

# Taizhou Chen (陳泰舟)

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## RESEARCH INTERESTS

Human-Computer Interaction, Sensing Technology, Applied Machine Learning

## EDUCATION

### City University of Hong Kong

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

HongKong, China

*Sept. 2018 – Oct. 2022*

### City University of Hong Kong

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

HongKong, China

*Sept. 2016 – Oct. 2017*

## EXPERIENCE

### 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*

### City University of Hong Kong

*School of Creative Media, Research Assistant*

HongKong, China

*Aug. 2021 – Aug. 2022*

### 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 University of Hong Kong

*School of Creative Media, Research Assistant*

HongKong, China

*Jan. 2017 – Aug. 2018*

## PUBLICATIONS

### 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 Physcal 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>2021</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>2021</b> | Kening Zhu, <b>Taizhou chen</b> , Xu Lantian, Xu Xianshan, A Human-Interface-Device (HID) And A Method for Controlling An Electronic Device Based on Gestures, And A Virtual-reality (VR) Head-mounted Display Apparatus. (Accepted/In press/Filed) Priority No. 17/369,020 |
| <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><br><i>Bronze medal</i>  | 2022 |
| <b>The Outstanding Academic Performance Award for Research Degree Students</b><br><i>Academic year 2020 - 21, City University of Hong Kong</i> | 2021 |
| <b>Best Paper Award</b><br><i>Asian CHI Symposium 2020, ACM</i>  | 2020 |
| <b>Research Tuition Scholarship</b><br><i>Academic year 2020 - 21, City University of Hong Kong</i>  | 2020 |
| <b>The Outstanding Academic Performance Award for Research Degree Students</b><br><i>Academic year 2018 - 19, City University of Hong Kong</i> | 2019 |

### 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*

*ACM UbiComp/ISWC 2023*

*ACM SIGGRAPH Asia Emerging Technologies 2023/2024*

### Reviewer

*ACM CHI Conference on Human Factors in Computing Systems 2019/2020/2021/2022/2023*

*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***

- Invited Speaker, Department of Computer Science, Shantou 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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[CityU] SM1103A Introduction to Media Computing	2018/19 Semester A
	2019/20 Semester A
[CityU] CS4187 Computer Vision for Interactivity	2018/19 Semester A
	2019/20 Semester A
	2020/21 Semester A
[STU] CST1701A The C Programming Language	2023/24 Semester A
	2023/24 Semester B
[STU] ISI3003A Practice in Python Programming	2023/24 Semester A
[STU] CST3402A Computer Networks	2023/24 Semester B

2024/06/25 updated