Szu-Yu (Cyn) Liu, Ph.D.
UX Design Researcher

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PROFILE

I am a UX researcher and an award-winning product designer. I have 7 years of experience conducting all phases of user research—protocol design, participant recruitment, data analysis, prototyping, evaluation, and report/publication.

As a designer-turned-social scientist, I combine qualitative social science methods, design-based inquiries, and humanistic approaches to turn large-scale and ambiguous questions into design implications that drive change in products.

SKILLS

User Research
Ethnography, field studies, survey, interview, contextual inquiry, material probe, diary studies, cognitive mapping, co-design, usability, card sorting, cognitive walkthroughs, content analysis, grounded theory, literature review

Design Strategy
Competitive analysis, trend study, service blueprint, behavior persona, customer journey map

Product Design
Ideation, sketching, wireframing, prototyping, 2D/3D fabrication

Language
English, Mandarin

EXPERIENCE

University of California, Irvine, *Postdoctoral Researcher*
Jan '21 – Present | Irvine, CA | School of Information and Computer Sciences
- Increase civic engagement with environmental data and support public health initiatives by designing, deploying, and evaluating multi-sensory data representation models.
- Selected by the National Science Foundation as one of 59 Computing Innovation Fellows nationwide for a 2-year research award ($253,800) for high-achieving computing PhDs based on the track record of research accomplishment and impacts.

Indiana University, *PhD Researcher*
Aug '16 – Dec '20 | Bloomington, IN | School of Informatics, Computing, and Engineering
- Conducted ethnography, interviews, contextual inquiries, and what-if scenarios with rural farmers to uncover design opportunities for precision and eco-friendly farming.
- Collaborated with engineers and researchers to build Ode to Soil, a sensor that tracks soil conditions and displays data via music to encourage engagement with nature.
- Led a team of 5 to conduct research through design activities that support participation of nontraditional/nonhuman stakeholders (e.g., animals, plants) in creative practices.

Snap Inc., *Research Intern*
Jan '20 – May '20 | Seattle, WA | Human-Computer Interaction Research, Snap Research
- Led 27 remote interviews and 1000+ surveys to pioneer untouched product areas for co-located interactions using Snapchat app; presented findings to CTO and R&D leads.
- Translated user insights into design guidelines that lead to the development of "Project IRL," a suite of 7 in-app AR games and lenses deployed in Q4 2020 and Q1 2021 that leverages physicality make in-person interactions more fun and engaging.

Microsoft, *Research Intern*
May '19 – Aug '19 | Redmond, WA | Urban Innovation Initiative, Microsoft Research + AI
- Created a cognitive mapping toolkit that facilitated 12 in-depth interviews to understand how people experience air pollution and identify the limitation of subjective perception.
- Led co-design workshops with local residents and co-created a data sonification model called Project Eclipse to increases data legibility and promote community health.
- Collaborated closely with local governments, community members, and in-house R&D teams to deploy a low cost, low powered air pollution sensing platform that drastically increases the granularity of urban air quality sensing by 10-100 times.

ASUS, *User Experience Researcher*
Mar '15 – May '16 | Taipei, Taiwan | Asus Design Center
- Owned and executed 20+ strategic, tactical, and evaluative studies ranging from user studies, trend analysis, stakeholder co-design workshops, and usability testing.
- Laid out 10-year strategy roadmaps for mobile imaging and smart projection technologies that are currently being implemented in multiple product lines.
- Conducted user research that led to the launch of multiple hardware and software products, including ASUS 360° (panorama camera) and Zenbo (companion robot).
- Developed and embedded research templates in cross-functional teams to foster a collaborative research culture and advocate user-centered design thinking.

ASUS, *Product Designer*
Mar 2014 – Mar 2015 | Taipei, Taiwan | Asus Design Center
- Designed the award-winning Google On-Hub router and VivoMini PC; involved in the entire product development process from ideation and prototyping to mass production.
- Collaborated closely with project managers, researchers, designers, software/hardware engineers on 5 exploratory and tactical projects: ranging from PC and monitor to robot.

AWARDS

Research Grants
(as Principal Investigator)
- Computing Innovation Fellow - CIFellow, Computing Research Association, USA ($253,800)
- PhD Research Grant, Ministry of Education, Taiwan ($32,000)
- Government Fellowship for Overseas Study, Ministry of Education, Taiwan ($51,000)

Best Paper Honorable Mention
(top 5% of accepted papers)
- ACM CHI'19 (2 awards)
- ACM TEI'19

International Design Awards
- Good Design Award (2015)
- iF Concept Award (2012)
- Nagoya Design Do (2010)

Service Awards
- ACM CHI Special Recognition for Outstanding Reviews (6 awards)

LEADERSHIP & SERVICES

Conference Associate Chairs
- ACM DIS'21 - Papers & Pictorials
- ACM CHI'21 - Design
- ACM CHI'20 - Late-Breaking Work
- ACM DIS'19 - Pictorials

Conference Organizing Committee
- ACM DIS'19 - Student Volunteer Co-Chair
- ACM TEI'19 - Social Media Chair

TEACHING

Student Mentorship
- Cultural Research in Technology (CRIT) group; 2 PhD and 2 MS students (2017 - 2019)
- Undergraduate Research Opportunities in Computing; 3 undergrad students (2018 - 2019)

Associate Instructor
- Computer & Information Ethics (Fall, 2020)
- Capstone/Thesis in Human-Computer Interaction (Spring 2018 & 2019)
- Experience Design (Fall 2019)

EDUCATION

Ph.D., Human-Computer Interaction (Informatics)
Aug '16 – Dec '20 | Indiana University, Bloomington, IN | GPA: 4.0

M.S., Human-Computer Interaction (Informatics)
Aug '16 – May '18 | Indiana University, Bloomington, IN | GPA: 4.0

M.Des., Product Design
Sep '10 – Jun '13 | Taiwan Tech, Taipei, Taiwan

B.Des., Product Design
Sep '06 – Jun '10 | Taiwan Tech, Taipei, Taiwan | *summa cum laude*

SELECTED PUBLICATIONS

Szu-Yu (Cyn) Liu, Brian A. Smith, Rajan Vaish, Andrés Monroy-Hernández. 2021. Understanding the Role of Context in Making Co-Located Interactions Enjoyable. *Proceedings of the 2019 ACM Conference on Computer-Supported Cooperative Work and Social Computing* - ACM CSCW. (Under review).

Szu-Yu (Cyn) Liu, Justin Cranshaw, and Asta Roseway. 2020. Making Air Quality Data Meaningful: Coupling Objective Measurement with Subjective Experience through Narration. *Proceedings of the 2020 conference on Designing Interactive Systems* - ACM DIS. (Acceptance rate: 24.0%).

Szu-Yu (Cyn) Liu, Shaowen Bardzell, and Jeffrey Bardzell. 2019. Symbiotic Encounters: HCI and Sustainable Agriculture. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* – ACM CHI. (Acceptance rate: 23.8%; Best Paper Honorable Mention, top 5% of accepted papers.) ⚲

Guo Freeman, Jeffrey Bardzell, Shaowen Bardzell, **Szu-Yu (Cyn) Liu**, Xi Lu, and Diandian Cao. 2019. Smart and Fermented Cities: An Approach to Placemaking in Urban Informatics. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* – ACM CHI. (Acceptance rate: 23.8%; Honorable Mention, top 5% of accepted papers.) ⚲

Szu-Yu (Cyn) Liu, Jeffrey Bardzell, and Shaowen Bardzell. 2019. Decomposition as Design: Co-Creating (with) Natureculture. *Proceedings of the Thirteenth International Conference on Tangible, Embedded, and Embodied Interaction* – ACM TEI. (Acceptance rate: 33%; Best Paper Honorable Mention, top 5% of accepted papers.) ⚲

Szu-Yu (Cyn) Liu. 2019. Designing for Multispecies Collaboration and Cohabitation. *Proceedings of the 2019 ACM Conference on Computer-Supported Cooperative Work and Social Computing* - ACM CSCW (Doctoral Consortium).

Szu-Yu (Cyn) Liu, Jen Liu, Kristin Dew, Patrycja Zdziarska, Maya Livio, and Shaowen Bardzell. 2019. Exploring Noticing as Method in Design Research. *Proceedings of the 2019 Designing Interactive Systems Conference* - ACM DIS. (Workshop Proposal).

Jeffrey Bardzell, Shaowen Bardzell and **Szu-Yu (Cyn) Liu**. 2018. Beautifying IoT: The Internet of Things as a Cultural Agenda. *Social Internet of Things*. Alessandro Soro, Margot Brereton, and Paul Roe (ed.). Springer. (Book Chapter).

Szu-Yu (Cyn) Liu, Shaowen Bardzell, and Jeffrey Bardzell. 2018. Out of Control: Reframing Sustainable HCI Using Permaculture. *Proceedings of the 2018 Workshop on Computing within Limits* - ACM LIMITS.

Szu-Yu (Cyn) Liu, Jeffrey Bardzell, and Shaowen Bardzell. 2018. Photography as A Design Research Tool into Natureculture. *Proceedings of the 2018 Designing Interactive Systems Conference* - ACM DIS. (Acceptance rate: 25%).

Szu-Yu (Cyn) Liu, Tung-Jen Tsai, and Daniel Alenquer. 2016. Exploring Computational Composite: An Approach to Sensorial Interaction. *Proceedings of the 19th ACM Conference on Computer Supported Cooperative Work and Social Computing Companion* - ACM CSCW. (Extended Abstract and Poster).