

JULIE HUI

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RESEARCH OBJECTIVE

I am a design researcher with a focus in human-computer interaction and human-centered design. I study how socio-technical systems are changing the nature of professional development in informal workplace contexts. I am trained in design and mixed-methods approaches.

CURRENT ACADEMIC APPOINTMENT

2017-Present **Research Fellow**
University of Michigan
School of Information
Ann Arbor, MI, USA
Mentor: Dr. Tawanna Dillahunt

EDUCATION

2011-2017 **Ph.D. in Mechanical Engineering**
Segal Design Institute
Northwestern University
McCormick School of Engineering
Evanston, IL, USA
Doctoral Committee: Elizabeth Gerber (advisor), Darren Gergle, Edward Colgate

2007-2011 **B.S. in Physics**
Massachusetts Institute of Technology
School of Science
Cambridge, MA, USA
Minor in Mechanical Engineering

RESEARCH EXPERIENCE

2017-Present **Postdoctoral Research Fellow**
University of Michigan
School of Information
Mentor: Dr. Tawanna Dillahunt
Understanding the work of micro-entrepreneurs in lean economies to identify design implications for career support tools and co-design community-based interventions.

- Interviewing micro-entrepreneurs in Detroit to understand how they leverage social technologies and local communities to develop professional skills and access resources.
- Leading a community-based participatory research approach by working with a local organization in Eastside Detroit to develop and lead workshops for teaching local community members how to develop neighborhood businesses.

2011-2017 **Graduate Research Assistant**

Northwestern University
Delta Lab, Segal Design Institute
Advisor: Dr. Elizabeth Gerber

Understanding and leveraging social technologies to support entrepreneurs and designers:

- Recruited and interviewed 109 crowdfunders about their motivations and the role of community to inform the design of crowdfunding technologies for social learning [J1, J2, C1, C2, C4, C5].
- Participatory observations of makerspaces to understand equitable participation and help-seeking practices [C8, W11].
- Field study of 6 design classes to create a set of activities that help students leverage social media and online crowds in their design process. Activities used at Northwestern University and Carnegie Mellon University [C3, C6].
- Designed, built, and tested an online tool to support novice entrepreneurs in writing introductory help requests to community partners and mentors [C9]

Fall 2016 **Research Intern**

Facebook
User Experience Research
Mentor: Donna Tedesco

- Performed large-scale surveys, interviews, field intercepts, product user testing, and log data analyses to understand how people used online technologies to coordinate event awareness and attendance.

Summer 2015 **Research Intern**

Microsoft Research
FUSE Labs
Mentor: Dr. Shelly Farnham

- Surveyed 132 entrepreneurs and performed 20 interviews to identify how collaboration tools can better support gender diverse project teams [C7].

2010-2011 **Undergraduate Research Assistant**

Massachusetts Institute of Technology
Department of Electrical Engineering and Computer Science
Mentor: Dr. Steven Leeb

- Designed and built educational tools for MIT's Advanced Power Electronics II Lab class
- Work contributed to a publication in the IEEE Workshop on Control and Modeling for Power Electronics

ACADEMIC AWARDS & RECOGNITION

- 2017 Northwestern Cabell Fellowship
- 2013-2016 NSF Graduate Research Program Fellowship
- 2016 Invited Member of Doctoral Consortium at CHI
- 2015 Invited Member of Doctoral Consortium at HCOMP
- 2015 Invited Member of Doctoral Consortium at C&C
- 2014 CSCW Best Paper Nomination
- 2014 Grace Hopper Celebration for Women in Computing Scholarship
- 2013 Northwestern Segal Design Cluster Fellowship
- 2011-2012 Northwestern Murphy Scholarship

PUBLICATIONS

CONFERENCE PAPERS (PEER-REVIEWED, ARCHIVAL)

- [C9] **Hui, J.**, Gergle, D., Gerber, E. (2018) IntroAssist: A Tool to Support Writing Introductory Help Requests. *Proceedings of SIGCHI Conference on Human Factors in Computing Systems*. Montréal, Canada. To Appear at CHI'18. ACM Press.
- [C8] **Hui, J.**, Gerber, E. (2017) Developing Makerspaces as Sites of Entrepreneurship. *Proceedings of SIGCHI Conference on Computer Supported Cooperative Work and Social Computing*. Portland, USA. To Appear at CSCW '17. ACM Press. [Acceptance Rate: 34%]
- [C7] **Hui, J.**, Farnham, S.. (2016) Designing for Inclusion: Supporting Gender Diversity in Independent Innovation Teams. *Proceedings of SIGCHI Conference on Supporting Groupwork*. Sanibel Island, USA. GROUP '16. ACM Press. [Acceptance Rate: 30%]
- [C6] **Hui, J.**, Glenn, A., Jue, R., Dow, S., Gerber, E. (2015) Using Anonymity and Communal Efforts to Improve Quality of Crowdsourced Feedback. *Proceedings of AAAI Conference on Human Computation and Crowdsourcing*. San Diego, USA. HCOMP '15. AAAI Press, 72-82. [Acceptance Rate: 30%]
- [C5] **Hui, J.**, and Gerber, E. (2015) Crowdfunding Science: Sharing Research with an Extended Audience. *Proceedings of SIGCHI Conference on Computer Supported Cooperative Work and Social Computing*. Vancouver, Canada. CSCW '15. ACM Press, 31-43. [Acceptance Rate: 26%]
- [C4] Harburg, E., **Hui, J.**, Greenberg, M., Gerber, E. (2015) The Effects of Crowdfunding on Entrepreneurial Self-Efficacy. *Proceedings of SIGCHI Conference on Computer Supported Cooperative Work and Social Computing*. Vancouver, Canada. CSCW '15. ACM Press, 31-43. [Acceptance Rate: 26%]
- [C3] **Hui, J.**, Gerber, E., Dow, S. (2014) Crowd-Based Design Activities: Helping Students Connect with Users Online. *Proceedings of SIGCHI Conference on Designing Interactive Systems*. Vancouver, Canada. DIS '15. ACM Press, 875-884. [Acceptance Rate: 20%]
- [C2] **Hui, J.**, Gerber, E., Gergle, D. (2014) Understanding and Leveraging Social Networks for Crowdfunding: Opportunities and Challenges. *Proceedings of the SIGCHI Conference on Designing Interactive Systems*. Vancouver, Canada. DIS '15. ACM Press, 677-680. [Acceptance Rate: 20%]
- [C1] **Hui, J.**, Greenberg, M., Gerber, E. (2014) Understanding the Role of Community in Crowdfunding Work. *Proceedings of SIGCHI Conference on Computer Supported Cooperative Work and Social Computing*. Baltimore, USA. CSCW '14. ACM Press, pp. 62-74. [Acceptance Rate: 26%] ***Nominated for Best Paper Award***

JOURNAL ARTICLES (PEER-REVIEWED, ARCHIVAL)

- [J3] Roldan, W., **Hui, J.**, Gerber, E. University Makerspaces: Opportunities to Support Equitable Participation for Women in Engineering. *International Journal of Engineering Education*. In press.
- [J2] **Hui, J.**, Gerber, E., Easterday, M. Distributed Apprenticeship in Online Communities. Accepted to the *Human-Computer Interaction* journal. In press.
- [J1] Gerber, E., **Hui, J.** (2013) Crowdfunding: Motivations and Deterrents for Participation. *ACM Transactions on Computer-Human Interaction*. TOCHI. ACM Press, 20(6), Article 34, 677-680.

BOOK CHAPTERS

- [B1] Gerber, E., **Hui, J.** (2016) Crowdfunding: How and Why People Participate. In Méric, J., Maque, I., Brabet, J. (Eds.) *International Perspectives on Crowdfunding: Positive, Normative, and Critical Theory*. Emerald Group Publishing Limited, Bingley, UK.

WORKSHOP PAPERS AND POSTERS (PEER-REVIEWED)

- [W11] Roldan, W., **Hui, J.**, Gerber, E. (2017) University Makerspaces: Opportunities to Support Equitable Participation for Women in Engineering. Clive L. Dym Mudd Design Workshop. Claremont, CA, USA.
- [W10] **Hui, J.** (2017) Supporting Entrepreneurship in Underserved Populations. In workshop on Reflections on Design Methods for Underserved Communities at SIGCHI Conference on Computer Supported Cooperative Work and Social Computing. Portland, USA. CSCW '17. ACM Press.
- [W9] **Hui, J.** (2016) Online Help-Seeking in Communities of Novice Innovators. In Extended Abstracts of SIGCHI Conference on Human Factors in Computing Systems Doctoral Consortium. San Jose, USA. CHI '16. ACM Press, 218-222.
- [W8] **Hui, J.** (2015) Supporting Online Mentor Connections for Novice Entrepreneurial Engineers. In Extended Abstracts of AAAI Conference on Human Computation and Crowdsourcing Doctoral Consortium. San Diego, USA. HCOMP '15. AAAI Press.
- [W7] **Hui, J.** (2015) Leveraging Online Communities for Novice Designers. In Extended Abstracts of SIGCHI Conference on Creativity and Cognition Graduate Student Symposium. Glasgow, Scotland. C&C '15. ACM Press, 347-348.
- [W6] **Hui, J.**, Gerber, E. (2015) The Role of Community in Crowdfunding Work. Paper presented at Collective Intelligence Conference. Santa Clara, USA.
- [W5] Gerber, E., **Hui, J.** (2014) To Crowdfund or Not. Poster presented at Collective Intelligence Conference. Cambridge, USA.
- [W4] **Hui, J.**, Gerber, E., Gergle, D. (2013) Understanding and Leveraging Social Networks for Crowdfunding: Implications for Support Tools. In Extended Abstracts of SIGCHI Conference on Human Factors in Computing Systems. Paris, France. CHI '13. ACM Press, 2083-2088.
- [W3] **Hui, J.**, Greenberg, M., Gerber, M. (2013) Understanding Crowdfunding Work: Implications for Support Tools. In Extended Abstracts of SIGCHI Conference on Human Factors in Computing Systems. Paris, France. CHI '13. ACM Press, 889-894.
- [W2] Greenberg, M., **Hui, J.**, Gerber, M. (2013) Crowdfunding: A Resource Exchange Perspective. In Extended Abstracts of SIGCHI Conference on Human Factors in Computing Systems. Paris, France. CHI '13. ACM Press, 883-888.
- [W1] Gerber, E., **Hui, J.**, Kuo P-Y. (2012) Crowdfunding: Why People are Motivated to Post and Fund Projects on Crowdfunding Platforms. In workshop on Design Influence and Social Technologies: Techniques, Impacts, and Ethics at SIGCHI Conference on Computer Supported Cooperative Work. Bellevue, USA. CSCW '12.

INVITED TALKS AND PAPER PRESENTATIONS

- 2017 Presidential Postdoctoral Fellowship Job Talk - Self-directed Professional Development via Socio-Technical Systems. University of Michigan School of Information. November 25, 2017. Ann Arbor, MI, USA.
- 2017 Paper-based Talk - University Makerspaces: Opportunities to Support Equitable Participation for Women in Engineering. Clive L. Dym Mudd Design Workshop. June 1-3, 2017. Claremont, CA, USA.
- 2017 Paper-based Talk - Developing Makerspaces as Sites of Entrepreneurship. ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW). February 27 - March 1, 2017. Portland, OR, USA.
- 2016 Invited Talk - University of Illinois - Urbana Champaign, Human-Computer Interaction Seminar. December 6, 2016. Champaign, IL, USA.
- 2016 Invited Talk - Arizona State University, Engineering Education Systems and Design PhD Seminar. November 28, 2016. Tempe, AZ, USA.
- 2016 Paper-based Talk - Designing for Inclusion: Supporting Gender Diversity in Independent Innovation Teams. ACM Conference on Groupwork (GROUP). November 13-16, 2016. Sanibel Island, FL, USA.
- 2016 Invited Talk - Developing Communities of Independent Innovators. Northwestern University, Segal Design Seminar. August 30, 2016. Evanston, IL.
- 2016 Doctoral Consortium Talk - Online Help-Seeking in Communities of Novice Innovators. ACM Conference on Human Factors in Computing Systems Doctoral Consortium (CHI). May 7-12, 2016. San Jose, CA, USA.
- 2015 Doctoral Consortium Talk - Supporting Online Mentor Connections for Novice Entrepreneurial Engineers. AAAI Conference on Human Computation and Crowdsourcing Doctoral Consortium (HCOMP). November 8-11, 2015. San Diego, CA, USA.
- 2015 Paper-based Talk - Using Anonymity and Communal Efforts to Improve Quality of Crowdsourced Feedback. AAAI Conference on Human Computation and Crowdsourcing (HCOMP). November 8-11, 2015. San Diego, CA.
- 2015 Doctoral Consortium Talk - Leveraging Online Communities for Novice Designers. ACM Conference on Creativity and Cognition Graduate Student Symposium (C&C). June 22-26, 2015. Glasgow, Scotland.
- 2015 Paper-based Talk - The Role of Community in Crowdfunding Work. Collective Intelligence Conference. May 31-June 2, 2015. Santa Clara, CA, USA.
- 2015 Paper-based Talk - Crowdfunding Science: Sharing Research with an Extended Audience. ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW). March 14-18, 2015. Vancouver, BC, Canada.
- 2014 Paper-based Talk - Crowd-Based Design Activities: Helping Students Connect with Users Online. ACM Conference on Designing Interactive Systems (DIS). June 21-25, 2014. Vancouver, BC, Canada.

- 2014 Paper-based Talk - Understanding and Leveraging Social Networks for Crowdfunding: Opportunities and Challenges. ACM Conference on Designing Interactive Systems (DIS). June 21-25, 2014. Vancouver, BC, Canada.
- 2014 Paper-based Talk - Understanding the Role of Community in Crowdfunding Work. ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW). February 15-19, 2014. Baltimore, MD, USA.

TEACHING, LEADERSHIP, AND OUTREACH

- Fall 2017 **Guest Lecturer**
University of Michigan
 - Designed and delivered lectures in the School of Information's Interaction Design master's level course taught by Dr. Tawanna Dillahunt, the Introduction to Information undergraduate level course taught by Dr. Mark Newman, and the Stamp's School of Art and Design Research Methods master's level course taught by Dr. Sun Young Park.
- Winter 2017 **Lead Organizer**
Segal Design Cluster
Northwestern University
 - Organized and facilitated 9 meetings between the 40 faculty and students to discuss topics in human-centered design, share feedback on projects, and present current work.
- Winter 2016 **Head Teaching Assistant**
ME 398-1: Engineering Design
Northwestern University
 - Developed and gave lectures on user research, ideation, and user testing.
 - Met with all five project teams for an hour every week to provide guidance and feedback.
 - Attended all instructor team meetings to plan class direction.
- October 2015 **Hackathon Lead Organizer and Facilitator**
Crowdcamp Workshop
AAAI Conference on Human Computation and Crowdsourcing
 - Recruited 25 participants, including faculty, graduate students, and industry researchers.
 - Organized and led a day-long hackathon to design and build crowdsourcing technologies.
- 2014-2016 **President, Co-Founder of Northwestern Toastmasters Chapter (Public Speaking Team)**
Northwestern University
 - Founded the Northwestern Toastmasters chapter of over 30 graduate and undergraduate students from 10 different departments.
 - Organized and lead 1.5 hour weekly meetings to improve student public speaking skills.
- Spring 2014, 2015 **Guest Lecturer**
Northwestern University
 - Designed and delivered lectures and activities in the undergraduate and masters level Human-Centered Service Design course on how to identify problems, brainstorm ideas, and seek feedback from users.
- Spring 2014 **Curriculum Design Mentor**
LRN_SCI 429: Design of Learning Environments
 - Selected by course professor, Dr. Matt Easterday, to mentor a graduate student team on their class projects to design a maker learning environment for a local middle school.

RESEARCH MENTORSHIP

- 2017 (10 mo.) Wendy Roldan, Northwestern undergraduate (PhD Student in U. of Washington HCDE Program)
- 2015 (6 mo.) Shannon Nachreiner, Northwestern undergraduate (Computer Programmer at Course Hero)
- 2015 (6 mo.) Sofia Sami, Northwestern undergraduate
- 2014 (3 mo.) Joona Hamad, Northwestern undergraduate
- 2014 (1 yr.) Hannah Hudson, Northwestern undergraduate (Designer at Intuit)
- 2013 (3 mo.) Nichole Zhu, Northwestern undergraduate (Computer Science Intern at Vox)
- 2013 (1 yr.) Lauren Tindal, Northwestern undergraduate (User Support at Box)
- 2013 (3 mo.) Alan Besquin, Northwestern undergraduate (Design Intern at Apple)
- 2013 (6 mo.) Cassandra Coravos, Northwestern undergraduate (Fellow at Venture for America)
- 2013 (3 mo.) Catherine Jameson, High school student (Mechanical Engineering student at Yale)
- 2012 (1 yr.) Megan Sherich, Northwestern undergraduate (Engineer at CareFusion)

ACADEMIC SERVICE

Program Committee: ACM Creativity & Cognition 2017 Papers, ACM Creativity & Cognition 2015 Posters and Demonstrations

Conference Paper Reviewer: CHI 2013-2018, CSCW 2013-2017, UIST 2015, HICSS 2016

Journal Paper Reviewer: Transactions on Human Computer Interaction (TOCHI), Behavior & Information Technology, Information Systems Frontiers, American Society of Mechanical Engineers Journal, Journal of Business Ethics

Web Designer: HCOMP 2017

PRESS

Work featured in: NPR Marketplace (2017), Harvard Business Review (2016), The Wall Street Journal (2014), ABC News (2012), Toronto Star (2012), and Physics Today (2013),

SKILLS

Mastery: Interviews, Participatory Observation, Survey Design, Qualitative Data Analysis, Usability Studies

Proficiency: Experimental Design, Quantitative Data Analysis, Statistics (R), Python, HTML, CSS, Javascript, Social Network Analysis, SQL, SolidWorks

Familiarity: Mechatronics, Machining, Woodworking

REFERENCES (UPON REQUEST)

Dr. Elizabeth Gerber - Associate Professor of Mechanical Engineering (Segal Design Institute, Northwestern University)

Dr. Darren Gergle - Associate Professor of Communication Studies, Director of Graduate Studies - Technology and Social Behavior (Northwestern University)

Dr. Steven Dow - Assistant Professor of Cognitive Science (University of California San Diego)