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## Education

<b>PhD in Computer Science at University of Liverpool</b>	01/2018—05/2021
Thesis: Motion-based Interaction for Head-Mounted Displays	
Supervisor: Prof Hai-Ning Liang, Prof Yong Yue, Dr Bing Wu Berberich	
Examiners: Prof Shengdong Zhao, Dr Lingyun Yu	
<b>MSc Advanced Computing with Management at King's College London</b>	09/2016—09/2017
<b>BSc Computer Science (Games Technology) at Nottingham Trent University</b>	09/2014—07/2016

## Experience

<b>Lecturer in HCI</b>	05/2021—now
Birmingham City University, UK	
<b>Doctoral Research Assistant</b>	01/2018—05/2021
Xi'an Jiaotong-Liverpool University, CN	
<b>Graduate Teaching Assistant</b>	01/2018—12/2020
Xi'an Jiaotong-Liverpool University, CN	

## Teaching Experience

<b>Lecturer</b>	2021—now
<i>Course:</i>	
▪ DIG4166 Web Design and Development (~200 Y1 students)	2021—22
▪ CMP6214 User Experience Design (~100 Y3 students)	2021
▪ CMP7220 Advanced and Immersive Technologies (~60 two terms Y4 students)	2022
<b>Graduate Teaching Assistant, XJTLU</b>	2018—21
<i>Course:</i>	
▪ Human-Centric Computing (100+ Y2 students)	2018, 2020
▪ Data Structures (200+ Y1 students)	2018
▪ Principles of Computer Programming (~800 Y0 students)	2018—19
▪ Principles of Computer Games Design (80+ Y3 students)	2019—21
▪ Professional Skills and Emerging Topics in Computer Science (~200 Y0 students)	2019
▪ Professional Skills in Computer Science (~200 Y0 students)	2019
▪ Explore Advanced Technology (~800 Y0 students)	2020

## Mentoring Experience (selected)

### Master Thesis

- Y. Yu. Assessing the Effects of a Full-body Motion-based Exergame in Virtual Reality (2018).

### Bachelor Thesis

- Z. Zhang. Studying the Effect of Display Type and Viewing Perspective on User Experience in Virtual Reality Exergames (2019).
- J. Zhu. An Investigation of Micro-and Macro-Interaction for 3D Manipulation using Dual-Hand Controller in Virtual Reality Environments (2018).

## Summer Interns

- Y. Chen, X. Li, and K. Yu. Exploring Visual Techniques for Boundary Awareness During Interaction in Augmented Reality Head-Mounted Displays (2019).
- A. He, Z. Wang. Pointing and Selection Methods for Text Entry in Augmented Reality Head-Mounted Displays (2018).
- D. Yu, X. Lu, T. Zhang. DepthMove: Leveraging Head Motions in the Depth Dimension to Interact with Virtual Reality Head-Worn Displays (2018).

## Professional Services

<b>Conference Chair</b>	ICDIIME'22 (Technical Program Chairs)
<b>Program Committee</b>	TEI WIP'21, IMX'22, CHI Play'22, iLRN'22, IMET'22
<b>Conference Reviewer</b>	CHI'21-22, IEEE ISMAR'21-22, IEEE VR'21-22, MobileHCI'21 VRST'19-21, SUI'21, CHI Play'20, TEI'20-21, AH'22
<b>Journal Reviewer</b>	Springer Virtual Reality JMIR Serious Games International Journal of Human-Computer Studies International Journal of Human-Computer Interaction IEEE Transactions on Games
<b>Journal Editorial Board</b>	Frontiers in Virtual Reality
<b>Grant Reviewer</b>	EPSRC UKRI
<b>Student Volunteer</b>	IEEE VR'19, IEEE ISMAR'19

## Awards

▪ High-Impact Articles (Games for Health Journal)	06.2022
▪ High-Impact Articles (Games for Health Journal)	03.2022
▪ ACM CHI Play Student Game Design Competition Finalist	11.2020
▪ Outstanding Teaching Team Award (UG programme) in Suzhou	06.2020
▪ IEEE VR Best Conference Paper Nominee	03.2020
▪ Best PhD Poster Award, XJTLU	12.2019
▪ Best PhD Presentation Award, XJTLU	12.2019
▪ Excellent Volunteer Service, IEEE ISMAR'19	10.2019
▪ Ph.D. Scholarship, RDF 15-02-12, XJTLU	2018—2020

## Grant

Gaming Interface for Aging Population. KSF-A-035 CNY 1M	07/2017-06/2020
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## Publications

I have published peer-reviewed full papers in top-tier HCI conferences like ACM CHI; top-tier XR conferences like IEEE VR, IEEE ISMAR; top-ranked journals on graphics and visualizations like IEEE TVCG; and top-ranked game-related journals like JMIR serious games, Games for Health. You can find my papers in the following sources:

[Google scholar](#) | [Researchgate](#)

## Conference

- [C11] **W. Xu**, X. Meng, K. Yu, S. Sarcar, H.N. Liang. Evaluation Text Selection in Virtual Reality Head-Mounted Displays. *IEEE ISMAR'22*.

- [C10] X. Meng, **W. Xu**, H.N. Liang. An Exploration of Hands-free Text Selection for Virtual Reality Head-Mounted Displays. *IEEE ISMAR'22*.
- [C9] D. Monteiro, H.N. Liang, X. Wang, **W. Xu**, H. Tu. Design and Development of a Low-cost Device for Weight and Center of Gravity Simulation in Virtual Reality. *ACM ICMI'21*.
- [C8] **W. Xu**, H.N. Liang, K. Yu, N. Baghaei. Effect of Gameplay Uncertainty, Display Type, and Age on Virtual Reality Exergames. *ACM CHI'21*.
- [C7] X. Lu, D. Yu, H.N. Liang, **W. Xu**, Y. Chen, X. Li, K. Hasan. Exploration of Hands-free Text Entry Techniques for Virtual Reality. *IEEE ISMAR'20*.
- [C6]  **W. Xu**, H.N. Liang, Y. Chen, X. Li, and K. Yu. Exploring Visual Techniques for Boundary Awareness During Interaction in Augmented Reality Head-Mounted Displays. *IEEE VR'20*. Nominated for the best conference paper award (top5%).
- [C5] D. Yu, H.N. Liang, X. Lu, T. Zhang, and **W. Xu**. DepthMove: Leveraging Head Motions in the Depth Dimension to Interact with Virtual Reality Head-Worn Displays. *IEEE ISMAR'19*.
- [C4] **W. Xu**, H.N. Liang, A. He, and Z. Wang. Pointing and Selection Methods for Text Entry in Augmented Reality Head-Mounted Displays. *IEEE ISMAR'19*.
- [C3] **W. Xu**, H.N. Liang, Y. Yu, D. Monteiro, K. Hasan, and C. Fleming. Assessing the Effects of a Full-body Motion-based Exergame in Virtual Reality. *Chinese CHI'19*.
- [C2] **W. Xu**, H.N. Liang, Y. Zhao, D. Yu, and D. Monteiro. DMove: Directional Motion-based Interaction for Augmented Reality Head-Mounted Displays. *ACM CHI'19*.
- [C1] **W. Xu**, H.N. Liang, Y. Yue. Directional Motion-based Interfaces for Virtual and Augmented Reality Head-mounted Displays. *ICOMSSC'18*.

## Journal

- [J11] **W. Xu**, H.N. Liang, K. Yu, S. Wen, N. Baghaei, H. Tu. Acceptance of Virtual Reality Exergames Among Chinese Older Adults. *International Journal of Human-Computer Interaction*.
- [J10] J. Wang, H.N. Liang, D. Monteiro, **W. Xu**, J. Xiao. Real-time Prediction of Simulator Sickness in Virtual Reality Games. *IEEE Transactions on Games*.
- [J9] **W. Xu**, H.N. Liang, N. Baghaei, X. Ma, K. Yu, X. Meng, S. Wen. Effects of an Immersive Virtual Reality Exergame on University Students' Anxiety, Depression, and Perceived Stress: Pilot Feasibility and Usability Study. *JMIR Serious Games*.
- [J8] R. Shi, H.N. Liang, Y. Wu, D. Yu, and **W. Xu**. Virtual Reality Sickness Mitigation Methods: A Comparative Study in a Racing Game. *Proceedings of the ACM on Computer Graphics and Interactive Techniques*.
- [J7] **W. Xu**, H.N. Liang, Q. He, X. Li, K. Yu, Y. Chen. Results and Guidelines From a Repeated-Measures Design Experiment Comparing Standing and Seated Full-Body Gesture-Based Immersive Virtual Reality Exergames: Within-Subjects Evaluation. *JMIR Serious Games*.
- [J6] **W. Xu**, H.N. Liang, N. Baghaei, W.B. Bing, and Y. Yue. Health Benefits of Digital Videogames for the Ageing Population: A Systematic Review. *Games for Health*.
- [J5] **W. Xu**, H.N. Liang, Z. Zhang, and N. Baghaei. Studying the Effect of Display Type and Viewing Perspective on User Experience in Virtual Reality Exergames. *Games for Health*.
- [J4] **W. Xu**, H.N. Liang, Y. Zhao, T. Zhang, D. Yu, D. Monteiro, and Y. Yue. RingText: Dwell-free and hands-free Text Entry for Mobile Head-Mounted Displays using Head Motions. *IEEE Transactions on Visualization and Computer Graphics*.
- [J3] D. Yu, K. Fan, H. Zhang, D. Monteiro, **W. Xu**, and H.N. Liang. PizzaText: Text entry for virtual reality systems using dual thumbsticks. *IEEE Transactions on Visualization and Computer Graphics*.
- [J2] D. Yu, J. Zhu, **W. Xu**, H.N. Liang, C. Fleming, and Y. Yue. An Investigation of Micro-and Macro-Interaction for 3D Manipulation using Dual-Hand Controller in Virtual Reality Environments. *International Journal of Design, Analysis & Tools for Integrated Circuits & Systems*.
- [J1] D. Monteiro, H.N. Liang, **W. Xu**, M. Brucker, V. Nanjappan, and Y. Yue. Evaluating Immersion, Presence, and Emulator Sickness in Virtual Reality Games based on First- and Third-Person Viewing Perspectives. *Computer Animation & Virtual Worlds*.

## Book Chapter

- [CH1] R. Zheng, H.N. Liang, R. Xie, F. Lu, Y. Shi, **W. Xu**, and K. Papangelis. BlockTower: A Multi-player Cross-Platform Competitive Social Game. *In VR, Simulations and Serious Games for Education*.

## Poster and Extended Abstract

- [Po5] B. Spittle, **W. Xu**, M. Frutos-Pascual, C. Creed, I. Williams. Socially Distanced: Have user evaluation methods for Immersive Technologies changed during the COVID-19 pandemic? *IEEE ISMAR'21*.
- [Po4] N. Baghaei, L. Stemmet, I. Khaliq, A. Ahmadi, I. Halim, H.N. Liang, **W. Xu**, M. Billingham, R. Porter. Designing Individualised Virtual Reality Applications for Supporting Depression: A Feasibility Study. *ACM EICS'21*.
- [Po3] **W. Xu**, H.N. Liang, X. Ma, and X. Li. VirusBoxing: A HIIT-based VR boxing game. *ACM CHI PLAY'20*.
- [Po2] J. Wang, H.N. Liang, D. Monteiro, **W. Xu**, H. Chen, Q. Chen. Real-Time Detection of Simulator Sickness in Virtual Reality Games Based on Players' Psychophysiological Data during Gameplay. *IEEE ISMAR'20*.
- [Po1] X. Lu, D. Yu, H.N. Liang, X. Feng, and **W. Xu**. DepthText: Leveraging Head Movements towards the Depth Dimension for Hands-free Text Entry in Mobile Virtual Reality Systems. *IEEE VR'19*.

## Patent

- [Pa3] H.N. Liang, D. Monteiro, **W. Xu**, X. Wang. A portable device for simulating weight and center of gravity in a virtual reality environment. CN patent App. CN202010885890.4 (Pending).
- [Pa2] H.N. Liang, J. Wang, D. Monteiro, **W. Xu**. A real time detection method for simulator sickness in virtual environment. CN patent App. CN202010754321.6 (Pending).
- [Pa1] H.N. Liang, **W. Xu**, Y. Yue. Dwell-Free Text Entry Technique for Mobile Virtual Reality Head-Mounted Displays. CN Patent App. CN201810711473.0 (Pending).

## Presentations

### Oral Presentations

- [Pr7] DMT Lab Interface: Postgraduate Study an Introduction. *BCU*.
- [Pr6] Effect of Gameplay Uncertainty, Display Type, and Age on Virtual Reality Exergames. *ACM CHI'21*.
- [Pr5] DMove: Directional Motion-based Interaction for Augmented Reality Head-Mounted Displays. *XJTLU Oral Presentation Competition*.
- [Pr4] Pointing and Selection Methods for Text Entry in Augmented Reality Head-Mounted Displays. *IEEE ISMAR'19*.
- [Pr3] Assessing the Effects of a Full-body Motion-based Exergame in Virtual Reality. *Chinese CHI 2019*.
- [Pr2] DMove: Directional Motion-based Interaction for Augmented Reality Head-Mounted Displays. *ACM CHI'19*.
- [Pr1] RingText: Dwell-free and hands-free Text Entry for Mobile Head-Mounted Displays using Head Motions. *IEEE VR'19*.

### Poster Presentations

- [Pr3] VirusBoxing: A HIIT-based VR boxing game. *ACM CHI PLAY'20*.
- [Pr2] DMove: Directional Motion-based Interaction for Augmented Reality Head-Mounted Displays. *XJTLU Poster Presentation Competition*.
- [Pr1] DepthMove: Leveraging Head Motions in the Depth Dimension to Interact with Virtual Reality Head-Worn Displays. *IEEE ISMAR'19*.

## Press

- [P5] What's it like to do a PhD at XJTLU? XJTLU, 2021
- [P4] 在西交利物浦大学读博士是种什么体验? XJTLU, 2021

[P3]	读博，不是为赢得博士这个“头衔”	XJTLU, 2021
[P2]	IEEE VR 中国学者宣讲论文精选	VR China, 2020
[P1]	VIRTUAL REALITY RESEARCH PROJECTS ACCEPTED BY INTERNATIONAL SYMPOSIUM	XJTLU, 2018

## References

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