

## Education

- Sept. 2018 **Xi'an Jiaotong-Liverpool University, XJTLU**, Suzhou, China.  
– June 2022 B.Sc. (Expected) in Information and Computing Science  
**GPA:** First Class (Honor), **Rank:** ~15%  
**Highlights:** IEEE XJTLU Student Branch Associate Co-Chair
- Sept. 2018 **University of Liverpool**, Liverpool, UK.  
– June 2022 B.Sc. (Expected) in Computer Science

## Selected Publications

- Note:** ACM CHI, ACM UIST, IEEE VR, IEEE/ACM ISMAR, ACM SIGGRAPH (&Asia) and ACM CHI PLAY are generally recognized as top-tier (CORE A/A\*) conferences in my field of HCI and VR/AR.
- [C.6] **CAPTCHA Design in Virtual Reality** [\[under review\]](#)  
**Xiang Li**, Yuzheng Chen, Rakesh Patibanda, Florian 'Floyd' Mueller\*  
Submitted to IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2021)
- [C.5] **Limited Bodily Control as Intriguing Play Design Resource** [\[under review\]](#)  
Florian 'Floyd' Mueller\*, Rakesh Patibanda, Rich Byrne, Zhuying Li, Yan Wang, Josh Andres, **Xiang Li**, Jonathan Marquez, Stefan Greuter, Jonathan Duckworth, Joe Marshall  
Submitted to ACM CHI Conference on Human Factors in Computing Systems (ACM CHI 2021)
- [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, Open Access)
- [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/ACM International Symposium on Mixed and Augmented Reality (IEEE/ACM 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  
**Presenting Author**, 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

- 2020 **Research Assistant Fellowship at XJTLU (\$1,400)**  
**2x Special Recognitions for Outstanding Reviews for ISMAR 2020**  
**IEEE VR & 3DUI 2020 Best Conference Paper Nominee (5%)**
- 2019 **Summer Undergraduate Research Fellowship (SURF) at XJTLU**

## Professional Experiences

- Review 10+ Papers I served as a reviewer for IMWUT (UbiComp 2020), ISMAR 2020, VRST 2020, CHI PLAY 2020 and IEEE TVCG (IEEE VR 2021 Journal-track) and CHI 2021.
- April 2020 – Present **Exertion Games Lab**, *Research Assistant*, Monash University  
Advisors: Prof. [Florian 'Floyd' Mueller](#), Prof. [Elise van den Hoven](#), and [Rakesh Patibanda](#) (PhD).  
Worked on bodily control theory for intriguing play design
- Evaluated several CAPTCHAs in VR and proposed guidance for CAPTCHA design in VR. [C.6]
  - Collaborated and participated in a systematic limited bodily control theory for intriguing play design. [C.5]
  - Devised a motor-memory system, which allows users to move their bodies as training the sequence learning.
  - Proposed the MusicBubble, which combines the simplicity of a puzzle game and provides the player with an equally accessible environment for creating music. [WiP]
- April 2019 – Present **X-CHI Lab**, *Research Assistant*, Xi'an Jiaotong-Liverpool University  
Advisors: Prof. [Hai-Ning Liang](#) and Dr. [Wenge Xu](#).  
Worked on virtual reality/augmented reality and exergames
- Evaluated the differences between playing a full-body gesture-based standing and seated exergame in VR regarding gameplay performance, intrinsic motivation, and motion sickness. [C.1, J.1]
  - Proposed the empirical study of visual methods for boundary awareness in AR HMDs. [C.2]
  - 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 HIIT-based VR exergame named VirusBoxing. [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]

## Presenting Experiences

- Oct. 2020 **Invited Talk**, *Exertion Games Lab*, Monash University, Melbourne, Australia.  
CAPTCHA Design in Virtual Reality
- 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
- March 2020 **Presenting Author**, *IEEE Virtual Reality 2020 Conference*, Atlanta, USA.  
Exploring Visual Techniques for Boundary Awareness During Interaction in AR HMDs

## Extracurricular Activities

- 2020 **Student Volunteer**, IEEE/ACM ISMAR 2020.  
**Student Volunteer**, ACM CHI PLAY 2020.  
**Member**, *Game Design Group*, ACM CHI PLAY 2020 Student Game Design Competition.  
**Member**, *Game Design Group*, Tencent NEXT IDEA 2020: Game Design Competition.
- 2019 **Student Volunteer**, *Assistant Lecturer*, QCon 10th International Software Development Conference.  
**Student Representative**, *Academic Practice Sub-Committee*, Xi'an Jiaotong-Liverpool University.  
**Leader**, *Game Design Group*, The 3rd University Students VR/AR Development Competition.

## Skills

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

**Tools and Frameworks:** L<sup>A</sup>T<sub>E</sub>X, Arduino, Unity3D, Microsoft Office, Photoshop, Final Cut Pro X

## Referees

**Prof. Florian 'Floyd' Mueller:** Professor, Director of the Exertion Games Lab, Monash University

**Prof. Hai-Ning Liang:** Associate Professor, Head of Department, Xi'an Jiaotong-Liverpool University