HU, Qingyu

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Address: Academy of Arts & Design, Tsinghua University, Beijing

EDUCATION

Tsinghua University, Beijing, China (QS 17)　　　　　　　　　　　　09/2022-07/2025
Master of Industrial Design
GPA: 3.84/4.0

➢ 2025 Beijing Municipal Outstanding Graduate（**Top 5%**）

➢ 2024 Tsinghua University Outstanding **First-Class** Scholarship

Beijing Institute of Technology, Beijing, China (985 211)　　　　　　09/2018-07/2022
Bachelor of Product Design
GPA: 3.9/4.0 **(Rank: 1/43)**

➢ 2020 National Scholarship（**Top 1%**）

➢ 2019, 2020 The First Prize Scholarship of Beijing Institute of Technology

EDUCATION

Game-based Learning, Serious Game, Mixed Reality, Human-computer Interaction

RESEARCH INTERESTS

Graduate Thesis Project: Cross-Scale Gamified Learning System for Circuit Education, Tsinghua University　　　　　　　　06/2024-05/2025

Developed a cross-scale interactive learning system integrating tangible circuit construction and Kinect-based embodied gameplay to teach abstract LC resonance circuit concepts.

Designed and implemented a dual-module system:

➢ Macro-level: tabletop LC circuit assembly guided by projection animation.

➢ Micro-level: first-person motion-sensing game simulating electron oscillation dynamics.

Conducted mixed-method user testing with middle school students (N=20); results showed statistically significant improvement in conceptual understanding, engagement, and initiative ($p < 0.01$).

Academic paper:

Hu, Q. & Li, H. (2025). "'Seeing' Electricity: Exploring Middle School Students' Experiences in a Kinect-based Sound Visualization Circuit Learning Game." Accepted for HCII 2025 (Late Breaking track), to be published in Springer CCIS Proceedings.

The Future Laboratory, Tsinghua University

Research Assistant　　　　　　　　　　　　　　　　　　　　　　08/2022-10/2023

Collaborative Project Initiated by the LEGO Foundation and Tsinghua University

Projects encompassed: organizing multiple children's workshops to explore the impact of AI and the environment on children's creativity, authoring a government report on the theories and methodologies for designing innovative learning toys, and designing and developing Arduino-based construction toys for children.

Academic paper:

An interdisciplinary design framework for creative collaboration (IASDR 2023)

Designing Child-Centric AI Learning Environments: Insights from LLM-Enhanced Creative Project-Based (IJHCS, under review)

Government report:

Government report writing: "The Theory and Method of Innovative Learning Toy Design."

Augmented Reality Exergame for Promoting Learning Outcomes in Sports, Tsinghua University

Team leader　　　　　　　　　　　　　　　　　　　　　　　　　03/2024-08/2024

This study introduces SmashMate, an innovative badminton training system that leverages augmented reality (AR) technology via the Microsoft HoloLens 2 platform. The system integrates virtual "avatars"

into training sessions, exploring the effectiveness of the "shadow training" method within Mixed Reality (MR) sports teaching scenarios. By incorporating the exergame interface design, SmashMate provides an immersive training experience that enhances footwork skills, allowing enthusiasts to practice and refine their movements with greater precision and efficiency.

PUBLICATION

Published Paper

Hu, Q. & Li, H. 2025. "'Seeing' Electricity: Exploring Middle School Students' Experiences in a Kinect-based Sound Visualization Circuit Learning Game." Accepted at HCII 2025 – Human-Computer Interaction International Conference, Late Breaking, Springer CCIS (to appear).

Ma, S., **Hu, Q**., Chen, Y., Zhao, Z., & Li, H. (2023). Social bots that bring a strong presence to remote participants in hybrid meetings. In Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction (HRI '23). Association for Computing Machinery, New York, NY, USA, 853–856. https://doi.org/10.1145/3568294.3580200

Yu, T., Fan, Y., Zhang, Z., **Hu, Q**., Xu, W., Mi, H., & Mueller, S. (2024). Thermaterial: Program ambient heat transfer behaviors on objects through fluidic composites. In Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems (CHI EA '24). Association for Computing Machinery, New York, NY, USA, 1–8. https://doi.org/10.1145/3613905.3650747

Zha, S., Zhao, D., Li, M., Gong, W., **Hu, Q**., & Li, Z. (2023). An interdisciplinary design framework for creative collaboration. In D. De Sainz Molestina, L. Galluzzo, F. Rizzo, & D. Spallazzo (Eds.), IASDR 2023: Life-Changing Design, 9-13 October, Milan, Italy. https://doi.org/10.21606/iasdr.2023.550

Zhilong Zhao, Yanran Chen, **Qingyu Hu**, Siran Ma, Houze Li, Yijie Guo, and Haipeng Mi. 2023. Buzzo or Eureka -- Robot that Makes Remote Participants Feel More Presence in Hybrid Discussions. In Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction (HRI '23). Association for Computing Machinery, New York, NY, USA, 323–327. https://doi.org/10.1145/3568294.3580098

Under Review

Zha, S., Qiao, Y., **Hu, Q**., Li, Z., Xu, Y. 2024. Designing Child-Centric AI Learning Environments: Insights from LLM-Enhanced Creative Project-Based Learning. (Under review at International Journal of Human-Computer Studies. arXiv:2403.16159)

AWARDS

- ➤ Outstanding First-Class Scholarship, ¥1,0000   10/2024
- ➤ D&A Design Discovery Awards 2024   08/2024
- ➤ 2024 MUSE Creative Awards Gold Winner   09/2024
- ➤ 2024 French Design Awards   07/2024
- ➤ Key Project for Graduation Design (Thesis) of Undergraduate Students   06/2022
- ➤ Diwen Scholarship, ¥ 1,0000   10/2021

SKILLS

Tools: Rhino, Blender, Unity, Unreal Engine, SPSS

Program: Python, HTML

Overview: XR Development, Modeling of Industrial Products and Scenarios (Skilled in creating and optimizing 3D models and virtual environments using tools like Rhino, and Blender, with expertise in preparing assets for real-time rendering in AR/VR platforms), Quantitative and Qualitative Data Analysis (Skilled in analyzing both quantitative and qualitative data using tools like SPSS, R, Python, and NVivo to draw insights and inform design decisions).