Pei-Yao Hung

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Research Interest

Human-Computer Interaction, Computer-Supported Cooperative Work,

Ubiquitous Computing, Health Informatics

Education

09/2010 – anticipated *12/2020* *Ann Arbor, MI, USA*	**University of Michigan** PhD in Information Science MS in Human-Computer Interaction Advisor: Mark Ackerman Committee: Mark S. Newman, Atul Prakash, and Florian Schaub
09/2002 – 08/2008 *Taipei, Taiwan*	**National Taiwan University** MS in Computer Science and Information Engineering (T.01) BS in Computer Science and Information Engineering Advisor: Hao-Hua Chu Committee: Jane Yung-Jen Hsu, and Tei-Wei Kuo

Professional Experience

09/2012 – present *Ann Arbor, MI, USA*	**School of Information, University of Michigan, Research Assistant** Exploring the interaction between technology and social relationships and designing technological augmentation to support people to conduct their everyday lives in the cyber and physical world. (J.01, C.02, B.01, B.02, W.03, W.04, WIP.01, WIP.02)
09/2017 – present *Ann Arbor, MI, USA*	**Department of Epidemiology, School of Public Health, University of Michigan, Research Assistant and Developer** Exploring different design dimensions of lung cancer screening decision aid through participatory design with minority groups in Detroit and developing a multilingual decision aid, ShouldIScreen.com. (C.03)

09/2011 – 06/2012 *Ann Arbor, MI, USA*	**School of Information, University of Michigan, Research Assistant** Designed and implemented features of RePlay, a tool to playback sensor traces to support context-aware system design and development. (C.01, W.02)
02/2011 – 08/2011 *Ann Arbor, MI, USA*	**School of Information, University of Michigan, Developer** Revised and maintained an online test and questionnaire system to investigate students' awareness of security issues when using information technology.
09/2009 – 06/2010 *Taipei, Taiwan*	**Institute of Information Science, Academia Sinica, Research Assistant** Designed a storytelling platform for elderly to revitalize psychological functions through the process of recalling memory of the past and present.
09/2008 – 06/2009 *Hsinchu, Taiwan*	**Industrial Technology Research Institute of Taiwan, Research Intern** Investigated and utilized Wi-Fi signal pattern at crossroad to facilitate navigation system development.
07/2008 – 06/2012 *Taipei, Taiwan*	**Freelance, Web Developer** Designed and implemented features of an on-line chamber customization platform, HaisonTech.
07/2007 – 08/2007 *Taipei, Taiwan*	**Freelance, Game Programmer** Designed and programmed the game flow and interaction of two installation games to teach children about information technology and health issues in a science exhibition held by Taiwan's National Science Council.
09/2006 – 06/2008 *Taipei, Taiwan*	**National Taiwan University, Research Assistant** Designed and Developed Cutting game, a computer game that facilitates in training, recording, and evaluating the visual-motor abilities of autistic children. (W.01, T.01)

Publications

Refereed Conference

C.03 **Hung, Pei-Yao**, Yan Kwan Lau, Mark S. Ackerman, Rafael Meza (2019). Designing a Web-based Decision Aid for Individuals to Consider Lung Cancer Screening. *13th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth)*, Trento, Italy, May 20–23. pp 51–60

C.02 Büyüktür, Ayse G., Mark S. Ackerman, Mark W. Newman, **Pei-Yao Hung** (2017). Design Considerations for Semi-Automated Tracking: Self-Care Plans in Spinal Cord Injury. *11th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth)*, Barcelona, Spain, May 23–26. pp 183–192

C.01 Chang, Yung-Ju, **Pei-Yao Hung**, Mark W. Newman (2012). TraceViz: 'Brushing' for Location Based Services. *ACM International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI)*, San Francisco, CA, USA, September 21–24. pp 345–348

Journal Articles

J.01 Büyüktür, Ayse G., **Pei-Yao Hung**, Mark S. Ackerman, Mark W. Newman (2018). Supporting Collaboratively Constructed Independence: A Study of Spinal Cord Injury. *Journal Proceedings of the ACM on Human-Computer Interaction - CSCW*, Volume 2 Issue CSCW, November 2018, Article No. 26.

Book Chapter

B.02 Ackerman, Mark S., Ayse G. Büyüktür, **Pei-Yao Hung**, Michelle Meade, Mark W. Newman (2017). Sociotechnical Design for the Care of People with Spinal Cord Injuries, in *Designing Healthcare That Works: A Sociotechnical Approach*, Ackerman, Mark, A., Michael Prilla, Christian Stary, Thomas Herrmann, Sean Goggins (eds.), Academic Press, 2017.

B.01 Merrit, David, **Pei-Yao Hung**, Mark S. Ackerman (2016). Expertise Finding: A Socio-Technical Design Space Analysis, in *Expertise, Communication, and Organizing*, Treem, Jeffrey and Paul Leonardi (eds.), Oxford University Press, 2016.

Refereed Workshop & Doctoral Consortium

W.04 **Hung, Pei-Yao**, Mark S. Ackerman (2019). Supporting Care Teams with Participatory Governance over Data Sharing. Who Cares? Exploring the Concept of Care Networks for Designing Healthcare Technologies Workshop, *The 17th European Conference on Computer-Supported Cooperative Work (ECSCW)*, June 8, Salzburg, Austria.

W.03 Kaziunas, Elizabeth, **Pei-Yao Hung**, Mark S. Ackerman (2014). FIT2: Information Translations for Health Practices. International Workshop on Collaboration and Co-ordination in the Context of Informal Care (CCCiC), *ACM Conference on Supporting Groupwork (GROUP)*, November 9, Sanibel Island, FL, USA.

W.02 Chang, Yung-Ju, Mark W. Newman, **Pei-Yao Hung**, Manchul Han (2013). Integrating Capture & Playback into Context-Aware Systems Development. International Symposium of Chinese (ChineseCHI), *ACM Conference on Human Factors in Computing Systems (CHI)*, April 28, Paris, France.

W.01 **Hung, Pei-Yao**, Jin-Ling Lo, Hsin-Yen Wang, Hao-Hua Chu, Ya-Lin Hsieh (2009). CuttingGame: A Computer Game to Assess & Train the Visual-motor Integration Ability for Preschool Children with Autism. Interactive Creative Play with Disabled Children Workshop, *ACM SIGCHI Interaction Design and Children (IDC)*, June 3, Como, Italy.

Work In Progress

WIP.02 Merrit, David, Mark W. Newman, **Pei-Yao Hung**, Mark S. Ackerman, Erica Acker-man (2015) Using Expertise for Crowd-sourcing. *AAAI Conference on Human Compu-tation and Crowdsourcing (HCOMP)*, San Diego, USA, November 8–11.

WIP.01 **Hung, Pei-Yao**, Mark S. Ackerman (2015) Discount Expertise Metrics for Augmenting Community Interaction. *ACM International Conference on Communities and Technologies (C&T)*, Limerick, Ireland, June 27–30.

Thesis

T.01 **Hung, Pei-Yao** (2008). A Computer Cutting Game to Train Hand Function for Children. *NTU MS Thesis*, Taipei, Taiwan, August.

Awards

Fall 2010 **University of Michigan Mobile Apps Challenge Runner-Up**
Designed a mobile application that manages personal emotions, with the goal of helping users reflect on their emotions and be aware of others' emotions. In collaboration with Ying-Yu Chen.

Winter 2010 **University of Michigan iDesign Competition Second Place**
Designed visualizations to create a new browsing interface for University Library's music collection. In collaboration with Gin L Chieng, Pei-Chih (Bell) Shih, Sylvia Szu-Hsuan Lai, and Yi-Ying Lin.

Presentations

01/30/2019 **Privacy@Michigan - Celebrating International Data Privacy Day**
Ann Arbor, MI, USA [Poster] Empowering Patients to Share Patient-Generated Data through a Grid-Based User Interface

01/30/2018 **Privacy@Michigan - Celebrating International Data Privacy Day**
Ann Arbor, MI, USA [Poster] Enable Control and Monitoring of IoT Data Sharing to Support Chronic Care

10/19/2017 **State of Science conference - Facilitating Health Self-Management and Indepen-**
Arlington, VA, USA **dence among adolescents and Young Adults with Disabilities: The Development, Efficacy, Integration, & Sustainability of Mobile Technology to Support the Transition Process**
[Showcase] Sensible Care: using Internet of Things (IoT) data to support collaborative care with sensing and mobile technology

09/02/2017 **Michigan Taiwanese Student Association (MTSA) Orientation**
Ann Arbor, Michigan, English Learning Resources at the University of Michigan
USA

08/05/2017 **Sharing Salon at National Tsing Hua University**
Hsinchu, Taiwan Reflection on Multi-Disciplinary Research Experience

07/16/2016 **National Tsing Hua University Institute of Information Systems and Applica-**
Hsinchu, Taiwan **tions**
Discount Expertise Metrics for Augmenting Community Interaction

06/06/2012 **National Chengchi University Department of Computer Science**
Taipei, Taiwan HCI Program and Research at the University of Michigan School of Information

05/13/2011 *Taipei, Taiwan*	**National Taiwan University Department of Computer Science & Information Engineering, Intelligent Agents Lab** Contextual Design Process Experience Sharing

Training & Certification

06/01/2017 *University of Michigan*	**Certificate of Completion, Preparing Futuer Faculty Seminar**

Service

Program Committee

2017-2019	Poster Chair, Taiwan Computer-Human Interaction Conference (Tai-CHI)

Peer Reviewing

2017	ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)
2017	ACM SIGCHI Conference on Designing Interactive Systems (DIS)
2016 – 2017	ACM Conference on Human Factors in Computing Systems (CHI)
2016 – 2019	ACM International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI)
2016	Taiwan Computer-Human Interaction Conference (Tai-CHI)

Other

2019	ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) student volunteer
09/2014 – 06/2016	Michigan Interactive and Social Computing (MISC) student organizer
09/2013 – 06/2014	University of Michigan School of Information Doctoral Executive Committee (DEC) officer

Teaching

01/2020 – Present *University of Michigan*	**Graduate Student Instructor – Advanced User Research in the Field** Give a guest lecture to examine a case study applying participatory design, hold office hours weekly to provide need-based assistance, and provide feedback on students' UX research plans for applying different methods (e.g., interview, survey) to sharpen their research planning skills.

09/2019 – 12/2019 *University of Michigan*	**Graduate Student Instructor – Programming I (Python)** Lead 2 weekly lab sessions (20+ master students per session) to examine important programming concepts and provided one on one instructions, hold office hours weekly to provide need-based assistance, use online platform Piazza to facilitate continuous student engagement, construct a wiki to provide structural learning guidance, hold learning clinic to provide group-based discussion and feedback about learning strategies, and participate in a panel on problem-solving to share and discuss good programming practices.
01/2015 – 04/2015 *University of Michigan*	**Graduate Student Instructor – Introduction to Information Studies** Led 3 weekly discussion session (above 15 students per session) to examine course topics, taught a 1.5 hours lecture in Human-Computer Interaction with 240 undergraduate students, designed 2 weekly lesson plans as the guidance for other instructors, and graded response papers and visualization projects to improve students' writing and visual presentations.
09/2014 – 12/2014 *University of Michigan*	**Graduate Student Instructor – Networked computing: Storage, Communication and Processing** Developed and led 3 weekly lab sessions (above 15 master students per session) to examine important programming and computer concepts and provided one on one instructions, graded programming assignments to provide feedback about the design and implementation of homework solutions, and held office hours weekly to answer additional questions.
08/11/201 *National Taiwan University*	**Instructor – Workshop on How to Organize and Do a Presentation** Presented a lecture on organizing a presentation in a problem-solution format, and led a workshop to guide students to practice an impromptu presentation.
July 2009 *National Taiwan University*	**Instructor – Adobe Flex/Flash Prototyping Crash Course** Designed lecture, prepared sample code, deliver a 2 hours training course to introduce the fundamental concepts required for prototyping in Adobe Flex/Flash for the Intelligent Agent lab as part of its orientation.
January 2009 *National Taiwan University*	**Instructor – Object Oriented Programming using C#** Developed syllabus, wrote lectures, created projects, presented, and graded,successfully facilitated understanding of programming, resulting in 5 students with no technology background developing a simple calculator with graphic user interface in ten days.
Fall 2006 *National Taiwan University*	**Teaching Assistant – Database Systems** Graded assignments and held weekly office hours to answer students' questions.

Students Supervised and Mentored

Undergraduate and Master's

07/2017 – 08/2017	**An undergraduate student with disability who uses his experience to design mobile application to support self-care at home**
University of Michigan	Introduced the concept of user-centered design, designed readings and homework, provided feedback on deliverables, facilitated brainstorming
09/2015 – 05/2016	**A team with 5 master students who became CHI 2016 Student Design Competition Finalist**
University of Michigan	Guided analysis of interview data, provided critique of findings and design recommendations, suggested writing revisions and polished presentation flow.
	See "Dot-it: Managing Nausea and Vomiting for A Peaceful Pregnancy with Personal Pattern Exploration" in ACM Digital Library.
Summer 2009	**A team with 6 undergrad students who received the Best Experience Award at the 1st annual OpenHCI workshop**
National Taiwan University	Mentored the learning and practicing of design thinking methods to identify problems and brainstorm a solution to streamline the dining experience in a university cafeteria.

Academic and Professional Society

ACM Student, ACM SigCHI, SigCHI Taipei Chapter, Taiwan Medical Design Association