
Research Summary

Research Keywords: Human-Computer Interaction (HCI), Social Computing, Social Media, Personal Informatics

My research focuses on **supporting people to effectively use social media platforms to share activities and achieve the desired sharing outcome**, such as receiving social well-being or communication benefits.

In my doctoral work, I specifically focused on studying the sharing activities with personal tracking data on social media platforms. I argued that **when people are supported in aligning their sharing with the ideal practices or existing sharing norms of the platform, they will receive more desired sharing outcomes**.

I design, implement, and evaluate systems that support the communication process of activity sharing. My research applies a mixed-method approach to (1) **advance understanding** of people's practices and experience with the design of social media platform [C-6, C-5, C-2, C-1], (2) **design and build systems** based on the empirical evidence from these studies and theories [C-4, P-6, P-3, P-2, P-1], and (3) **conduct real-world field deployment studies** with the target communities to understand the impact of my design [C-4, P-3, P-2, P-1].

Education

2020 - 2025 **Ph.D. in Informatics**

(Expected)

University of California, Irvine, CA

Advisor: Daniel Epstein

2017 - 2020 **M.S. in Computer Science (specializing in HCI)**

University of Illinois at Urbana Champaign, Champaign, IL

Advisor: Yun Huang

2011 - 2017 **B.S. in Computer Science**

National Chengchi University, Taipei, Taiwan

Advisor: Jones (Neng-Hao) Yu

Publications

Conference Publications

- [C-6] **Dennis Wang**, Jun Zhu, Daniel A. Epstein. **Understanding How Personal Activities Are Shared In Short-form Videos**. (In Submission) CSCW 2025
- [C-5]. **Dennis Wang**, Jocelyn Eng, Mykyta Turpitka, Daniel A. Epstein. **Exploring Activity-Sharing Response Differences Between Broad-Purpose and Dedicated Online Social Platforms**. CSCW 2024
- [C-4]. **Dennis Wang**, Marawin Chheang, Siyun Ji, Ryan Mohta, Daniel A. Epstein. **SnapPI: Understanding Everyday Use of Personal Informatics Data Stickers on Ephemeral Social Media**. CSCW 2022
- [C-3]. Daniel A. Epstein, Fannie Liu, Andrés Monroy-Hernández, **Dennis Wang**. **Revisiting Piggyback Prototyping: Examining Benefits and Tradeoffs in Extending Existing Social Computing Systems**. CSCW 2022
- [C-2]. **Dennis Wang***, Yi-Chieh Lee*, & Wai-Tat Fu. **"I love the feeling of being on stage, but I become greedy": Exploring the impact of monetary incentives on live streamers' social interactions and streaming content**. CSCW 2019. (* indicates equal contribution)
- [C-1]. Yi-Chieh Lee, Chi-Hsien Yen, **Dennis Wang**, & Wai-Tat Fu. **Understanding how digital gifting influences social interaction on live streams**. MobileHCI 2019

Posters, Demos, & Workshop Publications

- [P-7]. **Dennis Wang**, Daniel A. Epstein. **Supporting Positive Sharing Experiences with Personal Activity-Tracking Data on Social Media Platforms**. CSCW 2024 Workshop - Positive Social Technologies
- [P-6]. Lika Haizhou Liu*, Xi Lu*, Richard Martinez*, **Dennis Wang***, Fannie Liu, Andrés Monroy-Hernández, Daniel A. Epstein. **Mindful Garden: Supporting Reflection on Biosignals in a Co-Located Augmented Reality Mindfulness Experience**. CSCW 2022 Extended Abstracts (Demo)
- [P-5]. **Dennis Wang**, Jocelyn Eng, Nick Turpitka, Daniel A. Epstein. **Comparing Social Support Differences in Activity Data Sharing on Dedicated and Broad Online Communities**. CSCW 2021 Workshop - The Future of Research on Online Health Communities
- [P-4]. **Dennis Wang**, Marawin Chheang, Siyun Ji, Ryan Mohta, Daniel A. Epstein. **Practical Challenges in Piggyback Prototyping Social Media Experiences**. CHI 2021 Workshop - Social Media as a Design and Research Site for HCI
- [P-3]. Si Chen, **Dennis Wang**, and Yun Huang. **Exploring the Complementary Features of Audio and Text Notes for Video-based Learning in Mobile Settings**. CHI 2021 Extended Abstracts (Late Breaking Work)
- [P-2]. Yingyu Chen, **Dennis Wang**, Chia-Yu Chen, Daniela Rosner, & Alexis Hiniker. **The stamp plate and the kicking chair: Data play for mealtime in preschools**. TAICHI 2018 (Annual Conference of Taiwan Association of Computer-Human Interaction)
- [P-1]. I-Fang Wang, **Dennis Wang**, Chia-Yu Chen, & Jyun-Fong Jheng. **PinchFun: A fine motor training game for preschool children with developmental delays**. CHI 2016 Extended Abstracts (Student Game Competition)

Research Experiences

PhD Student Researcher | University of California, Irvine | Sep 2020 - Current

- 2023 - Current **Understanding and Designing For Sharing Activity with Personal Informatics Data in Short-form Videos**
Faculty Supervisor: Prof. Daniel Epstein | Publication: [C-6]
- Studied how individuals who share activities (e.g., physical activity, studying, creative work) on TikTok incorporate personal activity tracking data in short-form videos.
 - Conducted video analysis study to identify characteristics of short-form videos to understand how activities are represented through data-incorporation in short-form videos.
 - Designing and implementing a tool that support video sharer to align with the platform norms when incorporating data in short-form videos.
- 2021 - 2023 **Understanding Differences Of Activity Data Sharing on Dedicated and Broad-purpose Social Platforms**
Faculty Supervisor: Prof. Daniel Epstein | Publication: [C-5] [P-5]
- Adopted mixed-methods approach to study how and why people use both dedicated and broad-purpose social platforms for sharing activity data and the differences in outcome between these platforms.
 - Lead the development of text analysis pipeline to examine response differences between platforms.
 - Designed interview study for understanding why and how people use both dedicated and broad-purpose social platforms to share activity data.
- 2020 - 2022 **Exploring Sticker Design for Sharing Personal Informatics Data on Ephemeral Social Media**
Faculty Supervisor: Prof. Daniel Epstein | Publication: [P-4], [C-4], [C-3]
- Studied how the design of a system could support users to better incorporate personal informatics data in sharing on ephemeral social media through the development and deployment of SnapPI, a mobile app supporting authoring shareable data representations on Snapchat.
 - Designed field study, interview protocol, and questionnaire for field deployment study.
 - Conducted field study for two weeks and interviewed 21 participants to understand how they perceive and share through using our system in everyday life.

2021 - 2022 **Building Shared Spaces for Mindfulness with Data**

Snap Creative Challenge Project, featured on [Snap Blog](#)

Faculty Supervisor: Profs. Daniel Epstein and Kurt Squire | Publication: [P-6]

- Designed and prototyped augmented reality experiences for collaborative meditation with feedback provided by sensed data in a co-located mindfulness meditation scenario.
- Developed a wearable augmented reality prototype with Snapchat Lens on Snap Spectacles, including a data sensing/streaming pipeline with Muse headset, for studying how people perceive the experience of incorporating sensed data in co-located meditation in AR.

Graduate Student Researcher | University of Illinois at Urbana Champaign | Jan 2018 - 2020

2018 - 2020 **Feasibility of Chatbots As Guides for Peer Evaluation**

Faculty Supervisor: Profs. Yun Huang and Wai-Tat Fu

- Conducted field deployment experimental study in a university UI design class to evaluate chatbot design in guiding students' peer grading and provide feedback on both peers' assignments and team performance.
- Conducted comparative quantitative analysis on grading and text feedback data collected through different guidance prompt of chatbot to identify trends and differences in grading quality.

Feb - May 2020 **Comparing Audio and Text Notes for Video-based Learning in Mobile Settings**

Faculty Supervisor: Prof. Yun Huang | Publication: [P-3]

- Studied the differences between taking audio / text notes in video-based learning on mobile devices.
- Designed and implemented an interactive time-anchored note-taking system for mobile video-based learning.
- Designed study tasks and interview protocol for task-based study.
- Conducted study with 16 participants to analyze differences of notes taken and understand experience and challenges of note-taking on mobile phone for video-based learning.

2018 - 2019 **The Impact Of Digital Gifting On Live Streaming**

Faculty Supervisor: Prof. Wai-Tat Fu | Publication: [C-2], [C-1]

- Conducted interview study with 13 active live streamers to understand their motivation, tension, and strategy to balance economic incentive with social interactions and content creation when leveraging digital gift-giving features on live streaming platform.
- Conducted qualitative data analysis using reflexive thematic analysis to process data and identify themes.

Research Assistant | University of Washington | May - Dec 2018

May - Dec 2018 **Mealtime Technology For Parent-Child Interaction**

Faculty Supervisor: Prof. Alexis Hiniker, University of Washington | Publication: [P-2]

- Created and tested family-mealtime technologies aimed at boosting three to preschool children's data literacy. Iteratively designed and implemented an Android-based technological probe using Processing and sensing techniques through Arduino, as well as a weight sensor to be used during mealtimes.
- Transcribed video recordings of the field studies, and conducted qualitative data analysis to surface themes of parent-child joint media engagement.

Undergraduate Research Assistant | National Chengchi University (NCCU) | 2015 - 2017

2015 - 2018 **Parent-Preschooler Cooperative Fine-motor Skills Training Game**

Faculty Supervisor: Prof. Jones Neng-Hao Yu, NTUST, Taipei, Taiwan | Publication: [P-1]

- Conducted exploratory interviews and field observations to uncover opportunities for technology design to support learning for preschool children in special-education institutions.
- Translated insights from collected data to iteratively designing and prototyping PinchFun, a cooperative game with asymmetrical mechanism design to engage parents and their preschoolers in fine motor skills training.

Sep - Dec 2016 **Vocabulary for Human-IoT Systems Communication**

Faculty Supervisor: Prof. Lin-lin Chen, Intel IoX Center, Taipei, Taiwan

- Designed sounds to express smart objects' statuses as part of the self-explanatory IoT systems vocabulary.
- Implemented an interactive prototype using Arduino and Processing for evaluation in lab study to understand user's interpretation of the audio and visual feedback design for IoT systems.

2015 - 2016 **A Sketch-based Prototyping Tool to Accelerate Mobile App Design Processes**

Faculty Supervisor: Prof. Jones Neng-Hao Yu, NTUST, Taipei, Taiwan

- Implemented prototype functions for sketching low-fidelity UI prototypes on iOS using Swift.
- Conducted observational studies and post-study interviews with both junior and professional designers to understand user behaviors related to sketching during mobile-app UI design.

Awards and Honors

2024-2025 **Dissertation Writing Fellowship**, UC Irvine Department of Informatics

2023-2025 **Achievement Rewards for College Scientists (ARCS) Scholar Award**, National ARCS Foundation

2022 **Finalists (Top 8)**, GLS Showcase Award, GLS (Games+Learning+Society) Conference,

2020 **Chair's Award (\$2500)**, UC Irvine Department of Informatics

2016 **Winner**, Games for a Purpose, CHI Student Game Competition, "PinchFun: A Fine Motor Training Game for Preschool Children with Developmental Delay"

Teaching Experiences

Teaching Assistant

Spring 2024 INF 153: Computer Supported Collaborative Work, UC Irvine

Spring 2023 INF 134: Project in User Interaction Software, UC Irvine

Winter 2023 INF 133: User Interaction Software, UC Irvine

Spring 2021 SWE 263P: User Experience (UX) and Interaction, UC Irvine

Fall 2020 - Win 2021 INF 131: Introduction to Human Computer Interaction, UC Irvine

Fall 2018 - Fall 2019 CS 105: Introduction to Programming (For Non-tech Majors), UIUC

Fall 2017 CS 465: User Interface Design, UIUC

Academic Mentorship

Summer 2023 - Now **Jun Zhu** (Master), University of California, Irvine

Summer 2021 - 2022 **Jocelyn Eng** (Undergraduate), University of California, Irvine

Summer 2021 - 2022 **Nick Turpitka** (Undergraduate), University of California, Irvine

Professional Services and Activities

Peer Review

2025 CHI

2024 CHI, CHI Late Breaking Work

2023 CHI, CHI Late Breaking Work, CSCW Posters, TAICHI

- 2022 CSCW, CHI Student Design Competition
- 2021 TEI, CHI Late Breaking Work, TAICHI Posters

Student Volunteer

- 2022 CHI 2022 (In-person)
- 2021 CHI 2021 (Virtual)
- 2020 CHI 2020 Program Committee Meeting

Organizing

- 2015-2017 **Organizer (2015), Steering Committee (2016-2017)**, OpenHCI workshop (Taiwan)
 - Organized OpenHCI 2015, the biggest student-initiated HCI workshops in Taiwan, in which more than 100 student participants learned about human-centered design and gained experience of cross-disciplinary collaboration. Served as a steering committee member for OpenHCI 2016 and 2017.

Invited Talks & Guest Lectures

- 2024 **Wellbeing Support**
University of California, Irvine. Irvine, CA. INF 153: Computer Supported Collaborative Work
- 2023 **Designing Online Social Experiences for Sharing Personal Informatics Data**
National Yang Ming Chiao Tung University, Hsinchu, Taiwan. Host: Yingyu Chen

Research Skills

- Research Methods** **Mixed-method research**
 - Qualitative research** (interview, field deployment & observation study) & **analysis** (grounded theory, reflexive thematic analysis, qualitative coding)
 - Quantitative research** (survey) & **analysis** (text / statistical analysis, social media analysis)
- UX Methods** **User research** (usability testing, contextual inquiry, shadowing, wizard of oz, journey map)
 - Design strategies** (design charrette, human-centered design, design thinking)
 - Low- to high-fidelity prototyping, Sketching**
- Technologies** **Software** (Python, Javascript, Java, HTML, CSS, Ionic Framework, Firebase, MySQL, Pandas)
 - Physical and hardware prototyping** (Arduino, Processing, Ableton Live, Unity, Leap Motion)

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