

Tinghui Li

Email: tinghui.li@sydney.edu.au / tinghui.li.usyd@gmail.com

Phone: +61 422 878 336 / +86 159 5429 5886

Homepage: <https://tinghui-li.github.io/>



EDUCATION

University of Sydney

Sydney, Australia

Doctor of Philosophy

10/2023 – 12/2026

- **Supervisors:** Dr. Zhanna Sarsenbayeva, Associate Prof. Anusha Withana, Prof. Eduardo Velloso
- **Research Area:** Human-Computer Interaction, Extended Reality, Accessibility
- **Project Topic:** Understanding and Modelling the Effects of Situational Impairments in Mixed Reality
- **Scholarships:** Full Tuition Fee Scholarship, Full Stipend Scholarship

University of Sydney

Sydney, Australia

Bachelor of Advanced Studies (Honours)

09/2022 – 09/2023

- **Major:** Computer Science (First-Class Honours)
- **Supervisor:** Associate Prof. Anusha Withana
- **Project Topic:** Physics Inspired Time-Agnostic Graph Neural Network for Finger Motion Prediction

University of Sydney

Sydney, Australia

Bachelor of Science

02/2020 – 09/2022

- **Majors:** Data Science, Biochemistry and Molecular Biology
- **Courses:** Human-in-the-Loop Data Analytics (91/100); Pervasive Computing (91/100); Introduction to Programming (89/100); Visual Analytics (88/100); Usability Engineering (82/100).

EXPERIENCE

Dolby Laboratories, Inc.

Sydney, Australia

PhD Research Intern

05/2026 – 09/2026

- **Mentor:** Dr. Jeroen Breebaart
- **Project Topic:** Multimodal Context-Aware Mixed Reality System

School of Computer Science, University of Sydney

Sydney, Australia

Casual Academic – Computer Science

06/2023 – 12/2025

- COMP4427/5427 Usability Engineering Guest Lecturer
- COMP4427/5427 Usability Engineering Teaching Assistant and Tutor
- INFO3315 Human-Computer Interaction Teaching Assistant and Tutor
- COMP5703/DATA5703/CSEC5703 Group-Based Capstone Project Tutor and Client

Graduate School of Media Design, Keio University

Tokyo, Japan

Visiting Researcher

04/2025 – 05/2025

- **Supervisor:** Prof. Kouta Minamizawa
- **Project Topic:** Estimating the Effects of Ambient Noise on Mixed Reality Interaction

Bosch (China) Investment Co., Ltd.

Shanghai, China

Data Scientist Intern

11/2021 – 01/2022

- Analysed the abnormal vehicle data, including finding the abnormal cells and plotting voltage graphs;
- Participated in the production and improvement of the PowerBI dashboard.

University College London

Exchange Summer School

London, United Kingdom

07/2021 – 08/2021

- **Course:** Health Data Science and Data Analytics in Healthcare.

Shanghai Jiao Tong University

Exchange Summer School

Shanghai, China

12/2020 – 01/2021

- **Courses:** Algorithms and Analysis (89/100); Statistics of Stochastic Processes (89/100).

PUBLICATIONS

2026

- [CHI'26] Zheyuan Kuang, **Tinghui Li**, Weiwei Jiang, Sven Mayer, Flora Salim, Benjamin Tag, Anusha Withana, and Zhanna Sarsenbayeva. Understanding the Effects of Interaction on Emotional Experiences in VR. In Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems 2026 (**CORE A***).
- [CHI'26] Lefan Lai, **Tinghui Li**, Zhanna Sarsenbayeva, and Brandon Syiem. Searching Through Complex Worlds: Visual Search and Spatial Regularity Memory in Mixed Reality. In Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems 2026 (**CORE A***).
- [Under Review] **Tinghui Li**, Juno Kim, Eduardo Velloso, Anusha Withana, and Zhanna Sarsenbayeva. Isolating and Quantifying Mechanisms Behind Walking-Induced Performance Decline in MR.
- [Under Review] **Tinghui Li**, Ruilin Liu, Juno Kim, Eduardo Velloso, Anusha Withana, and Zhanna Sarsenbayeva. A Survey on Situational Impairments Research in Mixed Reality.
- [Under Review] **Tinghui Li**, Juno Kim, Eduardo Velloso, Anusha Withana, and Zhanna Sarsenbayeva. Why Mixed Reality Remains Confined to the Laboratory.
- [Under Review] Ren Hu, **Tinghui Li**, Zhanna Sarsenbayeva, Yujiu Yang, and Chu Luo. RTPCR: A Radon Transform-Based Image Construction Framework for Point Cloud Registration.
- [Under Review] Bing Li, Yan Hu, **Tinghui Li**, Yinuo Zhang, Wen Ma, and Yiran Shen. CyberSelf: Embodied Self-Distancing for Emotional Support in Virtual Reality.

2025

- [CHI'25 Honorable Mention] **Tinghui Li**, Eduardo Velloso, Anusha Withana, and Zhanna Sarsenbayeva. Estimating the Effects of Encumbrance and Walking on Mixed Reality Interaction. In Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (**CORE A***).
- [UIST'25] **Tinghui Li**, Eduardo Velloso, Anusha Withana, and Zhanna Sarsenbayeva. Weight-Induced Consumed Endurance (WICE): A Model to Quantify Shoulder Fatigue with Weighted Objects. In Proceedings of the ACM Symposium on User Interface Software and Technology 2025 (**CORE A***).
- [IMWUT/UbiComp'26] **Tinghui Li**, Danyang Peng, Eduardo Velloso, Anusha Withana, Kouta Minamizawa, and Zhanna Sarsenbayeva. Estimating the Effects of Ambient Noise on Mixed Reality Interaction. In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**CORE A***).
- [OzCHI'25] **Tinghui Li**, Brandon Victor Syiem, Niels van Berkel, Juno Kim, Anusha Withana, and Zhanna Sarsenbayeva. Trends and Directions of Extended Reality Research in HCI: A Co-Word Analysis. In Proceedings of the ACM Australian Conference on Human-Computer Interaction.

- [OzCHI'25] **Tinghui Li**, Pamuditha Somarathne, Zhanna Sarsenbayeva, and Anusha Withana. NeverLagging: Enhancing Virtual Reality Finger Tracking with a Physics-Inspired Time-Agnostic Graph Neural Network. In Proceedings of the ACM Australian Conference on Human-Computer Interaction.
- [OzCHI'25] **Tinghui Li**, Guangzheng Zhang, and Zhanna Sarsenbayeva. SOBO: An AI-Driven Small-Object Boundary Detection Framework for Optimizing VR Safety in Confined Spaces. In Proceedings of the ACM Australian Conference on Human-Computer Interaction.
- [OzCHI'25] Ruilin Liu, **Tinghui Li**, and Zhanna Sarsenbayeva. Understanding and Addressing Ambient Illumination as a Situational Impairment for Digital Devices. In Proceedings of the ACM Australian Conference on Human-Computer Interaction.
- [IEEE Access] Ruilin Liu, **Tinghui Li**, and Zhanna Sarsenbayeva. Effects of Ambient Illumination and Screen Luminance on Mixed Reality Interaction. IEEE Access.
- [ICXR'25] Danyang Peng, Zicheng Xia, **Tinghui Li**, Yixin Wang, Mark Armstrong, Kinga Skiers, Anish Kundu, Kouta Minamizawa, and Yun Suen Pai. Bioresponsive Avatars: Perceiving Emotions Through Virtual Avatar Representation in Empathic Social VR. Computers & Graphics.

AWARDS

- 2026 University of Sydney CS HDR Research Support Fund (A\$5,000)
- 2025 Deputy Vice-Chancellor Research Impact Proof-of-Concept Fund (A\$79,874)
- 2025 University of Sydney Faculty HDR Grant (A\$800)
- 2025 University of Sydney CS HDR Research Support Fund (A\$5,000)
- 2023 – 2027 University of Sydney Faculty of Engineering Research Stipend Scholarship (A\$42,754 p.a.)
- 2023 – 2027 University of Sydney International Tuition Fee Scholarship
- 2023 University of Sydney Engineering Vacation Research Internship Program Scholarship (A\$3,000)
- 2023 University of Sydney Undergraduate High Honour Roll
- 2022 University of Sydney Undergraduate Coursework and Top Third-Year High Honour Roll
- 2021 University of Sydney Global Citizenship Award

SERVICES

- **Session Chair:** CHI'26.
- **Review Committee Member:** UbiComp/ISWC'25.
- **Reviewer:** MobileHCI'26, IMWUT, IEEE VR'26, CHI'26, CHI'25, ICXR'25, OzCHI'25, OzCHI'24, AHs'24.
- **Student Volunteer:** OzCHI'25, ISMAR'25, ISMAR'23, VLDB'22.

JOINT SUPERVISION

- **Ruilin Liu (2025)**
Bachelor of Advanced Studies (First-Class Honours, University Medal), University of Sydney
Next Step: PhD at the University of Sydney, Supervisor: Dr. Zhanna Sarsenbayeva
- **Lefan Lai (2025)**
Master of Computer Science (Research Pathway), University of Sydney
Next Step: PhD at the University of Auckland, Supervisor: Prof. Mark Billinghurst
- **Vittoria Salim (2024)**
Bachelor of Advanced Computing (First-Class Honours), University of Sydney
Next Step: Microsoft Software Engineer