Eleanor O'Rourke

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Appointments

2016 – present. Northwestern University, Evanston IL.
Assistant Professor with a joint appointment in Computer Science and the Learning Sciences.

2009 – 2016. University of Washington, Seattle, WA.
Graduate Research Assistant.

Education

2016 Ph.D., Computer Science & Engineering
University of Washington, Seattle, WA
Thesis: *Educational Systems for Maximizing Learning Online and in the Classroom*
Advisor: Zoran Popović

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

Google Anita Borg Scholarship, 2015
Society of Women Engineers Outstanding Female Engineer Award, 2014
Best Paper Nomination: EDM 2013
Best Paper Nomination: CHI 2012
NSF Graduate Research Fellowship: Honorable Mention, 2011
Microsoft Research Graduate Women's Scholarship: Recipient, 2010
NSF Graduate Research Fellowship: Honorable Mention, 2010
Member of the Phi Beta Kappa Chapter of Maine at Colby College, 2007

Journal and Conference Publications

[1] **Eleanor O'Rourke**, Erin Peach, 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).

[2] 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)

[3] **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).

[4] 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).

[5] **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).

[6] **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).

[7] 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***

[8] **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).

[9] 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***

[10] 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).

[11] 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, Extended Abstracts, Works In Progress

[1] **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).

[2] 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).

[3] 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.

[4] 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.

Teaching Experience

Instructor
EECS 330: Human-Computer Interaction, Northwestern University, Winter 2017

Teaching Assistant
CSE 481D: Games Capstone, University of Washington, Spring 2014
CSE 143: Computer Programming II, University of Washington, Summer 2011

Guest Lecturer
CSE 481D: Games Capstone, University of Washington, Seattle WA. May 3, 2016
CSE 481D: Games Capstone, University of Washington, Seattle WA. May 6, 2014
Women's Studies Class, The Bush School, Seattle WA. November 1, 2013

Mentoring and Advising

Undergraduate Students
Armaan Shah, collaborative and competitive computer science games (March 2017 – Present)
Grace Alexander, growth mindset incentives for programming (January 2017 – Present)
Morgan Walker, growth mindset incentives for programming (January 2017 – Present)
Lily Zhang, growth mindset incentives for programming (January 2017 – Present)
Josh Shi, collaborative and competitive computer science games (January 2017 – Present)
Erin Peach, interactive tutorials in Refraction (January 2013 – April 2015)
Mallika Mathur, growth mindset incentives for Refraction (June 2013 – August 2013)

Computer Science Education Team (April 2015 – June 2015)
Advised a team of 13 undergraduate students on a project that uses my framework for automatically generating instructional scaffolding to create content for introductory computer science concepts.

Presentations

[1] *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.

[2] *Educational Systems for Maximizing Learning Online and in the Classroom*.
Rising Stars in EECS Workshop, MIT, Boston MA. November 9, 2015.

[3] *A Framework for Automatically Generating Interactive Instructional Scaffolding*.
ACM Conference on Human Factors in Computing (CHI 2015), Seoul, South Korea. April 21, 2015.

[4] *Automatically Generating Interactive Instructional Scaffolding*.
Computer Science & Engineering Symposium, University of Washington, Seattle WA. January 9, 2015.

[5] *Women in Game Design*, Panelist.
Seattle Association for Women In Science Series, Seattle WA. December 17, 2014.

[6] *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.

[7] *Brain Points: A Growth Mindset Incentive Structure Boosts Persistence in an Educational Game*.
DUB Group Seminar, University of Washington, Seattle WA. April 23, 2014.

[8] *Hint Systems May Negatively Impact Performance in Educational Games*.
ACM Conference on Learning at Scale (L@S 2014), Atlanta, GA. March 4, 2014.

[9] *Techniques for Maximizing Learning in Educational Games*.
General Examination, University of Washington, Seattle WA. January 29, 2014.

[10] *Brain Points: A Growth Mindset Incentive Structure for Educational Games*.
Industrial Affiliates Day, CSE, University of Washington, Seattle WA. October 23, 2013.

[11] *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.

[12] *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.

[13] *Smart Connect: Investigating Low-Bandwidth Communication for Peripheral Health*.
Qualifying Examination, University of Washington, Seattle WA. February 24, 2011.

[14] *Smart Connect: A Communication Link for Peripheral Health Facilities*.
Industrial Affiliates Day, CSE, University of Washington, Seattle WA. October 27, 2010.

Community Service

Center for Game Science Outreach, 2011 – present
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.

Academic Service

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

Program Committee
2017 ACM Conference on Human Factors in Computing Systems (*CHI 2017*)
2017 Technical Symposium on Computing Science Education (*SIGCSE 2017*)
2017 Foundation for Digital Games, Games for a Purpose Track (*FDG 2017*)

Reviewer
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*).

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. Work 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