

Haoqi Zhang

CONTACT INFORMATION	Northwestern University Delta Lab Design, Technology, & Research EECS & Segal Design Institute Evanston, IL 60208	(917) 445-2626 http://delta.northwestern.edu http://dtr.northwestern.edu http://haoqizhang.com hq@northwestern.edu
RESEARCH INTERESTS	I design and study socio-technical systems that advance human values at scale. My work bridges the fields of Human-Computer Interaction, Social Computing, Artificial Intelligence, Learning Science, and Decision Science.	
APPOINTMENTS	Northwestern University , Evanston, IL <i>Associate Professor, Computer Science and Segal Design Institute</i>	5/2019 to present
	Northwestern University , Evanston, IL <i>Allen K. and Johnnie Cordell Breed Junior Professor of Design</i>	9/2015 to 8/2018
	Northwestern University , Evanston, IL <i>Assistant Professor, Computer Science and Segal Design Institute</i>	9/2013 to 5/2019
	MIT CSAIL , Cambridge, MA <i>Postdoctoral Associate, User Interface Design Group</i>	9/2012 to 7/2013
	Microsoft Research , Redmond, WA <i>Research Intern, Adaptive Systems and Interaction Group</i>	5/2010 to 8/2010
EDUCATION	Harvard University , Cambridge, MA Ph.D. in Computer Science, September 2012 Thesis: <i>Computational Environment Design</i> Advisor: David C. Parkes	
	Harvard College , Cambridge, MA A.B. in Computer Science and Economics with highest honors, June 2007 Thesis: <i>Policy Teaching through Reward Function Learning</i>	
HONORS AND AWARDS	Office of Undergraduate Research Faculty Honor Roll, 2022. UIST Best Paper Award Honorable Mention, 2018. Office of the Provost Award for Digital Learning, 2016-2017. Murphy Award for Advancing Undergraduate Engineering, 2014-2016, 2018-2019, 2022. Searle Teaching Fellow, 2014 CHI Best Paper Award Honorable Mention, 2012, 2014. HCOMP Notable Paper Award, 2013. NSF Graduate Research Fellowship, 2011-2012. NDSEG Fellowship, 2008-2011. Derek C. Bok Award for Excellence in Teaching of Undergraduates at Harvard, 2009. Certificate of Distinction in Teaching at Harvard, received five times from 2005-2009. Thomas Temple Hoopes Prize for senior thesis at Harvard, 2007.	
DOCUMENTARY FILM	Forward: A Story About Learning and Growth. http://forward.movie , 2022.	

- CONFERENCE AND JOURNAL PAPERS Kapil Garg, Darren Gergle, and Haoqi Zhang. Orchestration Scripts: A System for Encoding an Organization’s Ways of Working to Support Situated Work. *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI 2023)*, 2023.
- Kapil Garg, Darren Gergle, and Haoqi Zhang. Understanding the Practices and Challenges of Networked Orchestration in Research Communities of Practice. *Accepted to the 25th ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW 2022)*, 2022.
- Ryan Louie, Darren Gergle, and Haoqi Zhang. Affinder: Expressing Concepts of Situations that Afford Activities using Context-Detectors. *Proceedings of the ACM CHI Conference on Human Factors in Computing Systems (CHI 2022)*, 2022.
- Ryan Louie, Kapil Garg, Jennie Werner, Allison Sun, Darren Gergle, and Haoqi Zhang. Opportunistic Collective Experiences: Identifying Shared Situations and Structuring Shared Activities at Distance. *Proceedings of the 23rd ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW ’20)*, 2020.
- Kapil Garg, Yongsung Kim, Darren Gergle, and Haoqi Zhang. 4X: A Hybrid Approach for Scaffolding Data Collection and Interest in Low-Effort Participatory Sensing. *Proceedings of the 22nd ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW ’19)*, 2019.
- Josh Hibschan, Darren Gergle, Eleanor O’Rourke, and Haoqi Zhang. Isopleth: Supporting Sensemaking in Professional Web Applications to Create Readily Available Learning Experiences. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 2019.
- Sarah Lim, Josh Hibschan, Haoqi Zhang, and Eleanor O’Rourke. Ply: A Visual Web Inspector for Learning from Professional Webpages. In *Proceedings of the 31st Symposium on User Interface Software and Technology (UIST ’18)*, 2018. Best Paper Award Honorable Mention.
- Yongsung Kim, Darren Gergle, and Haoqi Zhang. Hit-or-Wait: Coordinating Opportunistic Low-effort Contributions to Achieve Global Outcomes in On-the-go Crowdsourcing. In *Proceedings of the ACM CHI Conference on Human Factors and Computing Systems (CHI ’2018)*, 2018.
- Haoqi Zhang, Matthew W. Easterday, Elizabeth Gerber, Daniel Rees Lewis, and Leesha Maliakal. Agile Research Studios: Orchestrating Communities of Practice to Advance Research Training at Scale. In *Proceedings of the 20th ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW ’17)*, 2017.
- Yongsung Kim, Aaron Shaw, Haoqi Zhang, and Elizabeth Gerber. Understanding Trust amid Delays in Crowdfunding. In *Proceedings of the 20th ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW ’17)*, 2017.
- Yongsung Kim, Emily Harburg, Shana Azria, Aaron Shaw, Elizabeth Gerber, Darren Gergle, and Haoqi Zhang. Studying the Effects of Task Notification Policies on Participation and Outcomes in On-the-go Crowdsourcing. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP ’16)*, 2016.
- Katherine Lin, Henry Spindell, Scott Cambo, Yongsung Kim, and Haoqi Zhang . Habit-

sourcing: Sensing the Environment through Immersive, Habit-Building Experiences. In *Proceedings of the 29th Symposium on User Interface Software and Technology (UIST '16)*, 2016.

Joshua Hibschan and Haoqi Zhang. Telescope: Fine-Tuned Discovery of Interactive Web UI Feature Implementation. In *Proceedings of the 29th Symposium on User Interface Software and Technology (UIST '16)*, 2016.

Josh Hibschan and Haoqi Zhang. Unravel: Rapid Web Application Reverse Engineering via Interaction Recording, Source Tracing, and Library Detection. In *Proceedings of the 28th Symposium on User Interface Software and Technology (UIST '15)*, 2015.

Kevin Chen and Haoqi Zhang. Remote Paper Prototype Testing. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '15)*, 2015.

Anant Bhardwaj, Juho Kim, Steven P. Dow, David Karger, Sam Madden, Robert C. Miller, Haoqi Zhang. Attendee-sourcing: Exploring the Design Space of Community-Informed Conference Scheduling. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (HCOMP '14)*, 2014.

Haoqi Zhang, Andrés Monroy-Hernández, Aaron Shaw, Sean Munson, Elizabeth Gerber, Benjamin Mako Hill, Peter Kinnaird, Shelly Diane Farnham, and Patrick Minder. WeDo: End-To-End Computer Supported Collective Action. *Proceedings of the Eighth International AAAI Conference on Weblogs and Social Media (ICWSM '14)*, 2014.

Aaron Shaw, Haoqi Zhang, Andrés Monroy-Hernández, Sean Munson, Benjamin Mako Hill, Elizabeth Gerber, Peter Kinnaird, and Patrick Minder. Computer Supported Collective Action. *interactions*, 21, 2, March 2014.

Lydia B. Chilton, Juho Kim, Paul André, Felicia Cordeiro, James Landay, Dan Weld, Steven P. Dow, Robert C. Miller, and Haoqi Zhang. Frenzy: Collaborative Data Organization for Creating Conference Sessions. *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '14)*, pp. 1255–1264, 2014. Best Paper Award Honorable Mention.

Robert C. Miller, Haoqi Zhang, Eric Gilbert, and Elizabeth Gerber. Pair Research: Matching People for Collaboration, Learning, and Productivity. *Proceedings of the 17th ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '14)*, 2014.

Paul André, Haoqi Zhang, Juho Kim, Lydia B. Chilton, Steven P. Dow, and Robert C. Miller. Community clustering: Leveraging an academic crowd to form coherent conference sessions. In *Proceedings of the 1st AAAI Conference on Human Computation and Crowdsourcing (HCOMP '13)*, 2013. Notable Paper Award.

Haoqi Zhang, Eric Horvitz, and David C. Parkes. Automated Workflow Synthesis. In *Proceedings of the 27th AAAI Conference on Artificial Intelligence (AAAI '13)*, 2013.

Juho Kim, Haoqi Zhang, Paul André, Lydia Chilton, Wendy MacKay, Michel Beaudouin-Lafon, Robert C. Miller, Steven P. Dow. Cobi: A Community-Informed Conference Scheduling Tool. In *Proceedings of the 26th Symposium on User Interface Software and Technology (UIST '13)*, 2013.

Haoqi Zhang, Edith Law, Robert C. Miller, Krzysztof Z. Gajos, David C. Parkes, and

Eric Horvitz. Human Computation Tasks with Global Constraints. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '12)*, pp. 217–226, 2012. Best Paper Award Honorable Mention.

Haoqi Zhang, Eric Horvitz, Yiling Chen, and David C. Parkes. Task Routing for Prediction Tasks. To appear in *Proceedings of the 11th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS '12)*, 2012.

Ian A. Kash, John K. Lai, Haoqi Zhang, and Aviv Zohar. Economics of BitTorrent Communities. In *Proceedings of the 21st International Conference on World Wide Web (WWW '12)*, 2012.

Jon Noronha, Eric Hysen, Haoqi Zhang, and Krzysztof Z. Gajos. PlateMate: Crowdsourcing Nutrition Analysis from Food Photographs. In *Proceedings of the 24th Symposium on User Interface Software and Technology (UIST '11)*, pp. 1–11, 2011.

Edith Law and Haoqi Zhang. Towards Large-Scale Collaborative Planning: Answering High-Level Search Queries Using Human Computation. In *Proceedings of the 25th AAAI Conference on Artificial Intelligence (AAAI '11)*, pp. 1210–1215, 2011.

Yiling Chen, Jerry Kung, David C. Parkes, Ariel Procaccia, and Haoqi Zhang. Incentive Design for Adaptive Agents. In *Proceedings of the 10th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS '11)*, pp. 627–634, 2011.

Pavithra Harsha, Cynthia Barnhart, David C. Parkes, and Haoqi Zhang. Strong Activity Rules for Iterative Combinatorial Auctions. In *Computers & Operations Research*, vol. 37, no. 7, pp. 1271–1284, 2010.

Haoqi Zhang, Yiling Chen, and David C. Parkes. A General Approach to Environment Design with One Agent. In *Proceedings of the 21st International Joint Conference on Artificial Intelligence (IJCAI '09)*, pp. 2002–2008, 2009.

Haoqi Zhang, David C. Parkes, and Yiling Chen. Policy Teaching Through Reward Function Learning. In *Proceedings of the 10th ACM Conference on Electronic Commerce (EC '09)*, pp. 295–304, 2009.

Haoqi Zhang and David C. Parkes. Value-based Policy Teaching with Active Indirect Elicitation. In *Proceedings of the 23rd AAAI Conference on Artificial Intelligence (AAAI '08)*, pp. 208–214, 2008. Oral presentation and poster paper.

WORKSHOP
PAPERS AND
DEMOS

Harrison Kwik, Haoqi Zhang, and Eleanor O'Rourke. How Do Students Seek Help and How Do TAs Respond? Investigating Help-Seeking Strategies in CS1 Office Hours. *SIGCSE Technical Symposium*, 2022.

Nina Cong, Kevin Cheng, Haoqi Zhang, and Ryan Louie. Collective Narrative: Scaffolding Community Storytelling through Context-Awareness. *CSCW Late Breaking Work*, 2021.

Yongsung Kim, Emily Harburg, Shana Azria, Elizabeth Gerber, Darren Gergle, Haoqi Zhang. Enabling Physical Crowdsourcing On-the-go with Context-Sensitive Notifications. *HCOMP Work-in-Progress*, 2015.

Emily Harburg, Yongsung Kim, Elizabeth Gerber, and Haoqi Zhang. CrowdFound: A Mobile Crowdsourcing System to Find Lost Items On-the-Go. *CHI Work-in-Progress*,

2015.

Haoqi Zhang, Paul André, Lydia Chilton, Juho Kim, Steven P. Dow, Robert C. Miller, Wendy MacKay, and Michel Beaudouin-Lafon. Cobi: Communitysourcing Large-Scale Conference Scheduling. Demo at *CHI Interactivity (CHI '13)*, 2013.

Haoqi Zhang, John Lai, and Moritz Baecher. Hallucination: a Mixed-Initiative Approach for Efficient Document Reconstruction. In *Proceedings of the AAAI workshop on Human Computation (HCOMP '12)*, 2012.

Andrew Mao, Yiling Chen, Krzysztof Gajos, David Parkes, Ariel Procaccia, and Haoqi Zhang. TurkServer: Enabling Synchronous and Longitudinal Online Experiments. In *Proceedings of the AAAI workshop on Human Computation (HCOMP '12)*, 2012.

Beatrice Liem, Haoqi Zhang, and Yiling Chen. An Iterative Dual Pathway Structure for Speech-to-Text Transcription. In *Proceedings of the AAAI workshop on Human Computation (HCOMP '11)*, 2011.

Ian A. Kash, John K. Lai, Haoqi Zhang, and Aviv Zohar. Economics of BitTorrent Communities. In *Proceedings of the 6th Workshop on the Economics of Networks, Systems, and Computation (NetEcon '11)*, 2011.

Haoqi Zhang, Eric Horvitz, Yiling Chen, and David C. Parkes. Task Routing for Prediction Tasks. In the *ACM EC Workshop on social computing and user-generated content*, 2011.

Haoqi Zhang, Eric Horvitz, Robert C. Miller, and David C. Parkes. Crowdsourcing General Computation. In the *CHI workshop on crowdsourcing and human computation*, 2011. Also available as Microsoft Research Technical Report MSR-TR-2011-6.

Eric Huang, Haoqi Zhang, David C. Parkes, Krzysztof Z. Gajos, and Yiling Chen. Toward Automatic Task Design: A Progress Report. In *Proceedings of the KDD workshop on Human Computation (HCOMP '10)*, 2010.

Haoqi Zhang and David C. Parkes. Enabling Environment Design via Active Indirect Elicitation. In *the 4th Multidisciplinary Workshop on Advances in Preference Handling (MPREF '08)*, 2008.

PHD THESIS	Haoqi Zhang. Computational Environment Design. Ph.D. dissertation, <i>Harvard University</i> , 2012.
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UNDERGRADUATE THESIS	Haoqi Zhang. Policy Teaching through Reward Function Learning. Undergraduate thesis in Computer Science and Economics, <i>Harvard University</i> , 2007. Thomas Temple Hoopes Prize Winning Thesis.
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INVITED TALKS & SCREENINGS	<u>Forward: A Story about Learning and Growth</u> <i>Film Release Party at Northwestern Garage</i> , June 2022. <i>Early Career HCI + ARS</i> , April and May 2022. <i>Northwestern Women-in-Computing and DISC</i> , Nov 2021. <i>Northwestern Murphy Society</i> , Oct 2021. <i>Northwestern CS</i> , Apr 2021. <i>Stanford HCI</i> , Nov 2020. <i>San Francisco State, Workshop and Q&A</i> , Oct 2020.
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UCSD Design@Large, San Diego, CA, Feb 2020.

Computational Ecosystems: Tech-enabled Communities to Advance Human Values at Scale.

UChicago People & Tech Seminar, Chicago, IL, May 2023.

Northwestern Institute on Complex Systems, Evanston, IL, April 2022.

Berkeley BiD Seminar, Berkeley, CA, Jan 2018.

Michigan School of Information Seminar, Ann Arbor, MI, Jan 2018.

Harvard EconCS/HCI Seminar, Cambridge, MA, Nov 2017.

MIT HCI Seminar, Cambridge, MA, Nov 2017.

CMU HCII Seminar, Pittsburgh, CA, Nov 2017.

Stanford Seminar on People, Computers and Design, Stanford, CA, Oct 2017.

Microsoft Research Seminar, Seattle, WA, Oct 2017.

UW Dub Seminar, Seattle, WA, Oct 2017.

UCSD Design@Large, San Diego, CA, Oct 2017.

Agile Research Studios: Orchestrating Communities of Practice to Advance Research Training.

Cyberlearning 2019, Washington, DC, October 2019.

Berkeley WISE Seminar, Berkeley, CA, Jan 2018.

Northwestern Learning, Teaching, and Assessment Forum, Evanston, IL, Nov 2016.

Pair Research: Matching People for Collaboration, Learning, and Productivity.

Northwestern TEACHx, Evanston, IL, May 2017.

Design, Technology, and Research.

Northwestern Engineering Advisory Board Meeting, Evanston, IL, Oct 2019.

Northwestern Mobile Meetup, Evanston, IL, Feb 2015.

Crowds, Communities, and Mixed-Initiative Systems.

Microsoft Faculty Summit, Bellevue, WA, July 2014.

Northwestern Institute on Complex Systems, Evanston, IL, May 2014.

AAAS Annual Meeting, Chicago, IL, Feb 2014.

CMU Human Computer Interaction Institute, Pittsburg, PA, October 2013.

FUNDING

Haoqi Zhang and Jennifer Tackett. Empowering the Next Generation of Global Women Leaders in Universities around the World. *Buffett Institute of Global Affairs*, 2023-2025.

Haoqi Zhang and Darren Gergle. Human-AI Tools for Expressing Human Situations and Contexts to Machines. *Center for Advancing Safety of Machine Intelligence (CASMI)*, 2023-2024, \$274,986.

Nell O'Rourke and Haoqi Zhang. Context-Aware Metacognitive Practice: Instrumenting Classroom Ecosystems to Help Introductory Computer Science Students Develop Effective Learning Strategies. *NSF Cyberlearning*, 2020-2023, \$748,957.

Haoqi Zhang and Darren Gergle. Computational Tools for Expressing Conceptually Rich Situations to Machines. *Google Faculty Award*, 2019-2020, \$69,313.

Haoqi Zhang and Nell O'Rourke. Readily Available Learning Experiences: Turning the Entire Web into Progressive Examples to Bridge Conceptual Knowledge Gaps for Novice Web Developers. *NSF Cyberlearning*, 2017-2022, \$549,815.

Haoqi Zhang, Matt Easterday, and Liz Gerber. Agile Research Studios: Scaling Cognitive Apprenticeship to Advance Undergraduate and Graduate Research Training in STEM. *NSF Cyberlearning*, 2016-2021, \$549,944.

Haoqi Zhang and Darren Gergle. Coordination of Opportunistic Actions to Produce Globally Effective Behaviors for Physical Crowdsourcing. *NSF Cyber-Human Systems*, 2016–2021, \$496,380.

Haoqi Zhang and Liz Gerber. Pair Research: Matching People for Collaboration, Learning, and Productivity. *Northwestern’s Office of the Provost Award for Digital Learning*, 2016–2017, \$20,000.

Haoqi Zhang. HCOMP Doctoral Consortium. *NSF IIS*, 2016-2017, \$23,772.

Haoqi Zhang. Remote Paper Prototype Testing. *NSF CISE Research Initiation Initiative*, 2015–2017, \$147,536.

Haoqi Zhang. Design, Technology, and Research. *Northwestern’s Murphy Society Grant*, 2014–2016, \$100,000.

Haoqi Zhang, Aaron Shaw, and Elizabeth Gerber. Sharing Human-powered Mobility to Improve Societal Efficacy and Efficiency. *Microsoft Fuse Labs Research Award*, 2014–2015, \$25,000.

TEACHING	CS 330: Human Computer Interaction	2021
	<i>Instructor at Northwestern</i>	
	CS 329: HCI Studio	2021, 2023
	<i>Instructor at Northwestern</i>	
	CS-DSGN 315/497: Design, Technology, and Research	2014–now (quarterly)
	<i>Instructor & Program Director at Northwestern</i>	
	EECS 397/497: Social & Crowd Computing	2014, 2015, 2017, 2018
	<i>Instructor at Northwestern</i>	
	DSGN 401-2: Interaction Design	2015, 2016, 2017, 2018, 2019
PHD RESEARCH ADVISING	<i>Instructor at Northwestern</i>	
	EECS 330: Human Computer Interaction	2014
	<i>Instructor at Northwestern</i>	
	EECS 101: Intro to Computer Science for Everyone	2013, 2014
	<i>Instructor at Northwestern</i>	
	6.831: User Interface Design and Implementation	2013
	<i>Instructor at MIT</i>	
PHD RESEARCH ADVISING	Derek Bok Center for Teaching and Learning	2009–2011
	<i>Teaching Consultant at Harvard</i>	

PHD RESEARCH ADVISING	Kapil Garg	Fall 2018 to present
	- Advise research on Networked Orchestration Technologies (NOT).	
PHD RESEARCH ADVISING	Gobi Dasu	Fall 2018 to present
	- Advise research on Readily Available Learning Experiences (RALE).	

Ryan Louie Fall 2017 to present
 - Advise research on Opportunistic Collective Experiences (OCE).

Harrison Kwik Fall 2019 to Summer 2022.
 - Advised research on Context-Aware Metacognitive Practice (CAMP).

Leesha Maliakal Fall 2016 to Summer 2022.
 - Advise research on Agile Research Studios (ARS).

Yongsung Kim Fall 2014 to September 2020
 - Advise research on On-the-Go Crowdsourcing (OTG).
 - Dissertation: *Designing Flexible Coordination Systems to Advance Individual and Collective Goals in Physical Crowdsourcing*.
 - Northwestern Department of Communication Studies Graduate Dissertation Award.

Josh Hibschan Fall 2014 to June 2017
 - Advised research on Readily Available Learning Experiences (RALE).
 - Dissertation: *Readily Available Learning Experiences in Production Code*.

Emily Harburg Summer 2014 to Spring 2015
 - Advised research on crowdsourced lost and found for TSB rotation.

Scott Cambo Spring 2015 to Summer 2015
 - Advised research on on-the-go citizen science for TSB rotation.

Julian Vicens (visiting student) Summer 2016
 - Advised summer research on “Patterns: Teaching the Scientific Method through a Citizen Science application”

UNDERGRADUATE RESEARCH ADVISING Agile Research Studios (ARS)
 Isaac Miller, Molly Pribble, Neha Sharma, Olivia Gallager, Zev Stravitz, Victoria Cabales, Maggie Lou, and Nneoma Oradiegwu Fall 2017 to present

- Advise research on “Tools and Processes for Supporting Meta-cognitive Reflection.”
- Work led to CHI 2019 Student Research Competition Paper on “Muse: Scaffolding Metacognitive Reflection in Design-Based Research.”
- Work led to CHI 2022 Late Breaking Work on “MindYoga: Scaffolding the Metacognitive Reflection Process within Learning Ecosystems.”

Ariella Silver, Aimee Nicole van den berg, Shankar Salwan and Sehmon Burnam Spring 2017 to present
 - Advise research on “Understanding and Promoting Collective Skill Development and Growth in Learning Communities.”

Bomani McClendon and Sameer Srivastava Winter 2016 to Spring 2017
 - Advise research on “Polaris: Scaffolding the Creation & Evaluation of Design Arguments for Undergraduate Researchers”

Opportunistic Collective Experiences (OCE)
 Richard Lam, Parveen Dhanoa, Jenny Chang, Nina Cong, Kevin Cheng, David Lee, Gabriel Caniglia, Sanfeng Wang, Gino Wang, and Eunice Lee Spring 2017 to present
 - Advise research on “Collective Narratives: An API for Opportunistic Storytelling and Immersive Interactive Narratives.”

- Work led to CHI 2020 Late Breaking Work on “Cast: A Context-Aware Collaborative Storytelling Platform.”
- Work led to CSCW 2021 Late Breaking Work on “Collective Narrative: Scaffolding Community Storytelling through Context-Awareness.”

Cindy Hu, Grace Wainaina, Mason Lin, Zachary Cmiel, David Lee, Amy Yang, Mary Truong, and Navin Gopaul Winter 2019 to present

- Advise research on “Relationship Development Through Opportunistic Collective Experiences.”
- Work led to CHI 2022 Student Research Competition Paper on “Self-Disclosure for Early Relationship Development through Situated Prompts in Opportunistic Collective Experiences.”

Ryan Jeon, Matthew Wang, Allison Sun and Jennie Werner Fall 2016 to Spring 2018

- Advise research on “Cerebro: Programming Opportunistic Interactions Across People”
- Work led to presentation at ACM CHI Student Research Competition (2nd place), CHI 2018
- Work led to ACM CSCW 2020 paper “Opportunistic Collective Experiences: Identifying Shared Situations and Structuring Shared Activities at Distance.”

Kevin Chen, Ryan Madden, and Shannon Nachreiner Fall 2015 to Spring 2016

- Advise research on “Collective Experience API.”

Readily Available Learning Experiences (RALE)

Jonathan Liu, Natalie Brewster, Maxine Whitely, David Latimore, and Aaron Leon Spring 2017 to present

- Advise research on “Scaffolded Exercises on Professional Code Examples.”

Alex Andreiu, Roxy Wilcox, Fardeem Munir, Ava Robinson, Salome Kariuki, Daniel Zhu and Suzy Lee Winter 2018 to present

- Advise research on “Knowledge Maps: An Interactive Tool for Learners to Curate Similar and Contrasting Professional Code Examples.”
- Work led to ACM CHI 2020 Student Research Competition extended abstract on “Knowledge Maps: Building Conceptual CSS Knowledge Through Comparison.”
- Work led to ACM CHI 2022 Student Research Competition extended abstract on “Knowledge Maps for Building Conceptual and Transferable CSS Knowledge.”

Sarah Lim Fall 2016 to Spring 2018

- Advise research on “Ply: A Visual Web Inspector for Learning from Complex Professional Examples.”
- Work led to presentation at ACM CHI Student Research Competition (1st place), CHI 2017
- Work led to “Ply: A Visual Web Inspector for Learning from Complex Professional Examples” at *UIST '18*. Best Paper Award Honorable Mention.
- Work resulted in Mozilla Firefox 70 shipping the Inactive CSS feature to help identify and surface implicit dependencies within the Firefox Developer Tools.

Jon Rovira Winter 2016 to Spring 2016

- Advise research on “Intelligent Code Matching: Using Professional Examples to Help Novice Programmers Write Better Code.”

Sarah Lim and Christina Kim Fall 2015 to Spring 2016

- Advise research on “Dynamic Tutorials: Using Professional Web Examples to Providing When-To-Do Intuitions.”

Nicole Zhu and Michael Wang

Fall 2015 to Spring 2016

- Advise research on “Reverse Engineer Professional Web Layouts for Authentic Learning.”

Philip House, Alex Hollenbeck, Ben Rothman, Sarah Lim Spring 2014 to Spring 2015

- Advised research on “Programming with a purpose.”
- Prototyped a web application that teaches Bootstrap components. Students contribute to generating CSS style guides while learning.

Networked Orchestration Technologies (NOT)

Jason Friedman, Hang Yin, Kieran Bondy, Tommy McHugh, Vishal Giridhar, and Richard Huang Winter 2019 to present

- Advise research on “Orchestration Scripts: Language and Tool for Encoding Mentoring Strategies.”

Sydney Smith and Charlotte Jones

Spring 2021 to present

- Advise research on “Interactive SOAP notes for advancing mentoring and coaching.”

Ariella Silver, Caryl Henry, and Josh Klein

Winter 2019 to Spring 2020.

- Advise research on “Regulation Devices: Orchestration Support for Meetings.”

Context-Aware Metacognitive Practice (CAMP)

Lauren Bichelmeir, Justin Shi, Izzy Chun

Fall 2021 to present.

- Advise research on “Cardinal: A Personal Assistant for Helping CS1 Students Seek Help.”

Amy Guo

Spring 2022 to present.

- Advise research on “PATH: Process Adjustment by Tackling Hang-ups.”

On-The-Go Crowdsourcing (OTG)

Abizar Bagasrawala

Fall 2019 to Spring 2020

- Advise research on “Relational Development through On-the-Go Crowdsourcing.”

Cooper Barth, Sam Naser and Maggie Lou

Winter 2018 to Spring 2020

- Advise research on “The Last Mile Problem in On-the-Go Crowdsourcing: Challenges and Models.”

Olivia Barnett, Priya Shah, and Eli Cohen

Fall 2017 to Fall 2018

- Advise research on “Dynamic Habitsourcing: Incorporating the 4X framework into Habit-Building Activities.”

Sasha Weiss

Spring 2016 to Fall 2018

- Advise research on “Context-Aware Micro-reminders.”

Kapil Garg

Winter 2016 to Spring 2018

- Advise research on “4X: Scaffolding Low-Effort Sensing.”
- Work led to CSCW 2019 paper “4X: A Hybrid Approach for Scaffolding Data Collection and Interest in Low-Effort Participatory Sensing.”

Aaron Loh

Fall 2015

- Advise research on “Scaffolding Low-Effort Sensing.”

- Shana Azria Fall 2015 to Winter 2016
- Advise research on “Libero: On-the-Go Package Delivery.”
 - Work led to paper “Studying the Effects of Task Notification Policies on Participation and Outcomes in On-the-go Crowdsourcing” at *HCOMP '16*.
- Zachary Allen Spring 2014 to Spring 2015
- Advised research on “Engage with a purpose: using mobile and wearable devices to promote exploration and discovery.”
 - Work led to presentation at ACM CHI Student Research Competition (3rd place) on “GAZE: Using Mobile Devices to Promote Discovery and Data Collection.”, CHI 2015.
- Stephen Chan, Nicole Zhu Winter 2013 to Spring 2015
- Advised research on “Low-effort crowdsourcing.”
 - Co-developed iOS app *Tapshare*, which allows for low-effort, participatory community-sensing through simple gestures such as Knocks. Also led design and needfinding efforts.
- Nicholas Scoliard Spring 2014
- Advised research on “Crowdsourcing desirable walking paths.”
 - Developed iOS app for collecting and presenting desirable walking routes around campus.
- Situational Crowdsourcing (SC)
- Katherine Lin, Hyung-Soon Kim, and Alaina Kafkes Spring 2016 to Winter 2017
- Advise research on “Scaffolding Habitsourcing: Interactions and Methods.”
- Katherine Lin and Henry Spindell Spring 2015 to Spring 2016
- Advise research on “Habitsourcing: Build personal habits with immersive experiences that collect environmental data.”
 - Work led to paper “Habitsourcing: Sensing the Environment through Immersive, Habit-Building Experiences” at *UIST '16*.
- Shawn Caeiro and Jennie Werner Fall 2015 to Spring 2016
- Advise research on “Physical Games with a Purpose.”
- Leesha Maliakal, Scott Cambo, Christina Kim Winter 2015 to Spring 2016
- Advise research on “Crowdcheer: motivating marathon runners with timely cheers from the crowd.”
 - Work led to presentation at Grace Hopper 2015 Student Research Competition (2nd place) on “CrowdCheer: Situational Crowdsourcing of Motivation for Runners”
- Frank Avino and Henry Spindell Winter 2015 to Spring 2015
- Advised research on “RinkTalk: parentsourcing event detection at hockey games to support coaches and players.”
- Jonah Ruffer Spring 2014
- Advised research on “Waitsourcing: using dead time for crowd work.”
 - Developed ‘I spy’ games for waiting at bus stops. Games collect as a by-product a rich dataset of photos and census information.
- Breaking Boundaries (BB)
- Meg Grasse, Andrew Finke, and Alex Kaldjian Fall 2016 to Spring 2018

- Co-advised summer research on “k-Implementation with Unknown Rewards.”
- Work extended results from *EC '09* policy teaching paper to a multi-agent setting.

SELECT STUDENT HONORS	DTR students, Undergraduate Research Grant, awarded 59 times between 2014–present.
	Ryan Louie, Google PhD Fellowship in Human Computer Interaction, 2022.
	Roxy Wilcox and Fardeem Munir, CHI Student Research Competition, 1st Place, 2022.
	Cindy Hu, CHI Student Research Competition, 2nd Place, 2022.
	Yongsung Kim, Northwestern Communication Studies Dissertation Award, 2021.
	Abizar Bagasrawala, KPCB Fellow, 2020.
	Sarah Lim, UIST Best Paper Award Honorable Mention, 2018.
	Josh Shi and Armaan Shah, CHI Student Research Competition, 1st Place, 2018.
	Jennie Werner and Allison Sun, CHI Student Research Competition, 2nd Place, 2018.
	Ryan Louie, Segal Design Cluster Fellowship, 2018.
	Yongsung Kim, Microsoft Research Internship, 2017.
	Leesha Maliakal, Segal Design Cluster Fellowship, 2017.
	Sehmon Burnam, KPCB Fellow, 2017.
	Eli Cohen, KPCB Fellow, 2017.
	Sarah Lim, CHI Student Research Competition, 1st Place, 2017.
	Josh Hibschan, Segal Design Cluster Fellowship, 2016.
	Josh Hibschan, Google Research Internship, 2016.
	Sarah Lim, Google Lime Scholarship, 2016.
	Yongsung Kim, Segal Design Cluster Fellowship, 2015.
	Leesha Maliakal, Grace Hopper Student Research Competition, 2nd Place, 2015.
	Yongsung Kim, CHI Student Research Competition, 1st Place, 2015.
	Zachary Allen, CHI Student Research Competition, 3rd Place, 2015.
	Kalina Silverman, OZY Genius Award, 2015.
	Kevin Chen, KPCB Fellow, 2015.
PROFESSIONAL ACTIVITIES	Director, Design Technology and Research, 2014–present.

Founder and Director, Agile Research University, 2017–present

Creator and Facilitator, Junior Faculty Support Group, 2022

Creator, Pair Research Platform, 2016–present

Member, HCOMP Steering Committee, 2014–present

Co-chair, HCOMP Doctoral Consortium, 2016

Mentor, HCOMP Doctoral Consortium, 2014, 2015

Co-organizer, CrowdCamp, 2014, 2015

Scheduling Chair, CHI & CSCW, 2013, 2014

Chair, HCOMP Works-in-Progress and Demo track, 2014

Co-organizer, Human Computation Workshop (HCOMP), 2011, 2012

Co-editor & advisor, CrowdResearch.org blog, 2011–2016.

Program committee: Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2018, 2019, 2022; Collective Intelligence (CI) 2017; Conference on Artificial Intelligence (AAAI) 2014; International Conference on World Wide Web (WWW) 2014, 2017; International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2014; International Joint Conferences on Artificial Intelligence (IJCAI) 2013; Conference on Human Computation and Crowdsourcing (HCOMP) 2013, 2014, 2017; NIPS Workshop on Computational Social Science & the Wisdom of Crowds 2011; North East Student Colloquium on Artificial Intelligence 2010.

Refereeing: Machine Learning (ML) 2012; Artificial Intelligence (AIJ) 2012; ACM Symposium on User Interface Software and Technology (UIST) 2012, 2013, 2014, 2016, 2018, 2021; ACM Conference on Human Factors in Computing Systems (CHI) 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019; ACM Conference on Computer Supported Collaborative Work and Social Computing (CSCW) 2015, 2017, 2021; ACM Transactions on Computer-Human Interaction (TOCHI) 2013; IEEE Internet Computing 2012; Transactions on Economics and Computation (TEAC) 2012; International Conference on World Wide Web (WWW) 2010, 2015, 2016; Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS) 2009; Journal of Artificial Intelligence Research (JAIR) 2009, 2015, 2016; International Journal on Human Computer Studies (IJHCS) 2016, 2017.

UNIVERSITY AND
DEPARTMENTAL
SERVICE

Director, Design Technology and Research, 2014–present.

Chair of CS undergraduate research committee, Northwestern CS, 2019–present.

Director, CS undergraduate honors thesis program, Northwestern CS, 2021–present.

CS curriculum committee, Northwestern CS, 2015–2019.

URG selection committee, Northwestern University, 2015–2017.

Director, Design Cluster, 2022–present Executive Committee Member, Northwestern

NICO, 2021–present

Organizer, Segal Design Seminar Series, 2013–2021.

Segal research council, Northwestern University, 2013–present.

Mentor & judge, WildHacks, 2016.

Co-chair, Northwestern NICO working group on Internet and Society, 2014–2016.

CS admissions committee, Northwestern CS, 2017, 2018, 2021.

TSB admissions committee, Northwestern TSB, 2013–2017, 2023.

PhD Committee Chair: Josh Hirschman, Yongsung Kim

PhD Committee Member: Yi Yang, Michael Lucas, Diego Gomez Zara

Garage Executive Director search committee, 2022.

Member, CS+X strategic committee, Northwestern CS, 2016–2018.

Member, CS Professor of instruction search committee, 2017–2018.

Member, TSB Faculty search committee, 2016–2017.

Member, CS Postdoc of instruction search committee, 2017.

Co-chair, CS search planning committee, Northwestern CS, 2016.

Theory search committee, Northwestern University, 2013.