Eleanor O'Rourke

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Research Interests

My research lies at the intersection of computer science (CS) and the learning sciences (LS), with a particular interest in bridging across these two fields to advance innovative approaches for learning with and about technology. With expertise in human-computer interaction, computer science education, and theories of motivation and learning, much of my research has focused on understanding the experience of learning to program and designing, building, and evaluating interventions to better support students. More recently, I have been exploring the intersection of generative AI and learning through both research and service, with a focus on bridging between the often divergent perspectives on learning held by experts in the fields of CS and LS.

Appointments

2024 – present. Associate Professor (with tenure)

Joint appointment in the department of Computer Science and the Learning Sciences program Northwestern University, Evanston, IL

2017 – 2024. Assistant Professor (tenure track)

Joint appointment in the department of Computer Science and the Learning Sciences program Northwestern University, Evanston, IL

2016 – 2017. College Fellow (postdoctoral position)

Joint appointment in the department of Computer Science and the Learning Sciences program Northwestern University, Evanston, IL

Education

2016 Ph.D., Computer Science & Engineering

University of Washington, Seattle, WA Thesis: *Educational Systems for Maximizing Learning Online and in the Classroom* Committee: Zoran Popović (chair), Carol S. Dweck, Daniel S. Weld

2012 M.S., Computer Science & Engineering

University of Washington, Seattle, WA Advisor: Richard Anderson

2007 B.A., Majors in Computer Science and Spanish

Colby College, Waterville, ME Graduated Summa Cum Laude

Awards and Honors

Best Research Mentor: CS Department, Northwestern University, 2023 Best Paper Award: SIGCSE 2022 NSF CAREER Award, 2021 Google Systems Research Award, 2020 Best Paper Honorable Mention: UIST 2018 Google Anita Borg Scholarship, 2015 Society of Women Engineers Outstanding Female Engineer Award, 2014 Best Paper Nomination: EDM 2013 Best Paper Honorable Mention: CHI 2012 Microsoft Research Graduate Women's Scholarship: Recipient, 2010 NSF Graduate Research Fellowship: Honorable Mention, 2010 & 2011

Refereed Conference and Journal Publications

Premiere conferences in human-computer interaction and computer science (e.g CHI, UIST, ICER) are highly selective and intended for archival papers only. These conferences are often more selective and more visible than journals. In computer science, student authors are traditionally listed first, and advisors are listed last. Below, student and postdoc authors that I mentored are <u>underlined</u> and undergraduate authors are additionally starred^{*}.

- Melissa Chen, Yinmiao Li, Eleanor O'Rourke (2024). Understanding the Reasoning Behind Students' Self-Assessments of Ability in Introductory Computer Science Courses. Proceedings of the ACM International Computing Education Research Conference (ICER 2024).
- [2] <u>Yinmiao Li, Melissa Chen, Ayse Hunt</u>, Haoqi Zhang, Eleanor O'Rourke (2024). Exploring the Interplay of Metacognition, Affect, and Behaviors in an Introductory Computer Science Course for Non-Majors. Proceedings of the ACM International Computing Education Research Conference (ICER 2024).
- [3] <u>Yinmiao Li</u>, Haoqi Zhang, Eleanor O'Rourke (2024). The Undervalued Disciplinary and Emotional Support with Teaching Assistants in Introductory Computer Science Courses. Proceedings of the International Society of the Learning Sciences Annual Meeting (ISLS 2024).
- [4] Jamie Gorson, Kathryn Cunningham, Marcelo Worsley, Eleanor O'Rourke (2022). Using Electrodermal Activity Measurements to Understand Student Emotions While Programming. Proceedings of the ACM International Computing Education Research Conference (ICER 2022).
- [5] <u>Kathryn Cunningham</u>, <u>Yike Qiao*</u>, <u>Alex Feng*</u>, **Eleanor O'Rourke** (2022). Bringing "High-level" Down to Earth: Gaining Clarity in Conversational Programmer Learning Goals. Proceedings of the ACM Technical Symposium on Computer Science Education (SIGCSE 2022). Best Paper Award.
- [6] Jamie Gorson, Nicholas LaGrassa, Cindy Hsinyu Hu*, Elise Lee*, Ava Marie Robinson*, Eleanor O'Rourke (2021). An Approach for Detecting Student Perceptions of the Programming Experience from Interaction Log Data. Proceedings of the Artificial Intelligence in Education Conference (AIED 2021).
- [7] <u>Jamie Gorson</u>, **Eleanor O'Rourke** (2021). *CS1 Student Assessments of Themselves Relative to Others: The Role of Self-Critical Bias and Gender*. Proceedings of the International Society of the Learning Sciences Annual Meeting (ISLS 2021).

- [8] Jamie Gorson, Eleanor O'Rourke (2020). Why do CS1 Students Think They're Bad at Programming? Investigating Self-Efficacy and Self-Assessments at Three Universities. Proceedings of the ACM International Computing Education Research Conference (ICER 2020).
- [9] Jamie Gorson, Eleanor O'Rourke (2019). How Do Students Talk About Intelligence? An Investigation of Motivation, Self-efficacy, and Mindsets in Computer Science. Proceedings of the ACM International Computing Education Research Conference (ICER 2019).
- [10] Eleanor O'Rourke, Eric Butler, Armando Díaz Tolentino, Zoran Popović (2019). Automatic Generation of Problems and Explanations for an Intelligent Algebra Tutor. Proceedings of the International Conference of Artificial Intelligence in Education (AIED 2019).
- [11] Joshua Hibschman, Darren Gergle, Eleanor O'Rourke, Haoqi Zhang (2019). Isopleth: Supporting Sensemaking of Professional Web Applications to Create Readily Available Learning Experiences. ACM Transactions on Computer-Human Interaction (TOCHI 2019).
- [12] Joshua Shi*, Armaan Shah*, Garrett Hedman, Eleanor O'Rourke (2019). Pyrus: Designing A Collaborative Programming Game to Support Problem-Solving Behaviors. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2019).
- [13] <u>Sarah Lim*</u>, <u>Joshua Hibschman</u>, Haoqi Zhang, Eleanor O'Rourke (2018). Ply: A Visual Web Inspector for Learning from Professional Webpages. Proceedings of the ACM Symposium on User Interface Software and Technology (UIST 2018). Best Paper Honorable Mention.
- [14] Eleanor O'Rourke, <u>Erin Peach*</u>, Carol S. Dweck, Zoran Popović (2016). Brain Points: A Deeper Look at a Growth Mindset Incentive Structure for an Educational Game. The Third Annual ACM Conference on Learning at Scale (L@S 2016).
- [15] Oleksandr Polozov, Eleanor O'Rourke, Adam Smith, Luke Zettlemoyer, Sumit Gulwani, Zoran Popović (2015). Personalized Mathematical Word Problem Generation. Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI 2015)
- [16] Eleanor O'Rourke, Erik Andersen, Sumit Gulwani, Zoran Popović (2015). A Framework for Automatically Generating Interactive Instructional Scaffolding. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2015).
- [17] Yun-En Liu, Christy Ballweber, Eleanor O'Rourke, Eric Butler, Phonraphee Thummaphan, Zoran Popović (2015). Large-Scale Educational Campaigns. ACM Transactions on Computer-Human Interaction (TOCHI 2015).
- [18] Eleanor O'Rourke, Kyla Haimovitz, Christy Ballweber, Carol S. Dweck, Zoran Popović (2014). Brain Points: A Growth Mindset Incentive Structure Boosts Persistence in an Educational Game. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2014).
- [19] Eleanor O'Rourke, Christy Ballweber, Zoran Popović (2014). *Hint Systems May Negatively Impact Performance in Educational Games*. The First Annual ACM Conference on Learning at Scale (L@S 2014).

- [20] Yun-En Liu, Travis Mandel, Eric Butler, Erik Andersen, Eleanor O'Rourke, Emma Brunskill, Zoran Popović (2013). Predicting Player Moves in an Educational Game: A Hybrid Approach. The Sixth International Conference on Educational Data Mining (EDM 2013). Best Paper Nomination.
- [21] Eleanor O'Rourke, Eric Butler, Yun-En Liu, Christy Ballweber, Zoran Popović (2013). The Effects of Age on Player Behavior in Educational Games. International Conference on the Foundations of Digital Games (FDG 2013).
- [22] Erik Andersen, Eleanor O'Rourke, Yun-En Liu, Richard Snider, Jeff Lowdermilk, David Truong, Seth Cooper, Zoran Popović (2012). The Impact of Tutorials on Games of Varying Complexity. Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2012). Best Paper Nomination.
- [23] Rohit Chaudhri, Eleanor O'Rourke, Shawn McGuire, Gaetano Borriello, Richard Anderson (2010). FoneAstra: Enabling Remote Monitoring of Vaccine Cold-Chains Using Commodity Mobile Phones. ACM Symposium on Computing for Development (DEV 2010).
- [24] Victoria Interrante, **Eleanor O'Rourke**, Leanne Gray, Lee Anderson, and Brian Ries (2007). A Quantitative Assessment of the Impact on Spatial Understanding of Exploring a Complex Immersive Virtual Environment using Augmented Real Walking versus Flying. Proc. of the 13th Eurographics Symposium on Virtual Environments.

Workshop Papers, Posters, Abstracts, Works In Progress

- [1] <u>Caryn Tran</u>, **Eleanor O'Rourke**. *Understanding Novices' Perceptions of "Authentic" Programming*. Proceedings of the ACM International Computing Education Research Conference (ICER 2023).
- [2] <u>Melissa Chen</u>, Eleanor O'Rourke. Designing a Real-Time Intervention to Address Negative Self-Assessments While Programming. Proceedings of the ACM International Computing Education Research Conference (ICER 2023).
- [3] <u>Harrison Kwik</u>, Haoqi Zhang, Eleanor O'Rourke. How Do Students Seek Help and How Do TAs Respond? Investigating Help-Seeking Strategies in CS1 Office Hours. Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE 2022).
- [4] **Eleanor O'Rourke**, Yvonne Chen, Kyla Haimovitz, Carol S. Dweck, Zoran Popović (2015). *Demographic Differences in a Growth Mindset Incentive Structure for Educational Games*. The Second Annual ACM Conference on Learning at Scale Works in Progress (L@S WIP 2015).
- [5] Richard Anderson, Eric Blantz, David Lubinski, Eleanor O'Rourke, Mark Summer, and Krysta Yousoufian (2010). SmartConnect: Last Mile Data Connectivity for Rural Health Clinics. 4th ACM Workshop on Networked Systems for Developing Regions (NSDR 2010).
- [6] Victoria Interrante, Lee Anderson, Brian Ries, Eleanor O'Rourke, and Leanne Gray (2007). Experimental Investigations into the Feasibility of Using Augmented Walking to Facilitate the Intuitive Exploration of Large Scale Immersive Virtual Environments [Abstract]. Proc. of the 4th Symposium on Applied Perception in Graphics and Visualization (APGV 2007). vol. 253. ACM, New York, NY, p.144.

[7] Victoria Interrante, Brian Ries, **Eleanor O'Rourke**, Leanne Gray, Jason Lindquist, and Lee Anderson (2007). *Evaluating Alternative Metaphors for Augmented Locomotion Through Large-Scale Immersive Virtual Environments* [Abstract]. Journal of Vision, 7(9):145, 145a.

Funding

- [1] Eleanor O'Rourke (PI). CAREER: Towards Intelligent Learning Environments that Support the Practice of Programming. NSF RETTL, 2021-2026, \$597,870.
- [2] Eleanor O'Rourke. Google Systems Research Award, \$10,000 gift made in November, 2020.
- [3] Eleanor O'Rourke (PI) and Haoqi Zhang (Co-PI). Context-Aware Metacognitive Practice: Instrumenting Classroom Ecosystems to Help Introductory Computer Science Students Develop Effective Learning Strategies. NSF Cyberlearning, 2020-2023, \$748,957.
- [4] Eleanor O'Rourke (PI). Automatically Praising Learning Process to Promote the Growth Mindset in Computer Science. NSF CRII, 2018-2020, \$174,712.
- [5] Haoqi Zhang (PI) and Eleanor O'Rourke (Co-PI). Readily Available Learning Experiences: Turning the Entire Web into Progressive Examples to Bridge Conceptual Knowledge Gaps for Novice Web Developers. NSF Cyberlearning, 2017-2020, \$549,815.
- [6] Jason Hartline (PI), Doug Downey (Co-PI) and **Eleanor O'Rourke** (Co-PI). *Mechanism Design and Machine Learning for Peer Grading.* NSF Algorithms in the Field, 2017-2021, \$700,000.

Teaching

Computer Science:

CS 496: Transformative AI and the Learning Sciences: Fall 2023 CS 329: HCI Studio: Spring 2021, Spring 2024 CS 497: Tools and Technologies for Computer Science Education: Fall 2022, Fall 2020 EECS 330: Human-Computer Interaction: Winter 2019, Winter 2018, Winter 2017 EECS 315/497: Design, Technology, and Research: Fall 2017

Learning Sciences:

LS 451: Transformative AI and the Learning Sciences: Fall 2023 LS 451: Design of Playful Learning Environments: Fall 2021, Fall 2019 LS 301: Design of Learning Environments: Winter 2023, Winter 2021, Winter 2020, Spring 2019

Guest Lecturer

COG_SCI 366: Cognitive Science Proseminar. Fall 2022 COG_SCI 110: Introduction to Cognitive Science. Fall 2021 MSAI: Frameworks for Artificial Intelligence. Fall 2018 EECS 101: An Introduction to Computer Science for Everyone, Northwestern University. Fall 2017 CSE 481D: Games Capstone, University of Washington. May 3 & 6, 2016 Women's Studies Class, The Bush School, Seattle WA. November 1, 2013

Mentoring and Advising

Postdoc Advisees

Kathryn Cunningham, CI Fellows Program (2021 - 2022). Assistant Professor, UIUC

Ph.D. Advisees

Kristin Fasiang, CS+LS Program (2024 – Present) Ayse Hunt, CS+LS Program (2023 – Present) Yinmiao Li, CS+LS Program (2023 – Present) Melissa Chen, CS Program (2022 – Present) Caryn Tran, CS+LS Program (2022 – Present) Harrison Kwik (co-advised with Haoqi Zhang), TSB Program (2019 – 2022) Gobi Dasu (co-advised with Haoqi Zhang), CS Program (2018 – Present) Nick LaGrassa, CS+LS Program (2018 – 2021) Garrett Hedman, CS+LS Program (2017 – Present) Jamie Gorson, CS+LS Program (2017 – 2022). User Experience Researcher, Google

Ph.D. Committee

Leesha Maliakal Shah, TSB Program, PhD Expected 2023 Jue Wu, LS Program, Graduated September 2021 Allen Lin, CS Program, Graduated February 2021 Zheng Yuan, CS Program, Graduated June 2020 Isaac Johnson, CS Program, Graduated March 2019 Emily Harburg, TSB Program, Graduated September 2018 Joshua Hibschman, CS Program, Graduated June 2017

Undergraduate Students

Ella Cutler, CAMP: metacognitive process adjustments (March 2023 – Present) Kalli Gaggos, Authentic learning in high school computer science (January 2024 – June 2024) Dani Zhang, CAMP: metacognitive process adjustments (March 2023 – June 2023) Elise Lee, detecting self-assessment moments (September 2020 – August 2021) Ava Robinson, detecting self-assessment moments (September 2020 – April 2021) Cooper Barth, IDEs for helping students learn accessibility concepts (January 2021 - March 2021) Patrice Power, intelligent tutors to teach representational reasoning (January 2021 – March 2021) Cindy Hu, detecting self-assessment moments (June 2020 – February 2021) Jonathan Dai, peer grading (May 2020 – July 2020) Anna Deng, peer grading (May 2020 – July 2020) Maxine Whitely, RALE: scaffolded exercises (January 2018 – June 2020) Salome Kariuki, RALE: knowledge maps (October 2019 – March 2020) Armaan Dhingra, playful learning environments (June 2019 – December 2019) Andrew Finke, playful learning environments (April 2019 – December 2019) Daniel Zhu, RALE: knowledge maps (January 2018 - December 2019) Armaan Shah, collaborative games for novice programmers (March 2017 – April 2019) Josh Shi, collaborative games for novice programmers (January 2017 – April 2019) Suzy Lee, RALE: knowledge maps (September 2018 – March 2019) Sarah Lim, visual regression pruning for web inspection (March 2017 - October 2018) David Latimore, RALE: scaffolded exercises (January 2018 – June 2018) Allison Lu, metacognitive behavior tracking (September 2017 – June 2018) Megan Conlon, metacognitive behavior tracking (September 2017 – June 2018) Victoria Cabales, metacognitive reflection (January 2018 – June 2018) Sehmon Burnam, self-directed help seeking and skill growth (January 2018 – June 2018) Grace Alexander, growth mindset incentives for programming (January 2017 - March 2018) Maggie Lou, independent development plans (January 2018 – March 2018) Nneoma Oradiegwu, independent development plans (September 2017 - March 2018) Ankita Chowdry, peer grading assessments for reflection (September 2017 – December 2017) Morgan Walker, growth mindset incentives for programming (January 2017 - December 2017) Lily Zhang, growth mindset incentives for programming (January 2017 - December 2017) Erin Peach, interactive tutorials in Refraction (January 2013 – April 2015) Mallika Mathur, growth mindset incentives for Refraction (June 2013 - August 2013)

Student Honors

Melissa Chen, NSF Graduate Research Fellowship Program recipient, 2024 Melissa Chen, Segal Design Cluster Fellowship, 2023 Yinmiao Li, Segal Design Cluster Fellowship, 2023 Caryn Tran, Segal Design Cluster Fellowship, 2023 Harrison Kwik, NSF Graduate Research Fellowship Program recipient, 2021 Harrison Kwik, Segal Design Cluster Fellowship, 2020 Nicholas LaGrassa, NSF Graduate Research Fellowship Program recipient, 2020 Gobi Dasu, Segal Design Cluster Fellowship, 2019 Jamie Gorson, CS+LS Symposium poster competition, 1st place, 2019 Garrett Hedman, Segal Design Cluster Fellowship, 2018 Josh Shi and Armaan Shan, CHI Student Research Competition, 1st Place, 2018 Jamie Gorson, Segal Design Cluster Fellowship, 2017 Sarah Lim, CHI Student Research Competition, 1st Place, 2017 NU Undergrad Research Grants awarded to 10 undergraduate advisees since 2017

Invited Talks

- [1] *Thought Leader Dialogue: Designing Computing Education for Everyone*, Organizer and Moderator. Center for HCI+Design, Northwestern University. June 8, 2023.
- [2] Why Do Students Think They're Bad at Programming? Understanding and Supporting Motivation and Learning in CS1. The Illinois Computer Science Summer Teaching Workshop. June 5, 2023.
- [3] Why Do Students Think They're Bad at Programming? Understanding and Supporting Motivation and Learning in CS1. The Western Canadian Conference on Computing Education (WCCCE). May 4, 2023.
- [4] Why Do Students Think They're Bad at Programming? Understanding and Supporting Motivation and Learning in CS1. Computers + Education Research Group, UIUC. April 21, 2023.
- [5] Why Do Students Think They're Bad at Programming? Understanding and Supporting Motivation and Learning in CS1. SESAME Colloquium, University of California, Berkeley. March 23, 2023.
- [6] Why Do Students Think They're Bad at Programming? Towards Intelligent Systems to Support Motivation and Learning in CS1. HCII Seminar Series, CMU. February 17, 2023.
- [7] Environments to Support Motivation and Learning in Introductory Computer Science Computer Science Education Reading Group Seminar, Brown University. July 13, 2021.
- [8] Designing Growth-Oriented Learning Environments Northwestern Board of Trustees Academic Affairs Committee Meeting, Chicago, IL. June 3, 2021.
- [9] *The View from the Computer Science Learning Sciences Intersection*, Panelist. Envisioning the Future of Computing in Undergraduate Education, Evanston, IL. November 18, 2019.
- [10] Designing Growth-Oriented Learning Environments McCormick Advisory Council Dinner, Northwestern University, Evanston, IL. October 11, 2019.
- [11] Environments to Support Motivation and Learning in Undergraduate CS. CS+LS Symposium, Northwestern University, Evanston, IL. April 29, 2019.
- [12] Designing Interactive Systems to Teach Complex Processes. PIER Seminar, Carnegie Mellon University, Pittsburg, PA. November 5, 2018.

- [13] Interdisciplinary Education Research: Challenges and Opportunities. PIER Brown Bag Talk, Carnegie Mellon University, Pittsburg, PA. November 6, 2018.
- [14] Educational Systems for Maximizing Learning Online and in the Classroom. HCI Seminar, University of Illinois Urbana-Champaign, Urbana IL. October 3, 2017.
- [15] *Women in Game Design*, Panelist. Seattle Association for Women in Science Series, Seattle WA. December 17, 2014.

Presentations

- [1] *Towards Scaling the Depth and Equity of Desired Outcomes in HCI* Human Computer Interaction Consortium (HCIC 2021), Virtual. June 24, 2021.
- [2] Automatic Generation of Problems and Explanations for an Intelligent Algebra Tutor. International Conference on Artificial Intelligence in Education (AIED 2019), Chicago, IL. June 28, 2019.
- [3] Brain Points: A Deeper Look at a Growth Mindset Incentive Structure for an Educational Game. ACM Conference on Learning at Scale (L@S 2016), Edinburgh, UK. April 25, 2016.
- [4] *Educational Systems for Maximizing Learning Online and in the Classroom.* Rising Stars in EECS Workshop, MIT, Boston MA. November 9, 2015.
- [7] A Framework for Automatically Generating Interactive Instructional Scaffolding. ACM Conference on Human Factors in Computing (CHI 2015), Seoul, South Korea. April 21, 2015.
- [8] Automatically Generating Interactive Instructional Scaffolding. Computer Science & Engineering Symposium, University of Washington, Seattle WA. January 9, 2015.
- [9] Brain Points: A Growth Mindset Incentive Structure Boosts Persistence in an Educational Game. ACM Conference on Human Factors in Computing (CHI 2014), Toronto, Canada. May 1, 2014.
- [10] Brain Points: A Growth Mindset Incentive Structure Boosts Persistence in an Educational Game. DUB Group Seminar, University of Washington, Seattle WA. April 23, 2014.
- [11] *Hint Systems May Negatively Impact Performance in Educational Games.* ACM Conference on Learning at Scale (L@S 2014), Atlanta, GA. March 4, 2014.
- [12] Brain Points: A Growth Mindset Incentive Structure for Educational Games. Industrial Affiliates Day, CSE, University of Washington, Seattle WA. October 23, 2013.
- [13] *The Effects of Age on Player Behavior in Educational Games*, Joint presentation with Eric Butler. International Conference on the Foundations of Digital Games (FDG 2013). May 16, 2013.
- [14] *The Impact of Tutorials on Games of Varying Complexity*, Joint presentation with Erik Andersen. ACM Conference on Human Factors in Computing Systems (CHI 2012). May 7, 2012.
- [15] *Smart Connect: Investigating Low-Bandwidth Communication for Peripheral Health.* Qualifying Examination, University of Washington, Seattle WA. February 24, 2011.
- [16] Smart Connect: A Communication Link for Peripheral Health Facilities. Industrial Affiliates Day, CSE, University of Washington, Seattle WA. October 27, 2010.

University Service

Learning Sciences Program

Cognitive Science Committee (2021 – Present) PhD Admissions Committee (2018) Brown Bag Colloquium Series Co-Organizer (2017 – 2018)

Computer Science Department

Strategic Planning Committee (2023 – Present) Diversity Committee (2019 – 2023) PhD Admissions Committee (2019)

Computer Science + Learning Sciences Program

Steering Committee (2019 – Present) PhD Admissions Committee (2017 – 2021)

Technology and Social Behavior Program

PhD Admissions Committee (2017)

Academic Service

Steering Committee

Executive Member, Learning at Scale Steering Committee (2019 – 2023)

Conference Organizing

Posters and Lightning Talks Co-Chair, ACM International Computing Education Research 2023 (*ICER 2023*) Posters and Lightning Talks Co-Chair, ACM International Computing Education Research 2022 (*ICER 2022*)

Journals

Computer Science Education, Associate Editor (2023 - Present)

Conference Program Committee

2024 ACM International Computing Education Research Conference, Senior PC (ICER 2024)
2023 ACM International Computing Education Research Conference (ICER 2023)
2023 ACM Conference on Learning at Scale (L@S 2023)
2021 ACM International Computing Education Research Conference (ICER 2021)
2021 ACM International Computing Education Research Conference (ICER 2021)
2021 ACM Conference on Learning at Scale (L@S 2021)
2020 ACM Conference on Learning at Scale (L@S 2020)
2020 ACM Conference on Human Factors in Computing Systems (CHI 2020)
2020 ACM Conference on Learning at Scale (L@S 2019)
2019 ACM Conference on Learning at Scale (L@S 2019)
2019 ACM Conference on Human Factors in Computing Systems (CHI 2019)
2018 ACM Conference on Learning at Scale (L@S 2018)
2018 ACM Conference on Human Factors in Computing Systems (CHI 2018)
2017 ACM Conference on Human Factors in Computing Systems (CHI 2017)
2017 Technical Symposium on Computing Science Education (SIGCSE 2017)
2017 International Conference on the Foundation for Digital Games (FDG 2017)

Grant Referee

2017 National Science Foundation: Education & Human Resources – Advancing Informal STEM Learning

Reviewer

2022 Computer Science Education Journal 2021 ACM User Interface Software and Technology Symposium (*UIST* 2021) 2021 ACM Conference on Human Factors in Computing Systems Late-Breaking Work (CHI LBW 2021) 2020 American Educational Research Association Open Journal (AERA Open) 2020 ACM Interaction Design and Children Conference (IDC 2020) 2019 International Journal of Artificial Intelligence in Education (IJAIED) 2019 ACM Symposium on Computer-Human Interaction in Play Work in Progress (CHI PLAY WIP 2019) 2019 ACM User Interface Software and Technology Symposium (UIST 2019) 2018 ACM User Interface Software and Technology Symposium (UIST 2018) 2018 ACM Conference on Human Factors in Computing Systems Late-Breaking Work (CHI LBW 2018) 2017 ACM User Interface Software and Technology Symposium (UIST 2017) 2017 ACM Symposium on Computer-Human Interaction in Play (CHI PLAY 2017) 2017 ACM Transactions on Computing Education (TOCE 2017) 2017 ACM Conference on Human Factors in Computing Systems Late-Breaking Work (CHI LBW 2017) 2016 ACM User Interface Software and Technology Symposium (UIST 2016) 2016 ACM Conference on Human Factors in Computing Systems (CHI 2016) 2016 ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2016) 2015 Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI 2015) 2015 ACM Conference on Human Factors in Computing Systems (CHI 2015) 2014 ACM Conference on Human Factors in Computing Systems (CHI 2014) 2013 ACM Conference on Human Factors in Computing Systems Works-In-Progress (CHI WIP 2013) 2013 ACM Conference on Human Factors in Computing Systems Student Game Competition (CHI SGC 2013)

Community Service

Graduate Women in Computing (GWiC), 2019 - Present

Faculty advisor for the graduate women in computing group at Northwestern.

BuildHER Hackathon Judge, 2017

Served as a judge for the all-female undergraduate student hacakthon BuildHER, hosted at Northwestern.

Center for Game Science Outreach, 2011 – 2016

Organized school visits to the Center for Game Science involving research presentations and gameplay.

Prospective Student Visit Days Co-Chair, UW CSE Department, 2013

Worked with faculty, staff, and students to organize visit days, with a focus on recruiting female students.

Graduate Mentoring Program Coordinator, UW CSE Department, 2011 – 2013

Re-designed the mentoring program for new graduate students, and served as program coordinator.

Change Seminar Organizer, UW CSE Department, 2010-2011

Coordinate talks by external speakers and facilitate group discussions.

Industry Employment

Associate Developer, Outcome Sciences, Cambridge, MA (2007 – 2009)

Position as a full-time developer for Outcome Sciences (now Quintiles), a medical research company focused on developing patient registries. Worked on a team of five using Java, Java Servlets, AJAX, CSS, and SQL to develop new studies and update existing studies. View more online at quintiles.com