

jane l. e

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2021 – present
La Jolla, CA

University of California, San Diego | Design Lab

CSE Postdoctoral Fellow · Cognitive Science Instructor / Postdoc

Mentors · *Haijun Xia & Steven Dow*

2014 – 2021
Stanford, CA

Stanford University

PhD Candidate in Computer Science · d.school Creativity in Research Scholar

Advisors · *James Landay & Pat Hanrahan*

Committee · *Maneesh Agrawala, Scott Klemmer & Ge Wang (chair)*

Dissertation · *Artistic Vision: Providing Contextual Guidance for Capture-Time Decisions*

2008 – 2012
Princeton, NJ

Princeton University

Bachelor of Science in Engineering · cum laude

Advisors · *Thomas Funkhouser & Szymon Rusinkiewicz*

Major · *Computer Science*

Certificate · *Applied & Computational Mathematics*

publications

Under Review C&C

When to Give Feedback? Exploring In-Action Feedback in a Visual Design Tool

Jane L. E*, Yu-Chun Yen*, Isabelle Pan, Grace Lin, Mingyi Li, Hyoungwook Jin, Mengyi Chen, Haijun Xia & Steven Dow. *Paper*

To Appear CSCW 2024

ProcessGallery: Contrasting Early and Late Iterations for Design Principle Learning

Yu-Chun Yen*, **Jane L. E***, Hyoungwook Jin, Mingyi Li, Grace Lin, Isabelle Pan & Steven Dow. *Paper*

To Appear IUI 2024

Jamplate: Exploring LLM-Enhanced Templates for Idea Reflection

Xiaotong Xu, Jiayu Yin, Catherine Gu, Jenny Mar, Sydney Zhang, **Jane L. E** & Steven Dow. *Paper*

UIST 2023

Color Field: Developing Professional Vision by Visualizing the Effects of Color Filters

Matthew Beaudouin-Lafon, **Jane L. E** & Haijun Xia. *Paper*

🏆 CHI 2023

DataParticles: Block-Based and Language-Oriented Authoring of Animated Unit Visualization

Yining Cao, **Jane L. E**, Zhutian Chen & Haijun Xia. *Paper*

UIST 2021

Dynamic Guidance for Decluttering Photographic Compositions

Jane L. E, Kevin Zhai, Jose Echevarria, Ohad Fried, Pat Hanrahan & James Landay. *Paper*

2021

Artistic Vision: Providing Contextual Guidance for Capture-Time Decisions

Jane L. E. *Dissertation*

CHI 2020

Adaptive Photographic Composition Guidance

Jane L. E, Ohad Fried, Jingwan Liu, Jianming Zhang, Radomír Měch, Jose Echevarria, Pat Hanrahan & James Landay. *Paper*

* Authors contributed equally

🏆 Best Paper Award

- UIST 2019 **Optimizing Portrait Lighting at Capture-Time Using a 360 Camera as a Light Probe**
Jane L. E, Ohad Fried & Maneesh Agrawala. *Paper*
- CHI 2018 **How Teens with Visual Impairments Take, Edit, and Share Photos on Social Media**
Cynthia Bennett, Jane L. E, Martez Mott, Edward Cutrell & Meredith Morris. *Paper*
- CHI 2018 **Understanding the Accessibility of Smartphone Photography for People with Motor Impairments**
Martez Mott, Jane L. E, Cynthia Bennett, Edward Cutrell & Meredith Morris. *Paper*
- UbiComp 2017 **Drone Near Me: Exploring Touch-Based Human-Drone Interaction**
Parastoo Abtahi, David Zhao, Jane L. E & James Landay. *Paper*
- CHI 2017 **Drone & Wo: Cultural Influences on Human-Drone Interaction Techniques**
Jane L. E, Ilene E, James Landay & Jessica Cauchard. *Note*
- arXiv 2016 **Towards a Drone Cinematographer: Guiding Quadrotor Cameras using Visual Composition Principles**
Niels Joubert*, Jane L. E*, Dan Goldman, Floraine Berthouzoz, Mike Roberts, James Landay & Pat Hanrahan. *Paper*
- UbiComp 2015 **Drone & Me: An Exploration Into Natural Human-Drone Interaction**
Jessica Cauchard, Jane L. E, Kevin Zhai & James Landay. *Note*
- SCA 2015 **Automatic Generation of Anatomical Face Simulation Models**
Matthew Cong, Michael Bao, Jane L. E, Kiran Bhat & Ronald Fedkiw. *Paper*

extended abstracts

- SIGCSE 2023 **Developing Comic-based Learning Toolkits for Teaching Computing to Elementary School Learners**
Francisco Casto, Sangho Suh, Jane L. E, Weena Naowaprateep & Yang Shi. *Poster*
- C&C 2019 & UIST 2018 **Artistic Vision: Providing Contextual Guidance for Capture-Time Decisions**
Jane L. E. *Creativity & Cognition Graduate Student Symposium*
Jane L. E. *UIST Doctoral Symposium*
- CHI 2017 **Human Perception of Swarm Robot Motion**
Griffin Dietz, Jane L. E, Peter Washington, Lawrence Kim & Sean Follmer. *Late Breaking Work*

magazine articles

- XRDS 2023 **Exploring the Horizon of Computation for Creativity**
Sam Bourgault & Jane L. E.
- XRDS 2023 **Machines as Collaborators for Art and Rituals: An Interview with Sougwen Chung**
Jane L. E, Cathy Fang & Sam Bourgault.

book chapter

- 2021 **Designing Photography Guidance for Rapid In-Camera Iteration**
Jane L. E & James A. Landay. *Design Thinking Research: Understanding Innovation*. Springer. 151-165

patent

- 2021 **Adaptive Image Armatures with Interactive Composition Guidance**
Radomír Měch, Jose Echevarria, Jingwan Lu, Jianming Zhang & Jane L. E

work experience

- Summer 2018
San Jose, CA **Adobe Research** · Emerging Graphics Group Intern · *Mentor: Jose Echevarria*
- Designed and implemented in-camera adaptive composition guidance interface in iOS
- Summer 2017
Redmond, WA **Microsoft Research** · Research Intern · *Mentor: Neel Joshi*
- Designed and implemented drone camera interface using familiar multitouch gestures in iOS
 - Collaborated on design and facilitation of interviews to understand accessibility of mobile photography
- Summer 2015
San Francisco, CA **Adobe Research** · Creative Technologies Lab Intern · *Mentor: Floraine Berthouzot*
- Designed and implemented a Unity-based system for previewing and capturing drone shots according to cinematography principles for dialogue scenes
- Fall 2012 – 2014
Redmond, WA **Microsoft Corporation** · Software Development Engineer
- Developer on Photos for Windows 8 & 10: main features implemented included rotate and straighten
 - Designed and implemented infrastructure / interface for internal feedback tool to assess image analysis algorithms
- Spring 2011 – 2012
Princeton, NJ **Princeton Graphics** · Undergrad Researcher · *Advisors: Thomas Funkhouser & Szymon Rusinkiewicz*
- Extended Chen et al.'s work on extracting feature ("Schelling") points on 3D meshes to feature lines
 - Led collection and analysis of Mechanical Turk dataset of Schelling lines
 - Submitted for junior independent work & senior thesis: Schelling Lines on 3D Surface Meshes
- Summer 2010
Redmond, WA **Microsoft Corporation** · Software Development Engineer Intern
- Developer on Photo Gallery: implemented prototype of color filter search and grouping by image similarity (based on a Microsoft Research library)
- Summer 2009
Princeton, NJ **Princeton Summer Programming Experiences** · Participant
- Implemented handwriting recognition program using neural networks
 - Program run by Professor Kevin Wayne for prospective Computer Science students to work with a graduate student mentor on a self-selected project
- Summer 2007
Beijing, China **Microsoft Research Asia** · High School Research Engineer Intern
- Implemented algorithm to analyze data to differentiate between inline, superscript, and subscript text for the handwritten mathematical formula recognition project

contributions to diversity

- 2023 – present
UCSD **UCSD Design Lab Impact and Student Culture Organization (DISCO)** · Founding Member
- Part of the initial team of Design Lab members working with the director to design and implement programs around building a culture of service and community at the Design Lab
 - Leading initiatives to create a mentorship program within the lab and an application feedback program for underrepresented students (modeled after Stanford CS PhD's SASP)
- Summer 2021
UCSD **Learning@Scale / EMOOCS 2021** · ConferenceBuddies Co-Organizer
- Helped organize a new initiative to match first-time conference-goers with more senior attendees (with Armando Fox, Berkeley and co-founder of the Learning@Scale conference)
- Spring 2021
UCSD **UCSD CSE Early Research Scholars Program** · Application Reviewer
- Reviewed essay questions from student applications
 - Team-based research apprentice experience for underrepresented students early in CS career
- Fall 2020
Stanford **Stanford CS Student-Application Support Program** · Application Reviewer
- Student-led program to assist underrepresented CS PhD applicants
 - Reviewed and gave feedback to PhD applicants on application materials
- 2020 – 2022
Stanford **Stanford CS Undergraduate Mentoring Program** · Mentor
- Student-led program for mentoring underrepresented undergraduates interested in research
 - Mentored an undergraduate on college planning and seeking research opportunities

2018 – 2019 Stanford	WiGRAPH Berthouzoz Women in Research Lunch · Student Volunteer [Design & Photography] <ul style="list-style-type: none"> • Assisted in contacting panelists and coordinating publicity efforts • Designed publicity materials, program, and speaker gifts • Networking lunch at SIGGRAPH hosting a panel of established women in graphics each year; has grown from a small informal gathering to an event with over 100 participants
2017 – 2020 Stanford	Grace Hopper Conference Career Fair · Student Representative at Stanford Booth <ul style="list-style-type: none"> • Assisted students in understanding the CS PhD application process • Reviewed and discussed application materials • Recommended and helped initiate contact with professors • Maintained contact with a number of students—one was convinced that she could apply to Stanford after we spoke at the conference and is now there pursuing her PhD
2016 – 2018 Stanford	Stanford-Berkeley Women in CS / EE Research Meetup · Co-Organizer & Photographer <ul style="list-style-type: none"> • Mini conference aiming to strengthen ties between women researchers at Berkeley and Stanford • Invited keynote speaker, industry research and academia panelists, organized talks and poster sessions, arranged social / networking opportunities • For more information: https://stanfordberkeleyresearchmeetup.wordpress.com/
Summer 2015 Adobe Research	Girls Who Code · Intern Mentor <ul style="list-style-type: none"> • Co-mentored one of the high school participants with a full-time Adobe employee
Fall 2015 Stanford	Castilleja School Girls Hackathon · Design & Tech Mentor <ul style="list-style-type: none"> • Co-mentored the youngest group (6th grade) in day-long hackathon to design and implement a game
2011 – 2012 Princeton	Chinese-American Princeton Siblings · Mentor <ul style="list-style-type: none"> • Mentored a local Chinese-American high school student

institutional service & leadership

Summer 2022 & 2023 UCSD	UCSD Design Lab Undergrad Summer Research Program · Mentor <ul style="list-style-type: none"> • Mentored several undergraduate students per summer on research projects • Led HCI & design career panels / resume workshops for intern cohort
Fall 2021 UCSD	UCSD Design Lab Research Meeting · Organizer <ul style="list-style-type: none"> • Invited speakers and planned activities / discussion topics for the research lab meetings
Fall 2021 UCSD	UCSD Design & Innovation Building Spaces Committee · Committee Member <ul style="list-style-type: none"> • Discussed how to shape the framework and procedures for allocating space in the new building with a group of Design Lab faculty, postdocs, and PhD students
2018 – 2019 Stanford	Stanford CS PhD Admissions Committee · Student Committee Member <ul style="list-style-type: none"> • Reviewed PhD applications and participated in committee-wide admissions meetings
2017 – 2018 Stanford	Stanford HCI Group Lunch · Co-Organizer <ul style="list-style-type: none"> • Invited speakers and planned discussion topics for the talk series (with Liz Murnane, Dartmouth) • For speakers who were interested, arranged meetings with students and professors in the group
Spring 2016 Stanford	Stanford CS PhD Admit Weekend · Research Area Student Lead <ul style="list-style-type: none"> • Organized dinner and events for Graphics & HCI PhD admits
2014 – 2016 Stanford	Common Origins Dance Company · Publicity Officer <ul style="list-style-type: none"> • Designed company gear and publicity materials for workshops and events
2012 – 2014 Microsoft	Princeton Career Fair · Alumni Recruiter at Microsoft Booth <ul style="list-style-type: none"> • Talked to students about full-time and internship opportunities at Microsoft • Reviewed resumes and selected candidates for on-campus interviews • Organized and facilitated Microsoft @ Princeton Hackathon

- 2012 – 2014 **Princeton Club of Western Washington** · Young Alumni Coordinator
- Organized mixers and events for recent graduates and interns
 - Featured on the Daily Princetonian and Alumni Association of Princeton University: <http://alumni.princeton.edu/volunteer/profiles/StewardshipLopezE14.pdf>
- 2008 – 2012 **Triple 8 Dance Company** · President, Costume Coordinator
- Designed company gear and coordinated with choreographers to design costumes for each piece
 - Represented our company at meetings with the broader student performing arts community, ran company practices and board meetings, managed logistics for our annual show
- 2008 – 2010 **Princeton Bric-A-Brac Yearbook** · Section Editor
- 2005 – 2008 **WWP High School South Yearbook** · Editor-in-Chief, Section Editor

service to profession

- 2023 – 2024 **Creativity & Cognition 2024** · Organizing Committee
- Maintaining conference website as Web Co-Chair (with Grace Yen, UCSD): <http://cc.acm.org/2024/>
- 2023 **UIST 2023** · Associate Chair
- 2023 **XRDS: Crossroads, The ACM Magazine for Students** · Summer Issue Co-Guest Editor
- Invited authors to write articles for special issue: Computer-Aided Media
 - Co-authored an introduction to the topic and the individual articles (with Sam Bourgault, UCSB)
- 2022 – 2023 **Creativity & Cognition 2023** · Organizing Committee
- Maintained conference website as Web Co-Chair (with Bradley Rey, UBC): <http://cc.acm.org/2023/>
- 2021 – 2022 **UIST 2022** · Organizing Committee, Associate Chair, Session Chair
- Designed and maintained conference website, logo, and badges as Web and Design Co-Chair (with Jasper Tran O'Leary, UW): <http://uist.acm.org/uist2022/>
 - Session Title: Storytelling and Presentation
- 2022 **CHI 2022** · Associate Chair, Session Chair
- Subcommittee: Interacting with Devices
 - Session Title: Creativity Support Tools
- 2020 – 2021 **UIST 2021** · Organizing Committee, Associate Chair, Session Chair
- Designed and maintained conference website and logo as Web and Design Co-Chair (with Toby Li, Notre Dame): <http://uist.acm.org/uist2021/>
 - Session Title: Wrangling Data for Authoring & Analysis
- 2015 – 2016 **CHI 2016** · Student Volunteer
- Volunteered at PC Meeting and at conference

awards & grants

- 2023 **CHI Best Paper Award**
- 2022 **Selected for Rising Stars in EECS Workshop**
- 2021 – 2023 **UCSD CSE's Debut Postdoctoral Fellows Program**
- 2018, 2021 **Adobe Research Collaboration Grant**
- 2019 **Hasso Plattner Institute Design Thinking Research Program**
- 2018 – 2020 **Microsoft Research Dissertation Grant**
- 2015, 2017, 2018 **The Brown Institute for Media Innovation: Magic Grant** · Artistic Vision / Camera Observa / G:Drone
- 2016 **The Brown Institute for Media Innovation: Magic Grant & Fellowship** · RoughCut
- 2015 **Microsoft Research Women's Scholarship**
- 2015 **NSF GRFP Honorable Mention**
- 2008 **Edward J. Bloustein Scholar**
- 2008 **West Windsor-Plainsboro High Honor Award, Service Award & PTSA Scholarship Award**
- 2007 **1st place in NJIT High School Programming Contest**

invited talks

	Artistic Vision: Interactive Computational Guidance for Developing Expertise
April 2024	University of California, San Diego: Department of Cognitive Science · Host: Haijun Xia
April 2024	National University of Singapore: School of Computing · Host: Yi-Chieh Lee
April 2024	University of Southern California: Department of Computer Science · Host: Souti Rini Chattopadhyay
March 2024	Indiana University: Department of Human-Centered Computing · Host: Zebulun Wood
March 2024	Cornell University: Department of Information Science · Host: Malte Jung
March 2024	University of Virginia: Department of Computer Science · Host: Seongkook Heo
March 2024	Tufts University: Department of Computer Science · Host: Diane Souvaine & Rob Jacob
March 2024	Oregon State University: School of Electrical Engineering and Computer Science · Host: Mike Rosulek
February 2024	Stevens Institute of Technology: Department of Computer Science · Host: Mark Ho
February 2024	University of Wisconsin-Madison: School of Computer, Data & Information Sciences · Host: Yea-Seul Kim

Artistic Vision: Providing Contextual Guidance for Creative Tasks

July 2023	University of Washington: DUB Seminar · Host: James Fogarty
June 2023	Tsinghua University: CS HCI Seminar · Hosts: Chun Yu & Shi Yuanchun
June 2023	Fudan University: EDA AI & Math Seminar · Host: Yingzhou Li
June 2023	University of California, Irvine: Informatics Special Talk Series · Host: Stacy Branham
May 2023	University of California, Berkeley: Berkeley Institute of Design Seminar · Host: Jeremy Warner
April 2023	University of Texas, Austin: HCI Seminar · Host: Amy Pavel
April 2023	University of California, San Diego: CSE 191 Interactive Computing Seminar · Host: Mai ElSherief

Artistic Vision: Providing Contextual Guidance for Capture-Time Decisions

Dec 2020	Adobe: Tech Talk · Hosts: Marc Levoy & Cecilia Zhang
Nov 2020	Stanford University: CS547 Seminar on People, Computers, and Design · Host: Michael Bernstein
June 2020	University of Toronto: Dynamic Graphics Project Lab · Hosts: Tovi Grossman & Fanny Chevalier

Adaptive Photographic Composition Guidance

April 2020	Adobe Research: HCI & Vis Seminar, Adobe @ CHI · Host: Joy Kim
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Panel: Design and Higher Ed

November 2018	Artful Design Manifestal · Host: Ge Wang
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teaching experience

Fall 2023	UCSD COGS120 / CSE170: Interaction Design · Instructor <ul style="list-style-type: none">• Conceptually-focused introduction to human computer interaction with 200+ students• Iterated on lecture topics and course assignments (including a team project)• Invited guest speakers to lecture on topics based on class interest• Attended discussion sections to provide feedback on team projects
	UCSD Guest Lectures
May 2023	DSGN1: Design of Everyday Things · Instructor: Jim Hollan
March 2023	COGS1: Introduction to Cognitive Science · Instructor: Mary Boyle
Oct 2022	COGS120 / CSE170 & DSGN 118: Design for Creativity and Productivity · Instructor: Haijun Xia
Oct 2021	COGS120 / CSE170: Interaction Design · Instructor: Haijun Xia
Summer 2016	Stanford Center at Peking University: Designing Solutions to Global Grand Challenges · Teaching Assistant Instructors: James Landay & Ge Wang <ul style="list-style-type: none">• Sole TA for four-week intensive program with students from Stanford and Beijing• Reviewed applications, managed course logistics, mentored student team projects• Arranged company and lab visits (in Beijing and Bay Area) and organized final presentations both at the Stanford Center at Peking University and at Stanford d.school
Spring 2016	Stanford CS107E: Computer Systems from the Ground Up · Teaching Assistant Instructors: Pat Hanrahan, Philip Levis & Dawson Engler <ul style="list-style-type: none">• Revised assignments, helped run labs, held office hours, graded assignments and final projects

- Fall 2015 **Stanford CS147: Introduction to Human-Computer Interaction Design** · Head Teaching Assistant
Instructor: James Landay
- Ran weekly studios and TA meetings, managed course logistics, held office hours, graded exams and assignments, proctored exam, organized final presentations at Stanford d.school
 - Awarded additional stipend for effective performance as head TA of a 200+ student class

peer review

CHI · 2024**, 2023**, 2022 [AC], 2021, 2019, 2018
UIST · 2023* [AC], 2022* [AC], 2021 [AC], 2020, 2019
DIS · 2023
C&C · 2023
SIGGRAPH · 2022
GI · 2020
HRI · 2020, 2018
RA-L / ICRA · 2017

* Recognition for outstanding/highly useful review

graduate mentees (non-advisees)

Jude Rayan [UCSD CogSci PhD | ProtoLab]
Xiaotong (Tone) Xu [UCSD CogSci PhD | ProtoLab]
Matin Yarmand [UCSD CSE PhD | HXI Lab]
Matthew Beaudouin-Lafon [UCSD CogSci PhD | Creativity Lab]
Yining (Rima) Cao [UCSD CogSci PhD | Creativity Lab] · Adobe Research Intern
Sharvari Thippanna [UCSD CSE Masters]
Parastoo Abtahi [Stanford CS PhD] · Meta Reality Labs Visiting Research Scientist · Princeton University Assistant Professor
Cheng-Yao (Eric) Wang [National Taiwan University CS Masters] · Cornell Information Science PhD

undergrad and high school mentees

Brendan Mah [UCSD CSE Undergraduate]
Sarah Luo [Purdue CS Undergraduate]
Mengyi (Crystal) Chen [UCSD CogSci Undergraduate] · applying for Masters programs
Hyoungwook Jin [KAIST CS Undergraduate | KIXLAB] · KAIST CS Masters
Mingyi Li [UCSD CSE Undergraduate] · Microsoft Research Undergraduate Intern · applying for PhD programs
Grace Lin [UCSD CogSci Undergraduate] · Deloitte UX/AI/VR Design Analyst
Isabelle Pan [UCSD CogSci Undergraduate] · Dora Head of Community
Heidi Chen [Stanford CS Undergraduate] · Google Software Engineer
Punya Chatterjee [Stanford CS Undergraduate] · Apple Design Prototyper
Ilene E [WWPHSS High School] · Adobe Research Women-In-Tech Scholar · Schwarzman Scholar · Ubisoft Research Engineer
Kevin Zhai [Stanford Art Undergraduate] · AirLabs, Inc. Software Engineer · freelance Film Director & Editor

references

James Landay · Stanford
landay@cs.stanford.edu

Pat Hanrahan · Stanford
hanrahan@cs.stanford.edu

Ge Wang · Stanford
ge@ccrma.stanford.edu

Haijun Xia · UCSD
haijunxia@ucsd.edu

Steven Dow · UCSD
spdow@ucsd.edu

Jim Hollan · UCSD
hollan@ucsd.edu