

Education

2017- PhD student, Information Science

Cornell University, Ithaca, NY, USA

- Advisor: Professor Malte Jung
Committee Members: Professor Sue Fussell, Professor Poppy Mcleod
- Main research interest: Human-Robot Interaction (HRI), Human-AI Interaction (HAI), Social Power and Influence of Intelligent Agents, and UX Design.
- In my paper at CHI 2023, “*Should I Follow the Human, or Follow the Robot?*” — *Robots in Power Can Have More Influence Than Humans on Decision-Making*, I found out that the organizational factors also affect the collaboration between humans and AI-powered agents. Specifically, people in a mixed team will be influenced by the leader more than the peers, even when the leader was a robot, and the peer was a human.
- In my recent paper at CSCW 2021, “*Who is the expert? Reconciling algorithm aversion and algorithm appreciation in AI-supported decision making*”, I investigated the pressing question of whether people prefer suggestions from humans or AI systems when making decisions, which has yields many but conflicting results in previous literature. I illustrated through three empirical studies that the framing, i.e., how these humans and AI systems were introduced, was a key factor behind these contradictions. I also suggest that, when designing for AI systems, it is important to also design the framing so that these systems can achieve an adequate level of influence and trust from the users.

2013-2014 Master of Science, Human-Computer Interaction with Ergonomics

University College London (UCL), London, UK

- Advisor: Professor Yvonne Rogers.
- Dissertation: *Seeing More or Less? An In-the-Wild Study Comparing How Pedestrians Use Smartphone Maps (Google map) Versus Paper Maps*. I found people remembered more road names while using paper maps, but more street scenes when using google map app. Google map users also checked map more *after* they made turns, not before.
- Solid training in human-centered design practice, usability testing, interface design, and ergonomic methodologies.

2008-2011 Bachelor of Science, Psychology, National Taiwan University (NTU), Taipei, Taiwan

- Solid training in Cognitive psychology, experimental design, and statistics.

2007-2011 Bachelor of Art, Industrial Design, Shih-Chien University, Taipei, Taiwan

- Strong skills for the whole design process: ideation, sketching, and low- and high-fidelity prototyping.

2003-2007 Medicine, NTU, Taipei, Taiwan

- Received traditional medical school training before transferring to design school.

Professional Experience

2019 UX Research Intern, Facebook, Menlo Park, CA, USA

- Helped establishing a system to monitor civic harm on Facebook and Instagram, tracking signals such as fake news, election intervention, and voter suppression across the world. My research directly led to fundamental change in the design of the system.
- The feedback for my work was very positive and I was given a return offer as a result.

2015-2016 UX Designer/Researcher, ASUS Design Center, ASUS Computer Inc., Taipei, Taiwan

- Chief UX designer for Zenbo (Asus home robot): led design process including user study, ideation, system architecture, interaction guideline, voice interface, emotion expression, posture and movement design, resulting in the creation of 11 native apps.
- Zenbo: Wrote *Design Guideline for Zenbo*, the official document for developers.

Apps including Phone, Message, Contact, Music, Calendar, and To-Do List: Developed the information architecture, interaction flow, and wireframes.

2013, 2014 Interaction Designer, Kuchi Co. Ltd., Taipei, Taiwan

2009-2010 Special Contract Designer, Yonder Film Co. Ltd., Taipei, Taiwan

2008-2013 Special Contract Designer, KangSi Cultural Co. Ltd., Taipei, Taiwan

2009-2013 Design Director, Vox Nativa Music Association, Nantou, Taiwan

2008 Summer intern, Process Design (Switzerland)

2007-2009 Contract Designer, Vox Nativa Music Association, Nantou, Taiwan

Publications

1. **Hou, Y. T. Y.**, Lee, W. Y., and Jung, M. F. (2023). "Should I Follow the Human, or Follow the Robot?" — Robots in Power Can Have More Influence Than Humans on Decision-Making. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23)*, April 23–28, 2023, Hamburg, Germany. ACM, New York, NY, USA, 13 pages.
2. Pelikan, H. R., **Hou, Y. T. Y.**, Fu, X. J., Keevallik, L., Broth, M., & Jung, M. F. (2022, April). Interaction Prototyping With Video: Bridging Video Interaction Analysis & Design. In *CHI Conference on Human Factors in Computing Systems Extended Abstracts* (pp. 1-4).
3. Tsai, C. Y., Marshall, J. D., Choudhury, A., Serban, A., **Hou, Y. T. Y.**, Jung, M. F., Dionne, S. D. & Yammarino, F. J. (2022). Human-robot collaboration: A multilevel and integrated leadership framework. *The Leadership Quarterly*, 33(1), 101594.
4. Hohenstein, J., Larson, L. E., **Hou, Y. T. Y.**, Harris, A. M., Schechter, A., Dechurch, L., Contractor, N. & Jung, M. F. (2022). Vero: A Method for Remotely Studying Human-AI Collaboration. In *Proceedings of the 55th Annual Hawaii International Conference on System Sciences*, 2022. pp. 9. IEEE.
5. **Hou, Y. T. Y.**, & Jung, M. F. (2021). Who is the expert? Reconciling algorithm aversion and algorithm appreciation in AI-supported decision making. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2), 1-25.
6. Guo, J., **Hou, Y. T. Y.**, Muller, H., Tang, K., & Fussell, S. R. (2019, May). As If I Am There: A New Video Chat Interface Design for Richer Contextual Awareness. In *CHI'19 extended*

- abstracts on Human factors in computing systems. ACM. Glasgow.
7. Lee, W. Y., **Hou, Y. T. Y.**, Zaga, C., & Jung, M. (2019, March). Design for Serendipitous Interaction: BubbleBot-Bringing People Together with Bubbles. In *2019 14th ACM/IEEE International Conference on Human-Robot Interaction (HRI)* (pp. 759-760). IEEE.
 8. Tennent, H., Lee, W. Y., **Hou, Y. T. Y.**, Mandel, I., & Jung, M. 2018, October. "PAPERINO: Remote Wizard-Of-Oz Puppeteering For Social Robot Behaviour Design," In *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing* (pp. 29-32). ACM.
 9. **Hou, Y. T. Y.**, Jung, M. 2018, "Robots in Power," In *Proceedings of Longitudinal Human-Robot Teaming Workshop at HRI '18*. ACM, Chicago, USA.
 10. **Hou, T.Y.**, Rogers, Y. 2016, "Seeing More or Less? An In-the-Wild Study Comparing How Pedestrians Use Smartphone Versus Paper Maps," Master Dissertation. UCL, London.
 11. Chang, Y.C., **Hou, T.Y.**, Lu, C.H. 2012, "Investigating human performance on large touchscreen: the effect of angle, location and icon size," Paper presented at *Order in Disorder: USC International Design Theory and Practice Conference*, Taipei, Taiwan.

Research Experience

- 2021- Research Assistant**, Professor Malte Jung @ Cornell University and Professor Hirokazu Shirado @ Carnegie Mellon University
- Analyzed human's behavior in networks of different human-robot mixed configurations and different bot strategies.
- 2020- Research Assistant**, Professor Malte Jung, Information Science, Cornell University
- Participated in a collaborative research project with Northwestern University
 - Designed the robot agent Vero (in both physical and virtual forms) and its interaction
 - Investigated whether robot and AI agent can act as a teammate in a human-agent mixed team, how the expectation will be different from a human-only team, and how we should design the behavior of the agents in such mixed teams.
- 2018-2019 Research Assistant**, Professor Arpita Ghosh, Information Science, Cornell University
- Mathematical modeling of emotion communication in human-human and human-robot interactions with Professor Arpita Ghosh and Professor Robert Kleinberg.
- 2018 Research Assistant**, Professor Poppy McLeod, Communication, Cornell University
- Investigated the effect of different negative emotions (hostile/non-hostile) in a work scenario, specifically on people's self-esteem and perceived existential threat.
- 2012-2013 Research Assistant**, Design Psychology Lab, Shih-Chien University
- Investigated user behavior with new-generation large touchscreen device with ASUS design research team.
 - Prepared design thinking lessons suitable for design school students.

Teaching Experience

- 2019-2022 Teaching Assistant**, Teams and Technology, Professor Malte Jung, Cornell University

- 2018, 2019 **Lecturer**, Networks II, With guidance from Professor Arpita Ghosh, Cornell University
- Gave 12 lectures on mathematical modeling of market matching
- 2017 **Teaching Assistant**, Web Programming and Design, Lecturer Kyle Harms, Cornell University
- 2011-2013 **Co-instructor**, *Psychology in Human Factors and Design*, with Prof. Yeh, Yei-Yu, NTU

Academia Service

- Reviewers* HRI 2019, CHI 2020, CSCW 2020, CSCW 2021, CHI 2022, MobileHCI 2022, HRI 2023, IMWUT 2022, CHI 2023, ECIS 2023, Computer Supported Cooperative Work (CSCW): The Journal of Collaborative Computing and Work Practices (2023)
- SV Co-chair* CSCW 2022
- SV* CSCW 2018, CSCW 2019

Talks and Workshops

- 2022 **Workshop Organizer and Speaker**, *Interaction Prototyping With Video: Bridging Video Interaction Analysis & Design*, CHI 2022, New Orleans, USA
- 2016-2018 **Workshop speaker**, *Workshop: The look of behavior design*, Soochow University
- 2016-2017 **Workshop speaker**, *Workshop: The look of behavior design*, NTU
- 2012 **Invited speaker**, E-commerce Conference on User Experience Research and Design, Taipei, Taiwan

Selected Design Works

- 2017 Logo design, Environmental Protection, Executive Yuan, Government of Taiwan
- 2016-2017 System architecture, voice interface, interaction design for *Zenbo* (Home robot), ASUS
- 2015-2016 User interface and interaction design for apps on *Zenfone 2* and *Zenwatch 2*, ASUS
- 2015 Album Art for “*My favorite*”, Taiwan Vox Nativa Music School
- 2010-2013 *Biology (official high school textbook)*, Ministry of Education, Government of Taiwan
- 2012 Movie poster for documentary film “*Sing it+*”, Key Point Production
- 2011 *National Day Brochure*, Office of the President, Government of Taiwan
- 2010 Movie poster for Golden Horse Award winning “*Let the wind carry me*”, Yonder Film
- 2007 *The Guide for Freshmen*, National Taiwan University
- 2006 *Official Campus Map*, National Taiwan University

Technical Skills

Design: Adobe Suite (professional level in Photoshop, Illustrator, Premiere), AutoCAD, Microsoft Visio, ProE, Blender.

Statistics: SAS, R

Programming: Python, Java, Html/CSS

Language (Native): Chinese Mandarin, Taiwanese

Language (Fluent): English

Language (Intermediate): Japanese (3years), Deutsch (2 years)

Test Scores

GRE: Verbal: 166/170 (96%), Quantitative: 170/170 (99%)

TOEFL: 114/120 (READING: 30, LISTENING: 30, SPEAKING: 26, WRITING: 28)

IELTS: 8.0/9.0 (READING: 9.0, LISTENING: 8.5, SPEAKING: 7.5 WRITING: 7.5)

Taiwan College Entrance Exam: 75/75 (2003), 74/75 (2007), 75/75 (2008)

Awards and Honors

2019 Outstanding Teaching Assistant Award 2019, Information Science, Cornell University

2018 Government Scholarship for Studying Abroad, Ministry of Education, Taiwan

- Nineteen admission each year for all Taiwanese students abroad in design & architecture

2018 Outstanding Teaching Assistant Award 2018, Information Science, Cornell University

2017 Government Fellowship for Studying Abroad, Ministry of Education, Taiwan

- One admission each year for all Taiwanese students abroad in design & architecture

2017 Red Dot Design Awards, Zenbo (Home Robot), Red Dot, Essen, Germany

- Awarded for Zenbo's product design and UX design to the Asus design team, where I was the chief UX designer.

2014 Distinction Master Dissertation, Interaction Centre, University College London

2011 Best 100 New Designers of the Year, Taiwan New Generation Design Exhibition

2002 Gold Medalist, International Biology Olympiad