

# Taizhou Chen (陈泰舟)

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## RESEARCH INTERESTS

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

## EMPLOYMENT

<b>Shantou University</b> <i>Cheng Kong School of Art and Design, Master Advisor</i>	Shantou, China Sept. 2024 – Now
<b>Shantou University</b> <i>Department of Computer Science, Assistant Professor</i>	Shantou, China Dec. 2022 – Now

## EDUCATION AND RESEARCH EXPERIENCES

<b>Monash University</b> <i>Dept. of Human-Centered Computing, Visiting Scholar</i>	Melbourne, Australia Aug. 2024
<b>Huawei Technologies Co., Ltd.</b> <i>HMI Lab, Research Engineer Intern</i>	Shenzhen, China Oct. 2020 – Apr. 2021
<b>Tsinghua University</b> <i>Visiting Student, Supervisor: Dr. Chun Yu</i>	Beijing, China Dec. 2019 – Apr. 2020
<b>City University of Hong Kong</b> <i>PhD in Creative Media, Supervisor: Dr. Kening Zhu, Co-supervisor: Prof. Hongbo Fu</i>	HongKong, China Sept. 2018 – Oct. 2022
<b>City University of Hong Kong</b> <i>MA in Creative Media, GPA: 3.81/4.0, with Distinction</i>	HongKong, China Sept. 2016 – Oct. 2017

## FUNDED PROJECTS

<b>Natural Science Foundation of China - Young Scientists Fund</b> 国家自然科学基金项目-青年科学基金项目 PI, No. 62402301, CNY 300,000 <i>Ring-Based Interaction Techniques Through Electric-Field Sensing</i>	2025.01 - 2027.12
<b>Natural Science Foundation of Guangdong Province - General Research Fund</b> 广东省自然科学基金项目-面上项目 PI, CNY 100,000 <i>Low-Tethered Gesture-Based Interaction Techniques for Mobile VR Device</i>	2025.01 - 2027.12
<b>Teaching Research and Reform Foundation of Guangdong Province</b> 广东省高等教育教学研究和改革项目 PI, CNY 30,000 <i>Research on the "Teacher-Student-Computer" Ternary Teaching Mode</i>	2024.10 - 2027.06
<b>STU Scientific Research Initiation Grant (SRIG)</b> PI, CNY 250,000 <i>Research on Smart Ring Interaction Techniques</i>	2023.01 - 2026.12
<b>Natural Science Foundation of China - General Research Fund</b> 国家自然科学基金项目-面上项目 CI, No. 62172346, CNY 640,000 <i>Data-Driven Rendering of Temperature Tactile Signals for Virtual Material Simulation</i>	2022.01 - 2025.12

- 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 Lalintha 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

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- 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 Physiscal 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

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

## AWARD

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

## PROFESSIONAL SERVICE

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**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

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### ***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, Tokyo, Japan

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

- SIGGRAPH Asia 2017 Dec. 2017, Bangkok, Thailand

## TEACHING

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[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