

# Ho Yin (Sam) Ng 吳浩賢

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## EDUCATION

### Pennsylvania State University

M.S. in *Informatics*

Advisor: [Prof. Ting-Hao 'Kenneth' Huang](#)

University Park, PA

2023 – 2024

### National Taipei University of Technology (Taipei Tech)

M.Des. in *Interaction Design*

Advisor: [Prof. Ping-Hsuan Han](#)

Taipei, Taiwan

2021 – 2023

### Hong Kong University of Science and Technology (HKUST)

B.B.A. in *Information Systems & Professional Accounting* (Double Major)

Minor: *Design & Social Science* (Double Minor)

Outbound Exchange: Tsinghua University, Beijing, China (Fall 2014)

Hong Kong

2011 – 2016

## AWARDS AND HONORS

<b>Best Paper Award</b> , <i>UbiComp/ISWC'22 Adjunct: MIMSAI '22</i>	2022
<b>People's Choice Award</b> , <i>TAICHI '22</i>	2022
<b>Bronze Prize</b> , <i>The 31st Time Young Creative Award</i>	2022
<b>National Cultural Memory Bank Special Award</b> , <i>XR Edu Reality Creativity Competition</i>	2022
<b>Outstanding Overseas Chinese Graduate Student Scholarship</b> , <i>Ministry of Education, Taiwan</i>	2022 – 2023
<b>Winning Prize</b> , <i>World Hackathon 2014 (Beijing Division), Tsinghua University Makers' Space</i>	2014
<b>HKUST ELITE International Leadership Scholarship</b> , <i>HKUST</i>	2013

## PUBLICATIONS

- [P.9] **Ho Yin (Sam) Ng**, Ting-Yao Hsu, Ting-Yao Hsu, Jiyou Min, Sungchul Kim, Ryan A. Rossi, Tong Yu, Hyunggu Jung, Ting-Hao 'Kenneth' Huang. (in press). *Understanding How Paper Writers Use AI-Generated Captions in Figure Caption Writing*. In 2nd AI4Research Workshop: Towards a Knowledge-grounded Scientific Research Lifecycle (**AI4Research @ AAAI 2025**).
- [P.8] Yu-Hsiang Weng, Ping-Hsuan Han, Kuan Ning Chang, Chi-Yu Lin, Chia-Hui Lin, **Ho Yin Ng**, Chien-Hsing Chou, Wen-Hsin Chiu. (in press). *Hit Around: Substitutional Moving Robot for Immersive and Exertion Interaction with Encountered-Type Haptic*. In the 32nd IEEE Conference on Virtual Reality and 3D User Interfaces (**IEEE VR 2025**).
- [P.7] **Ho Yin Ng**, Zeyu He, Ting-Hao 'Kenneth' Huang. *What Color Scheme is More Effective in Assisting Readers to Locate Information in a Color-Coded Article?* 2024 IEEE Visualization and Visual Analytics (**VIS '24**) (pp. 291-295).
- [P.6] Luis Andres Mendez S., **Ho Yin Ng**, Zin Yin Lim, Yi-Jie Lu, Ping-Hsuan Han. *MovableBag: Substitutional Robot for Enhancing Immersive Boxing Training with Encountered-Type Haptic*. SIGGRAPH Asia 2022 XR (**SA '22 XR**). Association for Computing Machinery, New York, NY, USA, Article 10, 1–2.
- [P.5] **Ho Yin Ng**, Chia-Hui Lin, Zin Yin Lim, Yi-Jie Lu., Chu-Yu Lin, Ping-Hsuan Han. *PressySofties: Explore Multi-player Squeeze Interaction with Conductive Fabric Cubes*. ACM Conference On Computer-Supported Cooperative Work And Social Computing 2022 (**CSCW '22**), Invited Demos.
-  [P.4] Luis Andres Mendez S., **Ho Yin Ng**, Zin Yin Lim, Yi-Jie Lu, Ping-Hsuan Han. *MovableBag: Integrating Haptics and Visual Feedback on Mobile Devices to Enhance the Virtual Reality Experience of Sport Training*. The 8<sup>th</sup> Annual Conference of Taiwanese Association of Computer-Human Interaction (**TAICHI '22**), Demos.  
**\*People's Choice Award, 1st Place (among 20 accepted demo papers)**
-  [P.3] **Ho Yin Ng**, Chia-Hui Lin, Zin Yin Lim, Yi-Jie Lu, Chi-Yu Lin, Ping-Hsuan Han. *PressySofties: Utilize Conductive-Cloth Cube to Explore Squeeze Interaction Among Multi-Users*. The 8<sup>th</sup> Annual Conference of Taiwanese Association of Computer-Human Interaction (**TAICHI '22**), Demos.  
**\*People's Choice Award, 3rd Place (among 20 accepted demo papers)**
-  [P.2] Luis Andres Mendez S., **Ho Yin Ng**, Ping-Hsuan Han. *Movablebag: Exploring Asymmetric Interaction for Multi-user Exergame in Extended Reality*. Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and the 2022 ACM International Symposium on Wearable Computers (**UbiComp/ISWC 2022 Adjunct: MIMSAI '22**) (pp. 515-519).  
**\*Best Paper Award (1 out of 8 accepted papers)**
- [P.1] Chain Yi Chu, **Ho Yin Ng**, Chia Hui Lin, Ping-Hsuan Han. *PressyCube: An Embeddable Pressure Sensor with Softy Prop for Limb Rehabilitation in Immersive Virtual Reality*. 2022 IEEE International Conference on Multimedia and Expo Workshops (**ICMEW '22**) (pp. 1-1).

## THESIS

- [T.2] **Ho Yin Ng**. *Understanding Researchers' Behaviors and Design Considerations for AI-Assisted Scientific Caption Writing*. Master's Thesis for Pennsylvania State University, 2024.
- [T.1] **Ho Yin Ng**. *MovableBlocks: Exploring Dynamic Furniture for Whole-body Interaction in Room-scale Substitutional Reality*. Master's Thesis for National Taipei University of Technology, 2023.

## WORK UNDER REVIEW

- [R.1] Anonymous Submission (**Ho Yin Ng** as 4<sup>th</sup> author). *Using Contextually Aligned Online Reviews to Measure LLMs' Performance Disparities Across Language Varieties*. Short paper under review, submitted in November 2024.

## RESEARCH EXPERIENCE

### Pennsylvania State University

Research Assistant, *Crowd-AI Lab*

University Park, PA  
Nov. 2023 – Present

Advisor: [Prof. Ting-Hao 'Kenneth' Huang](#)

- Conducted a user study with 18 interdisciplinary researchers to examine their interactions with AI-generated suggestions during the caption writing process. Identified opportunities to enhance AI configuration, improving suggestion quality and writing efficiency. [P.9, T.2]
- Led controlled experiments (n=32) to assess the impact of various annotation schemes on text-based information seeking, identifying optimal color-coding strategies for enhanced text annotation. [P.7]
- Coordinated user studies, managing data collection and performing statistical analyses to validate research hypotheses effectively. [R.1]

### National Taipei University of Technology

Research Assistant, *XR Lab*

Taipei, Taiwan  
Dec. 2021 – Jul. 2023

Advisor: [Prof. Ping-Hsuan Han](#)

- Utilized Unity for prototyping innovative interaction techniques, haptic feedback systems, and integrated Arduino capacitive sensing sensors for custom interaction design. Investigated multi-body interactions, involving hands and limbs, for applications in exergames and rehabilitation within VR environments. [P.1-6]
- Engineered real-time motor control system integrating Unity3D with Raspberry Pi through socket-based communication for interactive prototype development. Designed and conducted controlled user studies (n=24), analysing interaction models through statistical methods (ANOVA, t-tests) [T.1, P.8]

## TEACHING EXPERIENCE

(<sup>†</sup> denotes leading programming/technical lab sessions)

### Penn State, Teaching Assistant

- IST 504: Foundations of Theories and Methods of Info. Sciences and Tech. (*Graduate*) Fall 2024
- HCDD 440: Human-Centered Design and Development Capstone (*Undergraduate*) Spring 2024

### Taipei Tech, Graduate Instructional Assistant

- Virtual Reality Application<sup>†</sup> (*Graduate*) Spring 2023
- Game Media Design<sup>†</sup> (*Graduate*) Fall 2022
- Creating 360 Panoramic Virtual Reality Video (*Undergraduate & High School*) Spring 2022

### HKUST, Full-time Instructional Assistant

- Information System Development Methodologies<sup>†</sup> (*Graduate*) Spring 2017
- Information System Analysis and Design<sup>†</sup> (*Undergraduate*) Spring 2017
- Information Systems Project Management<sup>†</sup> (*Undergraduate*) Spring 2017
- Information Systems Auditing (*Undergraduate*) Fall 2016, Winter 2017
- Business Applications Programming<sup>†</sup> (*Undergraduate*) Fall 2016

## PROFESSIONAL EXPERIENCE

### HKUST

Education Development Officer (Graphic Design), *Dept. Computer Science & Engineering*

Hong Kong  
Jun. 2017 – May 2021

- Developed the department's first design guidelines through independent research on design standards, fostering consistency in UI development.
- Coordinated with developer to create user interfaces and graphical assets for Android/iOS applications, emphasizing usability and seamless integration.

### **Baidu Inc.**

UX Design Intern, *Dept. of Operations*

- Designed website and interface layouts for 'Baidu Gaojing' using Sketch, focusing on usability and visual clarity, accompany with HTML/CSS for membership page and logo animation.
- Developed front-end components with HTML/CSS, including a membership page and logo animation

Shenzhen

Sep. 2015 – Jan. 2016

### **IBM**

Analyst Programmer (Placement Student), *Global Business Services*

- Facilitated System Integration Testing by engaging directly with users to understand their needs and requirements, ensuring the financial systems met user expectations.
- Collaborated with a cross-border team of 20 to successfully migrate systems from VB6 to VB.NET, enhancing system performance and maintainability.

Hong Kong

Aug. 2013 – Jun. 2014

## **SERVICE AND OUTREACH**

### **ACM CHI 2024 (CHI'24)**

Student Volunteer

- Supported the conference and workshop sessions, ensuring smooth operations and a productive environment for knowledge exchange in the HCI research community.
- Collaborated with international volunteers to facilitate cross-cultural teamwork, contributing to the success of academic event.

Honolulu, Hawaii

May 2024

### **Taipei Tech**

Student Helper, *Office of International Affairs*

- Coordinated seminar logistics and designed promotional materials to increase engagement among international students.
- Facilitated communication between students and staff, addressing concerns and fostering a supportive campus environment.

Taipei, Taiwan

Feb. 2022 – May. 2023

### **Hong Kong Art Centre**

Docent (Educational & Curational Stream)

- Designed interactive educational games to enhance public engagement with art exhibits, incorporating user feedback and iterative design.
- Led interactive cultural education sessions, developing effective communication strategies for diverse audiences.

Hong Kong

Jul. 2019 – Jun. 2021

### **Tsinghua University Maker Space**

Student Coordinator

- Facilitated brainstorming sessions and organized activities to foster innovation among members, while managing duty roster and providing technical assistance for equipment rentals.

Beijing, China

Sep. 2014 – Jan. 2015

### **HKUST Business Cohort Community**

Cohort Chief

- Co-led a team of 15 student leaders to organize and execute diverse activities for 150+ freshmen, including orientation day, community service, intra-cohort sports competitions, promoting teamwork, inclusivity and student engagement.
- Mentored peers and collaborated with Business School staff to interview and select the next cohort of leaders, ensuring continuity in leadership and community-building efforts.

Hong Kong

Apr. 2012 – Jun. 2013