EDUCATION	**University of California, San Diego**	**Apr 2020**

University of California, San Diego — Apr 2020
PhD, Computer Science
Advisor: Scott Klemmer
Committee: Mira Dontcheva, Jim Hollan, Bill Griswold, Philip Guo, Björn Hartmann

University of California, San Diego — Dec 2016
M.S., Computer Science
GPA: 3.77/4.0

University of Toronto, Victoria College — Jun 2013
Honours B.Sc. with High Distinction, Specialist in Math & Computer Science, Major in Music
GPA: 3.94/4.0

RESEARCH POSITIONS

PhD Researcher, Design Lab, UCSD — Oct 2014 – Mar 2020
Advisor: Scott Klemmer
Explored techniques and built tools for supporting creativity by harvesting existing expert content and recommending relevant examples to people in the context of their work

Creative Intelligence Lab Intern, Adobe Systems Inc. — Jun – Sep 2019
Supervisor: Mira Dontcheva
Developed and evaluated techniques for automatically segmenting creative live stream videos

Creative Intelligence Lab Intern, Adobe Systems Inc. — Jun – Sep 2017
Supervisor: Mira Dontcheva
Developed techniques for embedding expert software videos in the creative process

User Interface Research Intern, Autodesk Inc. — Jun – Sep 2016
Supervisor: Tovi Grossman
Developed and evaluated a system for distribution of collaborative physical task instructions

Creative Technologies Lab Intern, Adobe Systems Inc. — Jun – Sep 2015
Supervisors: Mira Dontcheva and Holger Winnemöller, collaboration with Scott Klemmer
Developed and evaluated a suggestion tool to help novice users get started in complex software

Research Assistant, DGP Lab, University of Toronto — Sep 2013 – May 2014
Advisor: Kyros Kutulakos
Explored camera methods for isolating light transport based on direction and distance of travel

Individual Research Project Course, University of Toronto — Sep – Dec 2012
Advisor: Karen Reid
Improved Classroom Response System for real-time analysis of programming submissions

PUBLICATIONS **C. Ailie Fraser**, Joy Kim, Valentina Shin, Joel Brandt, and Mira Dontcheva. 2020. Temporal Segmentation of Creative Live Streams. *Proceedings of CHI '20.*

C. Ailie Fraser, Mira Dontcheva, Joy Kim, and Scott Klemmer. How Live Streaming Does (and Doesn't) Change Creative Practices. 2020. *interactions Jan/Feb 2020.*

C. Ailie Fraser, Joy Kim, Alison Thornsberry, Scott Klemmer, and Mira Dontcheva. 2019. Sharing the Studio: How Creative Livestreaming can Inspire, Educate, and Engage. *Proceedings of Creativity & Cognition '19.*

C. Ailie Fraser, Tricia J. Ngoon, Mira Dontcheva, and Scott Klemmer. 2019. RePlay: Contextually presenting learning videos across software applications. *Proceedings of CHI '19.*

Tricia J. Ngoon, **C. Ailie Fraser**, Ariel S. Weingarten, Mira Dontcheva, and Scott Klemmer. 2018. Interactive Guidance Techniques for Improving Creative Feedback. *Proceedings of CHI '18.* Honorable Mention.

C. Ailie Fraser, Tovi Grossman, and George Fitzmaurice. 2017. WeBuild: Automatically Distributing Assembly Tasks Among Collocated Workers to Improve Coordination. *Proceedings of CHI '17.*

C. Ailie Fraser, Mira Dontcheva, Holger Winnemöller, Sheryl Ehrlich, and Scott Klemmer. 2016. DiscoverySpace: Suggesting Actions in Complex Software. *Proceedings of DIS '16.*

Catherine M. Hicks, Vineet Pandey, **C. Ailie Fraser**, and Scott R. Klemmer. 2016. Framing Feedback: Choosing Review Environment Features that Support High Quality Peer Assessment. *Proceedings of CHI '16.*

EXTENDED ABSTRACTS

C. Ailie Fraser, Julia M. Markel, N. James Basa, Mira Dontcheva, and Scott Klemmer. 2019. ReMap: Multimodal Help-Seeking. *UIST '19 Adjunct.*

C. Ailie Fraser, Joy Kim, Scott Klemmer, and Mira Dontcheva. 2019. Creative livestreaming: How sharing one's process can inspire, educate, and engage. *CHI '19 Live Streaming Workshop.*

C. Ailie Fraser. 2018. The Right Content at the Right Time: Contextual Examples for Just-in-time Creative Learning. *UIST '18 Doctoral Symposium.*

C. Ailie Fraser, Mira Dontcheva, and Scott Klemmer. 2018. Software videos: Rich content and learning potential, but a challenge for sensemaking. *CHI '18 Sensemaking Workshop.*

C. Ailie Fraser, Tricia J. Ngoon, Ariel S. Weingarten, Mira Dontcheva, and Scott Klemmer. 2017. CritiqueKit: A Mixed-Initiative, Real-Time Interface For Improving Feedback. *UIST '17 Adjunct.*

C. Ailie Fraser, Mira Dontcheva, Holger Winnemöller, and Scott Klemmer. 2016. DiscoverySpace: Crowdsourced Suggestions Onboard Novices in Complex Software. *CSCW '16 Companion.*

Catherine M. Hicks, **C. Ailie Fraser**, Purvi Desai, and Scott Klemmer. 2015. Do numeric ratings impact peer reviewers? *Learning at Scale '15*.

DISSERTATION	Contextually Recommending Expert Help and Demonstrations to Improve Creativity. 2020. C. Ailie Fraser. *UC San Diego.*

HONOURS AND AWARDS	Award for Excellence in Service/Leadership, CSE Department, UCSD	**June 2019**
	NSERC Postgraduate Scholarship – Doctoral (PGS-D)	**Fall 2017 – Spring 2019**
	Adobe Research Fellowship	**2017**
	Award for Contributions to Diversity, CSE Department, UCSD	**June 2016**
	Powell Fellowship, CSE Department, UCSD	**Fall 2014 – Spring 2017**
	NSERC CGS-M offers from UBC and U of T (declined)	**April 2014**
	Simeon Heman Janes Silver Medal	**Spring 2013**
	Dean's List	**Spring 2010 – 2013**
	Prof. William Kingston and Dr. John Kingston Scholarship	**Fall 2012**
	University of Toronto Scholar	**Fall 2011**
	Jessie Macpherson Memorial Scholarship	**Fall 2011**
	William Pearson Scott Scholarship	**Fall 2010**
	Mary Ellen Carty Residence Scholarship	**Fall 2009**

TEACHING & MENTORSHIP	**Mentor, Early Research Scholars Program, UCSD**	**Fall 2018 – Spring 2019**
	Mentored two undergraduate students in the Computer Science & Engineering department on a research project.	
	Mentor, GradWIC Mentorship Program, CSE Department, UCSD	**Fall 2017 – Spring 2019**
	Mentored three first-year graduate students in Computer Science & Engineering each year as part of the Graduate Women in Computing mentorship program.	
	Teaching Assistant, UCSD	**Fall 2015**
	CSE 216 / COGS 230 – Interaction Design Research	
	Managed course website, advised students, moderated discussions, and graded projects.	
	Teaching Assistant, University of Toronto	**Winters 2012, 2013**
	CSC148 – Introduction to Computer Science	
	Ran weekly labs, graded exams and assignments, held office hours, and proctored exam.	

OTHER EXPERIENCE	**Freelance Web Design & Development**	**Feb 2018 – present**
	Designed, built, and continue to manage website for Camp Wabikon (www.wabikon.com)	
	Web Developing Consultant	**Nov 2013 – May 2014**
	Adapted a series of pitch recognition and memory tasks written in MATLAB to run online, as part of a study on music and language for the Rotman Research Institute at Baycrest	

Casual Employee, University of Toronto   Jun 2012 – Apr 2014

Web design and content for the Faculty of Arts & Science's "FAStanswers" website for first-year students.

SERVICE AND
LEADERSHIP

Organizing Committee, ACM UIST   2020

Co-publicity chair for UIST 2020 conference.

Organizing Committee, ACM Creativity & Cognition   2019

Co-website chair for Creativity & Cognition conference. Built & managed website: https://cc.acm.org/2019.

Website Lead, Diversity, Equity & Inclusion Committee, UCSD   Fall 2017 – Winter 2020

Member of department-wide committee in Computer Science and Engineering, composed of students, faculty, and staff dedicated to highlighting and expanding efforts to improve diversity. Manage content & design for DEI website as well as special event websites.

Graduate Women in Computing, UCSD   Fall 2015 – Spring 2019

Treasurer and Mentorship Committee member 2017-2019, President 2015-2017. GradWIC aims to increase awareness of diversity issues and foster an inclusive CSE community.

PhD Admissions Student Committee, UCSD   Fall 2017 – Spring 2019

Co-leader of student committee for PhD admissions in the Computer Science and Engineering department.

The Beat, UCSD   Fall 2014 – Spring 2016

Assistant Music Director 2015-2016, Section Leader 2014-2015. Directed, sang, and arranged music for The Beat, an award-winning acappella choir.

Member, Introductory Math and Science Committee   Fall 2012 – Spring 2013

Faculty of Arts & Science, University of Toronto

COURSEWORK
AND SKILLS

Computer Skills:
- HTML, Javascript, PHP, CSS, Swift, Python, MATLAB, C++, Java, C, SQL, OpenGL, OpenCV, Adobe Flash and Actionscript, Microsoft Office, Adobe Photoshop, LaTeX

Relevant Coursework:
- *Computer Science*: Research in HCI and Ubiquitous Computing, Information Visualization, Computer Graphics and Vision, Web Programming, Programming Languages, Object-Oriented and Systems Programming
- *Mathematics*: Mathematical Logic, Linear Algebra, Abstract Algebra, Calculus, Real and Complex Analysis