

TRICIA NGOON, PH.D

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PROFESSIONAL SUMMARY

Accomplished learning science and human-computer interaction researcher with 12 years of experience in spearheading and overseeing collaborative research efforts in creativity support and educational technology, aimed at creating more equitable learning environments. Proficient at both quantitative and qualitative methodologies with a demonstrated track record to distill actionable insights. Recognized through 15 invited talks and 8 publications, including 3 award-winning publications.

EXPERIENCE

Postdoctoral Research Scientist

Jun 2021 – Present

Carnegie Mellon University

Pittsburgh, PA

- Led design and research initiatives for 3 digital products for improving teaching in K-12 and undergraduate contexts, serving over over 50 educators.
- Conducted comprehensive research activities such as user interviews, co-design sessions, and surveys with teachers, college instructors and undergraduate students. These efforts resulted in 2 peer-reviewed publications and an Honorable Mention publication award.
- Successfully articulated research vision and strategy for data-driven teaching professional development, securing \$300,000 funding from the National Science Foundation.

Ph.D Researcher

Jun 2015 – Jun 2021

UC San Diego

La Jolla, CA

- Designed and deployed 4 interactive products to support novices in open-ended problem-solving, supporting over 300 users.
- Demonstrated expertise in evaluating the usability and effectiveness of learning technologies through A/B testing, user interviews, and surveys, contributing to 3 peer-reviewed publications and 2 Honorable Mention publication awards.
- Mentored and trained 6 research assistants in research design, data collection, and data analysis.

Teaching Associate & Training Facilitator

Dec 2016 – Dec 2021

UC San Diego Cognitive Science Department

La Jolla, CA

- Created instructional materials and led group discussions for 12 design and computer science courses, with 85% positive teaching evaluations.
- Trained more than 50 teaching assistants in the department in active learning practices and effective feedback.
- Designed a new web programming seminar class, with materials subsequently adapted for a 250-person engineering course.

Research Scientist

Jun 2019 – Sept 2019, Jun 2020 – Sept 2020

Internship, Adobe Research

San Francisco, CA

- Coordinated interviews, focus groups, think-aloud sessions, and A/B testing to develop 2 novel prototypes for improving collaboration and drawing with over 50 users.
- Efficiently created and executed a 5-week plan for prototype design, study design, and evaluation, resulting in a peer-reviewed publication.
- Communicated findings to broad audiences in 2 invited seminar talks.

UX Researcher

Jun 2016 – Sept 2016

Internship, NASA Jet Propulsion Laboratory

La Cañada Flintridge, CA

- Developed personas, storyboards, and prototypes to improve internal performance monitoring tools, resulting in a web prototype actively utilized by over 30 users.

- Streamlined findings and processes through detailed design documentation, leading to adoption of human-centered design processes in 3 engineering teams.
- Invited to deliver a talk about integrating human-centered design and systems engineering at a large systems engineering conference to emphasize the synergy between these approaches.

Clinical Research Assistant

Stanford University School of Medicine

Jun 2013 – Jun 2015

Palo Alto, CA

- Spearheaded recruiting, experimental design, and data collection of over 100 child participants to examine the impacts of math tutoring, resulting in 2 peer-reviewed journal publications.
- Demonstrated initiative by developing a custom Python script to improve efficiency of data quality control by 30%.
- Developed a web version of math games to assess math abilities, extending access to over 200 children without access to in-person psychological testing.

SELECTED PROJECTS

ClassInSight. Conducted co-design sessions and interviews with high school teachers to design a web application that visualizes teachers' classroom discussion for their reflection and professional development. 22 teachers have used ClassInSight over 3 academic years.

Smart Technologies in the Classroom and Workplace. Interviewed over 50 teachers, faculty, students, nurses, and therapists about their perceptions around technologies that collect data to provide feedback to professionals. Our work with students earned an Honorable Mention (top 5%) paper award.

CritiqueKit. Collaborated with Adobe Research to design a tool to help novices provide specific, actionable, and justified feedback, used by over 200 students and teaching assistants in undergraduate design courses. This work received an Honorable Mention (top 5%) paper award.

EDUCATION

Ph.D in Cognitive Science, University of California, San Diego

June 2021

B.A. in Psychology with Honors, University of California, Berkeley

May 2013

SKILLS

Research Skills	Data analysis, Experimental design, A/B testing, Usability testing, Interviews, Survey design
Tools	R, Python, HTML/CSS, JavaScript, Qualtrics, Dedoose, Figma, Microsoft Office, Miro
Other	Grant writing, Writing, Public speaking, Project management, Presentation design

AWARDS & EXTRA-CURRICULAR ACTIVITIES

- Awarded a National Science Foundation STEM Education Postdoctoral Research Fellowship in 2022.
- Selected as a Rising Star in Electrical Engineering and Computer Science in 2019.
- Awarded a University of California, San Diego Competitive Edge Graduate Fellowship in 2015.
- Volunteer with the Humane Animal Rescue of Pittsburgh and avid boxer.