

Shumeng Zhang

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Bio

I am a digital artist, researcher and Ph.D. candidate in Computational Media and Arts at HKUST (Guangzhou). My research focuses on VR/AR and embodied design, exploring how interactive technologies can support social inclusion and embodied experiences. I bring **industry experience alongside technical and creative skills in software development, interactive hardware prototyping, and sound design**. My creative experience also includes interactive art exhibitions and performances. My teaching experience includes **bilingual instruction, undergraduate thesis supervision, and multiple teaching assistantships**. My research, industry experience, and technical and creative skills provide a foundation for practice-oriented teaching and student project mentoring in interactive media.

I have authored or co-authored **14 research papers published or accepted for publication, including seven as first author**. I have studied and conducted research in China, the United States, and Italy. My academic service includes program committee roles for ACM ASSETS and ICHEC, as well as reviewing for HCI conferences including ACM CHI, DIS, UIST and ISS. I also have experience in educational outreach and volunteer teaching.

Academic Experience & Education

The Hong Kong University of Science and Technology (Guangzhou)

Ph.D. Candidate, Computational Media and Arts

Jan 2024 – Present
Guangzhou / Hong Kong

University of Trento

Visiting Researcher, Department of Information Engineering

Feb 2026 – Oct 2026
Trento, Italy

The Hong Kong University of Science and Technology (Guangzhou)

M.Phil. in Computational Media and Arts (transferred to Ph.D.)

Sep 2022 – Dec 2023
Guangzhou / Hong Kong

Arizona State University

Master of Science in Design in Industrial Design

Aug 2017 – Dec 2019
Tempe, AZ, USA

Wuhan University

Bachelor's Degree in Product Design

Sep 2013 – Jun 2017
Wuhan, China

Publications

First-Author Publications [* Shared same contribution.]

- [1] **Zhang, S.**, Liu, T., Masu, R., Fan, M. (2027). *From Beadwork to Music Creation: A Longitudinal Co-Design Study with Teachers at a School for Blind and Low-Vision Students*. International Journal of Human-Computer Studies. [To Appear, SCI, JCR Q1]
- [2] **Zhang, S.**,* Mao, W.*, Lin, H., Wu, Z. & Hui, P. (2026). *Entangled Ballet: A Data-Driven Choreography of Embodied Entanglement*. In Proceedings of the 19th International Symposium on Visual Information Communication and Interaction. [To Appear]
- [3] **Zhang, S.**, Lin, S., Liu, T., Fan, M. & Masu, R. (2026). *To Perform/ To Live: Decolonizing of Digital Music Instruments and Feminism with Human-AI Co-Created Embodied Experience of Daily Objects*. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 9(3), 1-12. [Presented in SIGGRAPH 2026, CCF-A Conference]
- [4] **Zhang, S.**, Liu, T., & Fan, M. (2025). *FinHERtip: Embodied Identity and Human-AI Co-Creation in Accessible Musical Performance*. In Proceedings of the SIGGRAPH Asia 2025 Art Papers (pp. 1-8). [CORE A Conference]
- [5] **Zhang, S.**, Masu, R., Bettega, M., & Fan, M. (2025). *Accessibility and Social Inclusivity: A Literature Review of Music Technology for Blind and Low Vision People*. In Proceedings of the 27th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1-22). [CORE A Conference]
- [6] **Zhang, S.**, Lin, W., Li, Z., Jiang, R., Liang, C., Fan, M., & Masu, R. (2024). *Beadwork bridge: Understanding and exploring the opportunities of beadwork in enriching school education for blind and low vision (BLV) people*. In Proceedings of the 26th International ACM SIGACCESS Conference on Computers and Accessibility (pp. 1-14). [CORE A Conference]

- [7] **Zhang, S.**, Wang, Z., Zhou, Y., Cui, H., Fu, S., Wang, Z., & Fan, M. (2023, September). *OdorV-Art: An initial exploration of an olfactory intervention for appreciating style information of artworks in virtual museum*. In Proceedings of the 16th International Symposium on Visual Information Communication and Interaction (pp. 1-8).

Co-Authored Publications

- [1] Liu, T., **Zhang, S.**, Qu, H., & Zhou, H. (2026). *NarraStone: Reimagining the Stone Stele as an AI-Era Apparatus of Synthetic Memory* In Proceedings of the SIGGRAPH Asia 2026 Art Papers. [To Appear, CORE A Conference]
- [2] Wu, Z., Li, J., **Zhang, S.**, Xiong, P., Li, Z., & Fan, M. (2026). *Beyond Upright VR: Understanding Direct Interaction and Hand Redirection Strategies in Supine Posture*. IEEE Transactions on Visualization and Computer Graphics. [SCI, JCR Q1]
- [3] Liu, T., **Zhang, S.**, & Merendino, N. (2026). *BruSHŪ: Cross-Modal Translation of Implicit Micro-Actions in Chinese Calligraphy*. Proceedings of the ACM on Computer Graphics and Interactive Techniques, 9(3), 1-13. [Presented in SIGGRAPH 2026, CCF-A Conference]
- [4] Liu, T., Ye, J., **Zhang, S.**, Zhang, K., & Liang, C. (2025). *Quantifying Structural Aesthetic Features and Personality Trait Preferences in Kai Shu Calligraphy*. In Proceedings of the 33rd ACM International Conference on Multimedia (pp. 6730-6739). [CCF A Conference]
- [5] Li, Z., Li, J., Xiong, Z., **Zhang, S.**, Faruqi, F., Mueller, S., Liang, C., Ma, X., & Fan, M. (2025). *InteRecon: Towards Reconstructing Interactivity of Personal Memorable Items in Mixed Reality*. In Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (pp. 1-19). [CCF A Conference]
- [6] Wang, Z., Shen, L., Kuang, E., **Zhang, S.**, & Fan, M. (2024, July). *Exploring the impact of artificial intelligence-generated content (AIGC) tools on social dynamics in UX collaboration*. In Proceedings of the 2024 ACM Designing Interactive Systems Conference (pp. 1594-1606). [CORE A Conference]
- [7] Wu, Z., Wang, D.,* **Zhang, S.***, Huang, Y., Wang, Z., & Fan, M. (2024, May). *Toward making virtual reality (VR) more inclusive for older adults: investigating aging effect on target selection and manipulation tasks in VR*. In Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (pp. 1-17). [CCF A Conference]

Under Review

- [1] Liu, T., Yan, S., **Zhang, S.**, Liang, C., & Zhang, K. (2025). *Can machines interpret Chinese calligraphy pieces via computational aesthetics?* Leonardo. [Under Review]

Research Grants & Funding

- [1] **Overseas Research Award (ORA) at HKUST(GZ)** Award Recipient 01/2026
Funded collaborative research at the University of Trento, Italy, on accessible computing and embodied design; authored research papers, delivered invited talks, and established international academic collaborations.
- [2] **Overseas Research Travel Grant (RTG) at HKUST(GZ)** Award Recipient 12/2024
Supported publications and presentations at leading international conferences and academic exchange.
- [3] **Guangzhou–HKUST(GZ) Joint Research Fund (2024A03J0617)** Project Participant 2024
Developed accessible interaction prototypes, conducted field studies and data analysis, and contributed to conference papers; gained experience in end-to-end research project execution.
- [4] **CCF–Lenovo Blue Ocean Research Fund (CCF–Lenovo OF 202302)** Core Team Member 2024
Researched VR/AR technologies; developed prototypes, conducted user studies, contributed to ACM ASSETS and CHI papers, and supported project proposals and reports.
- [5] **HKUST(GZ) Practice Research Project: Exploring RBM Talent Development (HKUST(GZ)-ROP2023030)** Project Participant 2024
Contributed to interdisciplinary, practice-based course design and supported innovation-oriented graduate education.
- [6] **Guangzhou Science and Technology Program: City–University Joint Research Fund (2023A03J0001)** Core Team Member 2024
Conducted co-design and social innovation research with people with disabilities; organized user studies and contributed to multiple ACM ASSETS and SIGGRAPH publications.

Teaching Experience

- [1] **The Hong Kong University of Science and Technology (Guangzhou)** Jan 2024 – May 2025
Teaching Assistant Guangzhou, China
- Supported instruction, tutorials, and grading for the graduate course *Interactive Music Systems Design* and undergraduate course *Introduction to Experimental Animation*.
- [2] **Wuhan Donghu University** Sep 2021 – Aug 2022
Lecturer and Administrator Wuhan, China
- Lectured in the School of Media and Art Design and the School of International Education; also served in the Office of International Exchange and Cooperation.
 - Delivered Chinese–English bilingual teaching for the undergraduate course *Animation Design*.
 - Supervised undergraduate capstone projects and graduation thesis.
- [3] **Arizona State University** Jan 2018 – May 2018
Teaching Assistant Tempe, AZ, USA
- Assisted with undergraduate instruction and grading for *Design Awareness*.

Academic Service

- [1] **Conference Program Committees**
- ACM SIGACCESS Conference on Computers and Accessibility (ACM ASSETS)
 - International Conference on Human-Engaged Computing (ICHEC, formerly Chinese CHI)
- [2] **Reviewer**
- ACM Conference on Human Factors in Computing Systems 2025, 2026, 2027 (ACM CHI '25, '26, '27)
 - ACM Interactive Surfaces and Spaces Conference 2026 (ACM ISS '26)
 - ACM SIGACCESS Conference on Computers and Accessibility (ACM ASSETS '26)
 - ACM Conference on Human Factors in Computing Systems 2025 (ACM CHI '25)
 - International Conference on Human-Engaged Computing 2025 (ICHEC '25)
 - ACM Symposium on User Interface Software and Technology 2024 (ACM UIST '24)
- [3] **Invited Academic Talks**
- May 2026:** Invited talk on embodied design and accessible computing, jointly hosted by the Conservatorio di Musica “F. A. Bonporti” and the University of Trento, Italy.
 - Aug 2026:** Invited talk on accessible computing and technologies supporting older adults and people with disabilities, University of Bath, United Kingdom.
 - Sep 2026:** Invited talk on accessible design, Italian Union of the Blind and Partially Sighted (UICI), Brescia Branch, Italy.
- [4] **Academic Event Organization**
- Feb–May 2021:** Organized an international lecture series on art, design, and media arts at Wuhan Donghu University; coordinated invited speakers, schedules, and on-site delivery.

Industry Experience

- [1] **Bright Dream Robotics (Country Garden)** User Experience Designer 2020.06 – 2021.07
 Conducted user research, interaction prototyping, and product iteration; gained industry experience in product development and UX, applicable to supervising student industry–academia projects.
- [2] **Yelp** Visual Designer 2019.02 – 2020.02
 Worked on brand visual identity and digital marketing design, gaining experience in end-to-end commercial design workflows.
- [3] **FiberHome** Visual Design Intern 2019.06 – 2019.08
 Contributed to interaction design and brand visual design projects.
- [4] **Electronic Arts (EA)** User Experience Design Intern 2018.06 – 2018.08
 Contributed to interaction design and UX optimization for a recommendation system; gained familiarity with industry design implementation workflows.

Design, Exhibitions & Performance

- BeadBand V2.0 at Spazio Ramé** July 2026
Invited Performer Trento, Italy
- Performed with *BeadBand V2.0*, an audiovisual music system controlled via a beadwork-inspired tangible interface I designed.

InnoCharity Art Exhibition and Charity Auction	May 2026
<i>Exhibiting Artist</i>	Guangzhou, China
Exhibited the interactive digital music interface <i>BruSHŪ</i>. The design was published in SIGGRAPH 2026.	
“Second Life” Sustainable Art Festival and Market	Nov 2025
<i>Invited Performer</i>	Guangzhou, China
Performed <i>FinHERtip</i>, an interactive digital musical interface. The design was published in a SIGGRAPH Asia 2025.	
Machine Learning & Interactive Music Concert	May 2025
<i>Invited Performer</i>	Guangzhou / Hong Kong
Performed <i>Abacus</i>, an abacus-like digital music interface I designed. The design was published in SIGGRAPH 2026.	
Write On Downtown Art Magazine	Jan 2019 – Apr 2019
<i>Visual Designer</i>	Tempe, AZ, USA
Member of the design team for Issue 13, responsible for cover design, illustrations, and layout design.	
Clear Channel Outdoor Public Service Campaign	Dec 2018
<i>Graphic Designer / Team Lead</i>	Tempe, AZ, USA
Led a team to complete the design of a public service billboard in Arizona.	

Honors & Awards

Overseas Research Award (ORA), HKUST(GZ)	Feb–Oct 2026
Second Prize and Charity Award, CCF Technology for Charity Hackathon	Jun 2024
Finalist, Three Minute Thesis (3MT) Competition, HKUST(GZ) (competition founded by the University of Queensland)	Jun 2024
Postgraduate Studentship, HKUST(GZ)	Sep 2022 – Present
International Student Scholarship, Arizona State University	Oct 2018
Excellence Award, 8th National College Student Advertising Art Competition	Aug 2016
Excellence Award, National College Student Industrial Design Competition	Aug 2016
Third-Class Scholarship, School of Urban Design, Wuhan University	Oct 2014

Community Service & Outreach

Tongren No. 1 High School	Mar 2024 – Aug 2024
<i>Volunteer STEM Educator</i>	Tongren, China
Independently designed and taught two courses, <i>Large Language Models for Innovation in Miao Embroidery</i> and <i>Human-AI Co-Creation of Original English Drama</i>, connecting AI literacy with intangible cultural heritage and language arts education.	
Jianxin Primary School, Xinqing Town, Teng County	May 2021
<i>Volunteer Teacher and Charity Fundraising Coordinator</i>	Wuzhou, Guangxi, China
Conducted volunteer teaching in rural communities and coordinated charitable fundraising initiatives to support rural primary education.	
Jiuji Junior Middle School, Jiuji Town, Nanzhang County	Mar 2014 – Jun 2014
<i>Volunteer Teacher</i>	Xiangyang, Hubei, China
Delivered general art education to promote art literacy and appreciation.	

Research & Technical Skills

Programming & Hardware:	Python; C/C++ (Arduino, ESP32); JavaScript; HTML/CSS.
Interactive Development:	Unity; Pure Data; TouchDesigner; Processing; p5.js.
Interaction & Visual Design:	Figma; Photoshop; Illustrator; Premiere Pro; InDesign; Axure.
3D Modeling & PCB Design:	Rhino; Blender; Alias; CAD; KiCad.
Languages:	Mandarin Chinese (native); English (fluent spoken communication, academic writing, and bilingual teaching).

Hobbies

Creative technology and DIY projects; Guzheng; Guitar; Photography; Trekking; Painting; Cycling.