Yoyo Tsung-Yu Hou

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Education

2017-   **PhD student, Information Science**

Cornell University, Ithaca, NY, USA

- Main research interest: Human-Robot Interaction (HRI) and UX Design

- Advisor: Professor Malte Jung

  Committee Members: Professor Sue Fussell, Professor Poppy Mcleod

- In my previous study, "My robot leader is better than any human: the Influence of Power in Human-Robot Mixed Teams", 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, regardless of the leader being an intelligent agent or 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.

- Lab experience in molecular biology, especially virology.

Professional Experience

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

- Helped establishing a long-term tracking system to survey civic harm on Facebook and Instagram, monitoring signals such as fake news, election intervention, and voter suppression across the world. I created and tested many question candidates, and my research result directly informs Facebook's final decision.
- 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

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

Publications

1. **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.

2. Tsai, C. Y. J., Marshall, J. D., Choudhury, A., Serban, A., **Hou, Y. T. Y.**, Jung, M. F., ... & Yammarino, F. J. (2021). Human-robot collaboration: a multilevel and integrated leadership framework.

3. 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.

4. 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.

5. 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.

6. **Hou, Y. T. Y.**, Jung, M. 2018, "Robots in Power," In Proceedings of Longitudinal Human-

Robot Teaming Workshop at HRI '18. ACM, Chicago, USA.

7. **Hou, T.Y.**, Rogers, Y. 2016, "Seeing More or Less? An In-the-Wild Study Comparing How Pedestrians Use Smartphone Versus Paper Maps," Degree Dissertation.

8. 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

2020-   **Research Assistant**, Professor Malte Jung, Information Science, Cornell University
- Participated in a collaborative research project with Northwestern University
- 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   **Teaching Assistant,** Networks II, 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

Talks and Workshops

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, Balsamiq.

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

- 19 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

- 1 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