# TRICIA J. NGOON CURRICULUM VITAE

Personal Information Tricia J. Ngoon TeachFX, Inc.

tricia.ngoon@gmail.com

tngoon.github.io

# EDUCATION

# Ph.D., Cognitive Science

June 2021

University of California San Diego

Dissertation: "Interactive Attunement Catalyzes Creative Learning."

# M.S., Cognitive Science

June 2018

University of California San Diego

# B.A., Psychology with Honors

May 2013

University of California Berkeley

Honors Thesis: "The Efficacy of Verbal Retrieval Practice: Implications for Student Learning."

# Honors & Awards

# Research Fellowships & Funding

NSF STEM Education Postdoctoral Research Fellowship (\$300,000)	2022
NSF Graduate Research Fellowship Honorable Mention	2016
UC Berkeley Regents' & Chancellor's Scholars Research Fellowship (\$3,000)	2012-2013

UC Berkeley Summer Undergraduate Research Fellowship (\$3,000)

2012

#### Other Awards

ACM Designing Interactive Systems (DIS) Honorable Mention Paper Award (P.6)	2023
NSF Conference Travel Scholarships for Students to attend HCOMP/CI 2023 (\$27,263)	2023
Selected as a Rising Star in Electrical Engineering & Computer Science (EECS)	2019
ACM Human Factors in Computing (CHI) Honorable Mention Paper Award (P.9)	2019
ACM Human Factors in Computing (CHI) Honorable Mention Paper Award (P.10)	2018
UC San Diego Competitive Edge Fellowship	2015
UC Berkeley Regents' & Chancellor's Scholarship	2010-2013

# EMPLOYMENT

### TeachFX, Remote

2024-Present

Research Scientist

# Carnegie Mellon University, Pittsburgh, PA

2021-2024

Postdoctoral Research Fellow

# Adobe Research, San Francisco, CA

Summer 2020, Summer 2019

Research Intern

# NASA Jet Propulsion Laboratory, La Cañada Flintridge, CA

Summer 2016

User Experience Research Intern

# Stanford University School of Medicine, Palo Alto, CA

2013-2015

Stanford Cognitive & Systems Neuroscience Laboratory

Research Assistant

# University of California Berkeley, Berkeley, CA

2011-2013

Helen Wills Neuroscience Center

Research Assistant

# Publications

#### Conference & Journal Papers (Peer Reviewed)

- P.1 Prasoon Patidar, **Tricia J. Ngoon**, Neeharika Vogety, Nikhil Behari, Chris Harisson, John Zimmerman, Amy Ogan, & Yuvraj Agarwal. 2024. Edulyze: Learning Analytics for Real World Classrooms at Scale. Tools & Data Report in *Journal of Learning Analytics*.
- P.2 **Tricia J. Ngoon**, Vikram Cannanure, Kaja Jasinska, Sharon Wolf, & Amy Ogan. 2024. "I believe I did not preach into the desert": Opportunities & Challenges in Scaling Teacher Mentorship through Mobile Technology in Rural Côte d'Ivoire. In *ACM Learning at Scale (L@S'24) Proceedings*.

- P.3 Prasoon Patidar, **Tricia J. Ngoon**, John Zimmerman, Amy Ogan, & Yuvraj Agarwal. 2024. Enabling Student Behavior Attribution from Ambient Classroom Sensing Systems. In *ACM Journal of Interactive, Mobile, Wearable, & Ubiquitous Technologies (IMWUT'24)*.
- P.4 Vikram Cannanure, **Tricia J. Ngoon**, Kaja Jasinska, Sharon Wolf, Amy Ogan, & Tim Brown. 2024. Understanding the Longitudinal Impacts of a Chatbot to Facilitate a Virtual Community of Practice for Teachers in Rural Côte d'Ivoire. In ACM SIGCAS/SIGCHI Journal of Computing Systems and Sustainable Societies (COMPASS'24).
- P.5 **Tricia J. Ngoon**, S Sushil, Angela Stewart, Ung-Sang Lee, Saranya Venkatramen, Neil Thawani, Prasenjit Mitra, Sherice Clarke, John Zimmerman, & Amy Ogan. 2024. ClassInSight: Designing Conversation Support Tools to Visualize Classroom Discussion for Personalized Teacher Professional Development. To appear in *ACM Human Factors in Computing (CHI'24) Proceedings*.
- P.6 Tricia J. Ngoon, David Kovalev, Prasoon Patidar, Yuvraj Agarwal, Chris Harrison, John Zimmerman, & Amy Ogan. 2023. "An instructor can [already] keep track of 30 students": Students' Perceptions of Smart Classrooms for Improving Teaching and Their Beliefs about Teaching and Learning. In ACM Designing Interactive Systems (DIS'23) Proceedings, 1277-1292. Honorable Mention Award (Top 5%)
- P.7 Vikram Cannanure, Eloisa Avila, **Tricia J. Ngoon**, Yves Adji, Sharon Wolf, Kaja Jasinska, Tim Brown, and Amy Ogan. 2022. "We dream of climbing the ladder, for getting there, we have to do our job better": Designing for Teacher Aspirations in Rural Côte d'Ivoire. In *ACM Computing Systems and Sustainable Societies (COMPASS'22) Proceedings*, 122-138.
- P.8 Tricia J. Ngoon, Joy O. Kim, & Scott Klemmer. 2021. Shöwn: Adaptive Conceptual Guidance Aids Example Use in Creative Tasks. In ACM Designing Interactive Systems (DIS'21) Proceedings, 1834-1845.
- P.9 C. Ailie Fraser, **Tricia J. Ngoon**, Mira Dontcheva, & Scott Klemmer. 2019. RePlay: Contextually Presenting Learning Videos across Software Applications. In *ACM Human Factors in Computing (CHI'19)*Proceedings, 1-13. *Honorable Mention Award (Top 5%)*
- P.10 **Tricia J. Ngoon**\*, C. Ailie Fraser\*, Ariel Weingarten, Mira Dontcheva, & Scott Klemmer. 2018. Interactive Guidance Techniques for Improving Creative Feedback. In *ACM Human Factors in Computing Conference (CHI'18) Proceedings*, 1-11. *Honorable Mention Award (Top 5%)* (\*indicates equal contribution)
- P.11 Christian Battista, Tanya M. Evans, Tricia J. Ngoon, Tianwen Chen, Lang Chen, John Kochalka, & Vinod Menon. 2018. Mechanisms of Interactive Specialization and Emergence of Functional Brain Circuits Supporting Cognitive Development in Children. Nature Partner Journals Science of Learning, 3(1).
- P.12 Tanya M. Evans, John Kochalka, **Tricia J. Ngoon**, Sarah Wu, Shaozheng Qin, Christian Battista, & Vinod Menon. 2015. Brain Structural Integrity and Intrinsic Functional Connectivity Forecasts 6-Year Longitudinal Growth in Children's Numerical Abilities. *Journal of Neuroscience*, 35(33). 11743-11750.

# Dissertation

**Tricia J. Ngoon**. 2021. Interactive Attunement Catalyzes Creative Learning. *UC San Diego Cognitive Science PhD Dissertation*.

# Extended Abstracts & Posters (Lightly Reviewed)

- E.1 **Tricia J. Ngoon**, Vivian Leung, Micah Goldwater, & Caren M. Walker. 2022. Exploration as a Learning Strategy to Support Children's Pattern Learning. Poster at *Cognitive Science Society Conference*.
- E.2 Tricia J. Ngoon, Prasoon Patidar, Amy Ogan, Chris Harrison, Yuvraj Agarwal, & John Zimmerman. 2022. Professional Informatics: Personalized, Data-Driven Professional Development. Workshop paper at ACM Human Factors in Computing (CHI'22).
- E.3 **Tricia J. Ngoon**, Vivian Leung, & Caren Walker. 2022. How Exploration Supports Children's Pattern Learning. Poster at the *Cognitive Development Society (CDS) Conference*.
- E.4 **Tricia J. Ngoon**, Caren M. Walker, & Scott Klemmer. 2019. The Dark Side of Satisficing: Setting the Temperature of Creative Thinking. In *ACM Creativity & Cognition (C&C'19) Proceedings*, 591-596.
- E.5 **Tricia J. Ngoon**. 2019. Overcoming Satisficing: Scaffolds for Amplifying Creativity. Graduate Student Symposium abstract in *ACM Creativity & Cognition Conference (C&C'19) Proceedings*, 670-674.
- E.6 Samuel Lau, Tricia J. Ngoon, Vineet Pandey, & Scott Klemmer. 2019. Experiment Reconstruction Reduces Fixation on Surface Details of Explanations. In ACM Conference on Creativity & Cognition Conference (C&C'19) 2019 Proceedings, 578-582.
- E.7 Tricia J. Ngoon. 2019. Inventive Scaffolds Catalyze Creative Learning. Doctoral Consortium in ACM Human Factors in Computing Conference (CHI'19) Proceedings, 1-5.
- E.8 C. Ailie Fraser, **Tricia J. Ngoon**, Ariel Weingarten, Mira Dontcheva, & Scott Klemmer. 2017. CritiqueKit: A Mixed-Initiative, Real-Time Interface for Improving Feedback. In *ACM User Interface Software & Technology Conference (UIST'17) Companion*, 7-9.

- E.9 **Tricia J. Ngoon**, Alexander Gamero-Garrido, & Scott Klemmer. 2016. Supporting Peer Instruction through Evidence-Based Design of Online Instructional Templates. In *ACM Learning at Scale Conference (L@S'16) Proceedings*, 301-304.
- E.10 Tricia J. Ngoon, Rachel Chen, Amit Deutsch, & Sean Lip. 2016. Oppia: A Community of Peer Learners to Make Conversational Learning Experiences. In ACM Computer-Supported Cooperative Work & Social Computing (CSCW'16) Companion.

# Lectures and Presentations

#### **Invited Talks**

Pennsylvania State University College of Information Science & Technology Seminar	
(State College, PA)	February 2023
University of Pittsburgh Learning Research & Development Center Seminar	
(Pittsburgh, PA)	$April\ 2022$
Carnegie Mellon University Human-Computer Interaction Institute Seminar	
(Pittsburgh, PA)	January 2022
University of Wisconsin–Madison Human-Computer Interaction Seminar (Virtual)	November 2020
UC San Diego Cognitive Science Students Association Speaker Series (La Jolla, CA)	February 2020
UC Berkeley Institute of Design Seminar (Berkeley, CA)	September 2019
Stanford University Human-Computer Interaction Seminar (Palo Alto, CA)	August 2019
UC San Diego Cognition at the Shore Speaker Series (La Jolla, CA)	March 2019

#### Teaching

#### Instructor of Record

DSGN90: Design Seminar on Web Programming, UC San Diego (Summer 2018)

# Teaching Assistant

 $\operatorname{DSGN1}$ : The Design of Everyday Things, Lead Teaching Assistant, UC San Diego (Winter 2019-2021, Fall 2019-2020)

COGS120/CSE170: Interaction Design, Lead Teaching Assistant, UC San Diego (Winter 2016-2017, Spring 2018)

COGS112: Psychology of Humor, Lead Teaching Assistant, UC San Diego (Spring 2020)

COGS17: Neurobiology of Cognition, UC San Diego (Summer 2017)

COGS122: Interaction Design Startup Studio, UC San Diego (Spring 2016)

COGS123: Social Computing, UC San Diego (Spring 2016)

# Guest Lecturer

INFSCI27385 : The Machines are Taking Over? Power, Identity, and the Social Impact of AI, University of Pittsburgh (Fall 2023)

COGS17: Neurobiology of Cognition, UC San Diego (Summer 2017)

# Service

# **Professional Service**

Panelist, NSF Program	2024
Publications Co-Chair, ACM Creativity & Cognition Conference	2024
Panelist, NSF Program	2023
Scholarships Co-Chair, AAAI Conference on Human Computation & Crowdsourcing/	
ACM Collective Intelligence Conference	2023
Panelist, NSF Program	2022
Program Committee Member, ACM Creativity & Cognition Conference	2021, 2023
Student Volunteer Co-Chair, ACM Creativity & Cognition Conference	2019

# Other Service

Admissions Committee Member, CMU HCII Research Experiences for Undergraduates (REU)	2023
Head Teaching Assistant, UC San Diego Cognitive Science Department	2019-2021
Graduate Social Events Coordinator, UC San Diego Cognitive Science Department	2017-2019
K-12 Outreach Coordinator, UC San Diego Graduate Women in Computing	2018

Events Coordinator, UC San Diego Graduate Women in Computing	2017-2018
Graduate Student Representative, UC San Diego Cognitive Science Department	2016-2017
External Vice-President, UC Berkeley Regents' & Chancellor's Scholars Association	2012-2013
Faculty Committee Co-Chair, UC Berkeley Regents' & Chancellor's Scholars Association	2011-2012

# Reviewer (Alphabetical Order)

ACM Computer-Supported Cooperative Work & Social Computing (CSCW) Conference, ACM Creativity & Cognition (C&C) Conference, ACM Designing Interactive Systems (DIS) Conference, ACM Human Factors in Computing (CHI) Conference, ACM Journal of Interactive, Mobile, Wearable, & Ubiquitous Computing (IMWUT) Journal, ACM User Interface Software & Technology (UIST) Conference, American Educational Research Association (AERA) Conference, Artificial Intelligence & Education (AIED) Conference, Cognitive Science Society Conference, International Society of Learning Sciences (ISLS) Conference

# Supervision Mentorship

Weiter	
Vikram Cannanure Kamath, PhD Student (CMU)	2021-2024
Prasoon Patidar, PhD Student (CMU)	2021-2024
Luijia (Leslie) Yan, Research Assistant (CMU)	2022-2024
Yu (Lucia) Fang, Undergraduate Research Assistant (CMU)	2022-2024
Julia Gersey, Research Experiences for Undergraduates (REU) Student (CMU)	2023
Xinyi (Angela) Gui, Research Experiences for Undergraduates (REU) Student (CMU)	2023
Aastha Patel, Master's Student (CMU)	2022-2023
Haley Litt, Undergraduate Research Assistant (UCSD)	2021-2023
Prithika Acharya, Master's Student (CMU)	2022
Jinfan (Sara) Bai, Master's Student (CMU)	2022
Banso Nguyen, Undergraduate Research Assistant (UCSD)	2021-2022
Longjie Guo, Research Experiences for Undergraduates (REU) Student (CMU)	2022
David Kovalev, Research Experiences for Undergraduates (REU) Student (CMU)	2022
Vivian Leung, Undergraduate Research Assistant (UCSD)	2018-2021
Nicolas La Polla, Undergraduate Research Assistant (UCSD)	2018-2019
Michelle Lee, Research Assistant (UCSD)	2018-2019