4.0 (First Class Honor), **Rank:** ∼15%

Highlights: Student Representative in Academic Practice Sub-Committee (1 of the univ.); IEEE XJTLU Student Branch Associate Co-Chair

Sept. 2018 – June 2022 **University of Liverpool**, Liverpool, UK.
B.Sc. (Expected) in Computer Science

Publications

Note: ACM CHI, IEEE VR, IEEE ISMAR, and ACM CHI PLAY are generally recognized as top-tier conferences in my field of HCI and VR/AR.

[J.1] **Results and Guidelines from a Repeated-Measures Design Experiment Comparing Standing and Seated Full-Body Gesture-Based Immersive Virtual Reality Exergames: Within-Subjects Study**

Wenge Xu, Hai-Ning Liang*, **Xiang Li**, Yuzheng Chen, Kangyou Yu, Qiuyu He
JMIR Serious Games (IF = 3.53, SCI, **Top** Journal in Serious Games)

[C.4] **VirusBoxing: A HIIT-based VR Boxing Game**

Wenge Xu, Hai-Ning Liang*, Xiaoyue Ma, **Xiang Li**
ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (CHI PLAY 2020)

[C.3] **Exploration of Hands-free Text Entry Techniques for Virtual Reality**

Xueshi Lu, Difeng Yu, Hai-Ning Liang*, Wenge Xu, Yuzheng Chen, **Xiang Li**, Khalad Hasan
IEEE International Symposium on Mixed and Augmented Reality (IEEE ISMAR 2020)

[C.2] **Exploring Visual Techniques for Boundary Awareness During Interaction in Augmented Reality Head-Mounted Displays Best Paper Nomination (5%)**

Wenge Xu, Hai-Ning Liang*, Yuzheng Chen, **Xiang Li**, Kangyou Yu
IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2020)

[C.1] **Auto-Hierarchical Data Algorithm: Focus on Increasing Users' Motivation and Duration in Virtual Reality**

Xiang Li, Yuzheng Chen*
IEEE International Conference on Big Data Analytics (IEEE ICBDA 2020)

Selected Awards and Honors

Sept. 2020 **IEEE XJTLU Student Branch Associate Co-Chair**
June 2020 **2x Special Recognitions for Outstanding Reviews for ISMAR 2020**
March 2020 **IEEE VR & 3DUI 2020 Best Conference Paper Nominee (5%)**
Sept. 2019 **Student Representative in Academic Practice Sub-Committee (1 of the Univ.)**
May 2019 **Summer Undergraduate Research Fellowship (SURF) (5% of the Univ.)**

Oct. 2019 **Best Results-Making Team for Great Performance in Summer Social Research**

Professional Experiences

Review I served as a reviewer for IMWUT (Ubicomp 2020), ISMAR 2020, VRST 2020, CHI PLAY 2020 and IEEE Transactions on Visualization and Computer Graphics (IEEE VR 2021).

May 2020 – Present **Exertion Games Lab**, Monash University
Advisor: Professor Florian 'Floyd' Mueller and Rakesh Patibanda (PhD).
Leveraged Electrical Muscle Stimulation as an Embodied Memory Support Device
- Devised a novel motor-memory system "Loot the Bank" with Leap Motion and EMS/TENS machine, which can contribute at the intersection of body, memory and play. [WiP.3]
- Proposed the MusicBubble, which combines the simplicity of a puzzle game and provides the player with an equally accessible environment for creating music. [WiP.2]

April 2019 – Present **X-CHI Lab**, Xi'an Jiaotong-Liverpool University
Advisor: Professor Hai-Ning Liang and Wenge Xu (PhD).
Worked on virtual reality/augmented reality and gesture-based exergames
- Proposed the empirical study of visual methods for boundary awareness in AR HMDs and conducted a formative study to understand the challenges that users would face when interacting without boundary information. [C.2]
- Implemented a seated exergame for VR HMDs and evaluated the difference between playing a full-body gesture-based StE and SeE in iVR regarding gameplay performance, intrinsic motivation, and motion sickness. [C.1, J.1]
- Explored two hands-free text entry mechanisms in VR: BlinkType and NeckType, which leverage users' eye blinks and neck's forward and backward movements to select letters. [C.3]
- Presented a full-body gesture-based exergame named Virus Boxing game in VR scenarios, which leverage Kinect to detect and identify five gestures to destroy the virus or hide the solid cell. [C.4]
- Established an AR guidance system that works with see-through HMDs to assist in guiding seniors through tasks, and explored suitable techniques, guidance types, and task complexity. [WiP.4]

Presenting Experiences

Sept. 2020 **Invited Presentation**, *ChinaVR 2020 Conference*, Jilin, China.
Exploring Visual Techniques for Boundary Awareness During Interaction in AR HMDs

Aug. 2020 **Invited Talk**, *Exertion Games Lab*, Monash University, Melbourne, Australia.
Feasibility and Effectiveness of Gesture-based Virtual Reality Seated Exergames

Aug. 2020 **Invited Talk**, *Exertion Games Lab*, Monash University, Melbourne, Australia.
MusicBubble: When Puzzle Game Meets Musical Rhythms

March 2020 **Presenting Author**, *IEEE Virtual Reality 2020 Conference*, Atlanta, USA.
Exploring Visual Techniques for Boundary Awareness During Interaction in AR HMDs

Extracurricular Activities

June 2020 **Member**, *X-CHI Lab*, ACM CHI PLAY 2020 Student Game Design Competition.

Feb 2020 – July 2020 **Member**, *Game Design Group*, Tencent NEXT IDEA 2020: Game Design Competition.
Established an immersive blind simulation game: LoseSight

Sept. 2019 – Oct. 2019 **Leader**, *Game Design Group*, 3rd University Students VR/AR Development Competition.
Conducted a VR exergame: Cartoon Fitness Coach: My Fitness Coach Cannot be so Cute!

Skills

Programming Languages: Python, C/C++, C#, Java, MySQL, HTML, MATLAB

Tools and Frameworks: LaTeX, Arduino, Unity3D, Microsoft Office, Photoshop (Adobe), Final Cut Pro X (Mac OS)