

# jane l. e

postdoc [at] the design lab · je [at] ucsd.edu · ejane.me

---

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*

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	<b>WiGRAPH Berthouzoz Women in Research Lunch</b> · Student Volunteer [Design & Photography] <ul style="list-style-type: none"> <li>• Assisted in contacting panelists and coordinating publicity efforts</li> <li>• Designed publicity materials, program, and speaker gifts</li> <li>• 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</li> </ul>
2017 – 2020 Stanford	<b>Grace Hopper Conference Career Fair</b> · Student Representative at Stanford Booth <ul style="list-style-type: none"> <li>• Assisted students in understanding the CS PhD application process</li> <li>• Reviewed and discussed application materials</li> <li>• Recommended and helped initiate contact with professors</li> <li>• 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</li> </ul>
2016 – 2018 Stanford	<b>Stanford-Berkeley Women in CS / EE Research Meetup</b> · Co-Organizer & Photographer <ul style="list-style-type: none"> <li>• Mini conference aiming to strengthen ties between women researchers at Berkeley and Stanford</li> <li>• Invited keynote speaker, industry research and academia panelists, organized talks and poster sessions, arranged social / networking opportunities</li> <li>• For more information: <a href="https://stanfordberkeleyresearchmeetup.wordpress.com/">https://stanfordberkeleyresearchmeetup.wordpress.com/</a></li> </ul>
Summer 2015 Adobe Research	<b>Girls Who Code</b> · Intern Mentor <ul style="list-style-type: none"> <li>• Co-mentored one of the high school participants with a full-time Adobe employee</li> </ul>
Fall 2015 Stanford	<b>Castilleja School Girls Hackathon</b> · Design & Tech Mentor <ul style="list-style-type: none"> <li>• Co-mentored the youngest group (6th grade) in day-long hackathon to design and implement a game</li> </ul>
2011 – 2012 Princeton	<b>Chinese-American Princeton Siblings</b> · Mentor <ul style="list-style-type: none"> <li>• Mentored a local Chinese-American high school student</li> </ul>

## institutional service & leadership

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

- 2012 – 2014 **Princeton Club of Western Washington** · Young Alumni Coordinator  
Microsoft
- 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  
Princeton
- 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

	<b>Artistic Vision: Interactive Computational Guidance for Developing Expertise</b>
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: Ming Jiang
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
------------	--

### Panel: Design and Higher Ed

November 2018	Artful Design Manifestival · Host: Ge Wang
---------------	--

## teaching experience

Fall 2023	<b>UCSD COGS120 / CSE170: Interaction Design</b> · Instructor <ul style="list-style-type: none"><li>• Conceptually-focused introduction to human computer interaction with 200+ students</li><li>• Iterated on lecture topics and course assignments (including a team project)</li><li>• Invited guest speakers to lecture on topics based on class interest</li><li>• Attended discussion sections to provide feedback on team projects</li></ul>
	<b>UCSD Guest Lectures</b>
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	<b>Stanford Center at Peking University:</b> <b>Designing Solutions to Global Grand Challenges</b> · Teaching Assistant Instructors: James Landay & Ge Wang <ul style="list-style-type: none"><li>• Sole TA for four-week intensive program with students from Stanford and Beijing</li><li>• Reviewed applications, managed course logistics, mentored student team projects</li><li>• 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</li></ul>
Spring 2016	<b>Stanford CS107E: Computer Systems from the Ground Up</b> · Teaching Assistant Instructors: Pat Hanrahan, Philip Levis & Dawson Engler <ul style="list-style-type: none"><li>• Revised assignments, helped run labs, held office hours, graded assignments and final projects</li></ul>

- 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  
spdown@ucsd.edu

**Jim Hollan** · UCSD  
hollan@ucsd.edu