

Taizhou Chen (陈泰舟)

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RESEARCH INTERESTS

Human-Computer Interaction, Sensing Technology, Multimodal VR/AR/XR, Ubiquitous Computing

EMPLOYMENT

Shantou University

Cheng Kong School of Art and Design, Master Advisor

Shantou, China

Sept. 2024 – Now

Shantou University

Department of Computer Science, Assistant Professor

Shantou, China

Dec. 2022 – Now

EDUCATION AND RESEARCH EXPERIENCES

Monash University

Dept. of Human-Centered Computing, Visiting Scholar

Melbourne, Australia

Aug. 2024

Huawei Technologies Co., Ltd.

HMI Lab, Research Engineer Intern

Shenzhen, China

Oct. 2020 – Apr. 2021

Tsinghua University

Visiting Student, Supervisor: Dr. Chun Yu

Beijing, China

Dec. 2019 – Apr. 2020

City Universiy of Hong Kong

PhD in Creative Media, Supervisor: Dr. Kening Zhu, Co-supervisor: Prof. Hongbo Fu

HongKong, China

Sept. 2018 – Oct. 2022

City Universiy of Hong Kong

MA in Creative Media, GPA: 3.81/4.0, with Distinction

HongKong, China

Sept. 2016 – Oct. 2017

FUNDED PROJECTS

Natural Science Foundation of China - Young Scientists Fund

2025.01 - 2027.12

国家自然科学基金项目-青年科学基金项目

PI, No. 62402301, CNY 300,000

Ring-Based Interaction Techniques Through Electric-Field Sensing

Natural Science Foundation of Guangdong Province - General Research Fund

2025.01 - 2027.12

广东省自然科学基金项目-面上项目

PI, CNY 100,000

Low-Tethered Gesture-Based Interaction Techniques for Mobile VR Device

Teaching Research and Reform Foundation of Guangdong Province

2024.10 - 2027.06

广东省高等教育教学研究和改革项目

PI, CNY 30,000

Research on the "Teacher-Student-Computer" Ternary Teaching Mode

STU Scientific Research Initiation Grant (SRIG)

2023.01 - 2026.12

PI, CNY 250,000

Research on Smart Ring Interaction Techniques

Natural Science Foundation of China - General Research Fund

2022.01 - 2025.12

国家自然科学基金项目-面上项目

CI, No. 62172346, CNY 640,000

Data-Driven Rendering of Temperature Tactile Signals for Virtual Material Simulation

PUBLICATIONS

CHI 2026

Taizhou Chen, Kai Chen, Xingyu Liu, Pingchuan Ke, and Zhida Sun. 2026. BadminSense: Enabling Fine-Grained Badminton Strokes Evaluation on Single Smartwatch. In Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI '26), April 13–17, 2026, Barcelona, Spain. ACM, New York, NY, USA, 20 pages. <https://doi.org/10.1145/3772318.3790998>

CHI 2026

Xiyun Luo, Weirong Luo, Kening Zhu, and **Taizhou Chen***. 2026. AnkleType: A Hands- and Eyes-free Foot-based Text Entry Technique in Virtual Reality. In Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI '26), April 13–17, 2026, Barcelona, Spain. ACM, New York, NY, USA, 19 pages. <https://doi.org/10.1145/3772318.3790999>

CHI 2025 LBW

Yantao Liu, Dongmin Xiao, **Taizhou Chen***, and Kening Zhu. 2025. Augmenting Tablet Typing Experience by Integrating Key-Press Finger Contact Types as Input. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '25), April 26-May 1, 2025, Yokohama, Japan. ACM, New York, NY, USA, 8 pages. <https://doi.org/10.1145/3706599.3720116>

CHI 2025 LBW

Tianrui Hu, **Taizhou Chen***, and Kening Zhu*. 2025. AirThumb: Supporting Mid-air Thumb Gestures with Built-in Sensors on Commodity Smartphones. In Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA '25), April 26-May 1, 2025, Yokohama, Japan. ACM, New York, NY, USA, 7 pages. <https://doi.org/10.1145/3706599.3721219>

IMWUT / UbiComp 2023

Taizhou Chen, Tianpei Li, Xingyu Yang, Kening Zhu. 2022. EFRing: Enabling Thumb-to-Index-Finger Microgesture Interaction through Electric Field Sensing using Single Smart Ring. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 6, 4, Article 161 (December 2022), 31 pages. <https://doi.org/10.1145/3569478>

MTA

Taizhou Chen, Kening Zhu, Ming Chieh Yang. Deep-Learning-Based Unobtrusive Handedness Prediction for One-Handed Smartphone Interaction. Multimed Tools Appl (2022). ISSN: 1573-7721 <https://doi.org/10.1007/s11042-021-11844-6>

IJHCS

Taizhou Chen, Lantian Xu, Kening Zhu. FritzBot: A Data-Driven Conversational Agent for Physical-Computing System Design, in International Journal of Human-Computer Studies, Volume 155, November 2021, ISSN: 1071-5819 <https://doi.org/10.1016/j.ijhcs.2021.102699>

TVCG / IEEE VR 2021

Taizhou Chen, Lantian Xu, Xianshan Xu and Kening Zhu, GestOnHMD: Enabling Gesture-Based Interaction on Low-Cost VR Head-Mounted Display, in IEEE Transactions on Visualization and Computer Graphics, ISSN: 1941-0506, doi: 10.1109/TVCG.2021.3067689.

CHI Symposium 2020

Zhiyi Rong, Ngo Fung Chan, **Taizhou Chen**, Kening Zhu. CodeRhythm: A Tangible Programming Toolkit for Visually Impaired Students. In Proceedings of Asian CHI Symposium 2020, ACM CHI 2020. Best Paper Award.

HCII 2020

Arshad Nasser, **Taizhou Chen**, Can Liu, Kening Zhu, P. V. M. Rao. 2020. FingerTalkie: Designing A Low-Cost Finger-Worn Device for Interactive Audio Labeling of Tactile Diagrams. In Proceedings of International Conference on Human-Computer Interaction (HCI International) 2020. Springer, Cham.

HCII 2020

Zhiyi Rong, Ngo Fung Chan, **Taizhou Chen**, Kening Zhu. Toward Inclusive Learning: Designing and Evaluating Tangible Programming Blocks for Visually Impaired Students. In Proceedings of International Conference on Human-Computer Interaction (HCI International) 2020. Springer, Cham.

INTERACT 2019

Taizhou Chen, Yi-Shiun Wu, and Kening Zhu. DupRobo: Interactive Robotic Auto-completion of Physical Block-Based Repetitive Structure. In Proceedings of the 17th IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT 2019). Springer-Verlag, Berlin, Heidelberg, 19 pages.

IJHCS

Kening Zhu, Simon Perrault, **Taizhou Chen**, Shaoyu Cai, Roshan Lalitha Peiris. A Sense of Ice and Fire: Exploring Thermal Feedback with Multiple Thermoelectric-Cooling Elements on A Smart Ring. International Journal of Human-Computer Studies. Volume 130, 2019, Pages 234-247, ISSN 1071-5819, <https://doi.org/10.1016/j.ijhcs.2019.07.003>.

CHI 2019

Kening Zhu, **Taizhou Chen**, Feng Han, and Yi-Shiun Wu. 2019. HapTwist: Creating Interactive Haptic Proxies in Virtual Reality Using Low-Cost Twistable Artefacts. In CHI Conference on Human Factors in Computing Systems Proceedings (CHI 2019), May 4–9, 2019, Glasgow, Scotland UK. ACM, New York, NY, USA, 13 pages. <https://doi.org/10.1145/3290605.3300923>.

VRST 2018

Taizhou Chen, Yi-Shiun Wu, and Kening Zhu. 2018. Investigating Different Modalities of Directional Cues for Multi-Task Visual-Searching Scenario in Virtual Reality. In VRST 2018: 24th ACM Symposium on Virtual Reality Software and Technology (VRST '18), November 28 - December 1, 2018, Tokyo, Japan. ACM, New York, NY, USA, 6 pages. Acceptance Rate: 22%.

EXTENDED ABSTRACTS**CHI 2020**

Taizhou Chen. 2020. Facilitating Physical-Computer System Design through Data-Driven Natural-Language Interaction. In Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems (CHI EA '20). Association for Computing Machinery, New York, NY, USA, 1–6.DOI:<https://doi.org/10.1145/3334480.3381442>.

SIGGRAPH Asia 2018

Kening Zhu, **Taizhou Chen**, Shaoyu Cai, Feng Han, and Yi-Shiun Wu. 2018. Demo - HapTwist: Creating Interactive Haptic Proxies in Virtual Reality Using Low-Cost Twistable Artefacts. In Proceedings of SA '18 Virtual and Augmented Reality . ACM, New York, NY, USA, 2 pages.

SIGGRAPH Asia 2017 **Taizhou Chen**, Yi-Shiun Wu, Feng Han, Baochuan Yue, and Kening Zhu. 2017. DupRobo: An Interactive Robotic Platform for Physical Block-Based Autocompletion. In SIGGRAPH Asia 2017 Posters (SA '17). Association for Computing Machinery, New York, NY, USA, Article 19, 1–2. DOI:<https://doi.org/10.1145/3145690.3145708>.

SIGGRAPH Asia 2017 **Taizhou Chen**, Junyu Liu, Kening Zhu, and Tamas Waliczky. 2017. The Golden Guardian: Multi-Sensory Immersive Gaming through Multi-Sensory Spatial Cues. In SIGGRAPH Asia 2017 VR Showcase (SA '17). ACM, New York, NY, USA, Article 12, 2 pages. DOI: <https://doi.org/10.1145/3139468.3139473>. Acceptance rate: 25%.

PATENTS

- 2023** Kening Zhu, **Taizhou Chen**, Tianpei Li, Interactive Wearable Device And Method Of Machine Learning Based Training Thereof. Patent No.: US11,822,732. Nov 21, 2023.
- 2023** Zhida Sun, Wenhao Wu, Qiang Xu, Chenhe Li, Zhe Liu, Nu Zhang, Yanshan He, **Taizhou Chen**, Yibin Zhai, Data processing method and related device. Patent No.: WO2023051750A1. Apr 6, 2023.
- 2021** Kening Zhu, **Taizhou Chen**, Xu Lantian, Computerized Method of Composing A System for Performing A Task. (Accepted/In press/Filed) Priority No. 17/644,662
- 2020** Kening Zhu, Feng Han, **Taizhou Chen**, Yi-Shiun Wu, Systems and Methods for Creating Haptic Proxies for Use in Virtual Reality. Patent No.: US11,144,112. Oct 12, 2021.

AWARD

- Geneva International Exhibition of Inventions** 2022
Bronze medal
- The Outstanding Academic Performance Award for Research Degree Students** 2021
Academic year 2020 - 21, City University of Hong Kong
- Best Paper Award** 2020
Asian CHI Symposium 2020, ACM
- Research Tuition Scholarship** 2020
Academic year 2020 - 21, City University of Hong Kong
- The Outstanding Academic Performance Award for Research Degree Students** 2019
Academic year 2018 - 19, City University of Hong Kong

PROFESSIONAL SERVICE

Working Committee
ICACHI Blue Book for China Human-Computer Interaction Educational Development in 2022
ICACHI 2022中国人机交互发展蓝皮书工作委员会

PC Member
IEEE International Conference on Artificial Intelligence and Virtual Reality (AIVR) 2020/2021/2024
ACM UbiComp/ISWC 2023
ACM SIGGRAPH Asia Emerging Technologies 2023/2024/2025/2026

Reviewer

ACM CHI Conference on Human Factors in Computing Systems 2019/2020/2021/2022/2023/2024/2025/2026
The Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 2022
ACM SIGGRAPH 2022
ACM SIGGRAPH Asia 2018/2020/2021,
IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR) 2020/2021
IEEE International Symposium on Mixed and Augmented Reality (ISMAR) 2022
The ACM International Conference on Mobile Human-Computer Interaction (MobileHCI) 2020/2023/2024
ACM International Conference on Multimodal Interaction (ICMI) 2020/2021
ACM Interactive Surfaces and Spaces Conference (ISS) 2020/2021/2022
ACM Conference on Intelligent User Interfaces (IUI) 2020/2021/2022
ACM Spatial User Interaction (SUI) 2020
ACM International Symposium on Wearable Computers (ISWC) 2018
International Symposium of Chinese CHI (ChineseCHI) 2022/2023
Annual Conference on Tangible Embedded and Embodied Interaction 2023

TALK

Multimodal and Embodied User Interface for Natural Human-Computer Interaction

- Sensi Lab & Exertion Games Lab & Embodied Visualisation Group, Monash Univ. [Link] Aug. 2024, Australia
- Dept. of Computer Science, Monash Univ. May. 2023, Shantou, China

GestOnHMD: Enabling Gesture-based Interaction on Low-cost VR Head-Mounted Display

- Graphics And Mixed Environment Symposium (GAMES) Sept. 2021, Online
- IEEE VR Conference Presentation Mar. 2021, Online

DupRobo: Interactive Robotic Autocompletion of Physical Block-based Repetitive Structure

- INTERACT 2019 Sept. 2019, Paphos, Cyprus

HapTwist: creating interactive haptic proxies in virtual reality using low-cost twistable artefacts

- CHI 2019 May. 2019, Glasgow, UK

Investigating different modalities of directional cues for multi-task visual-searching scenario in virtual reality

- VRST 2018 Dec. 2018, Tykkyo, Japan

DupRobo: an interactive robotic platform for physical block-based autocompletion

- SIGGRAPH Asia 2017 Dec. 2017, Bangkok, Thailand

TEACHING

[STU] ISI3004A Agentic LLM: Theory and Practice

[STU] ADE1024A Creative Coding

[STU] ISI3003A Practice in Python Programming

[STU] CST3402A Computer Networks

[STU] CST1701A The C Programming Language

[CityU] SM1103A Introduction to Media Computing

[CityU] CS4187 Computer Vision for Interactivity