

RENE F. KIZILCEC

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EDUCATION

Ph.D., Communication, Stanford University, 2017

M.S., Statistics, Stanford University, 2015

B.A. (1st class honors), Philosophy and Economics, University College London, 2011

ACADEMIC APPOINTMENTS

2018 – Assistant Professor, Department of Information Science, Cornell University

2017 – 2018 Assistant Research Professor, School of Computing, Informatics, and Decision Systems Engineering, Arizona State University

2017 – 2018 Director of Digital Learning Research, Stanford Graduate School of Education, Stanford University

AWARDS AND FELLOWSHIPS

Best Paper Award, ACM Learning at Scale Conference, 2019

Best Paper Award, ACM Learning at Scale Conference, 2018

Nathan Maccoby Outstanding Dissertation Award, Stanford University, 2017

Best Paper Award, ACM Learning at Scale Conference, 2017

Computational Social Science Fellowship, Stanford University (\$10,000 research funding), 2015

Stanford Interdisciplinary Graduate Fellowship (Ph.D. funding for 3 years), 2014-17

Department of Communication Fellowship, Stanford University, 2011

UCL Alumni Scholarship, University College London, 2011

SELECTED GRANT AWARDS

Cornell Center for Social Science Small Grant (1 year; \$12,000; PI), 2020

Cornell Engaged Development Grant (2 year; \$60,000; Co-PI), 2020

Mindset Scholars Network (1.5 years; \$75,000 Co-PI), 2019

Cornell Active Learning Initiative (3 years; Co-PI), 2019

Cornell China Center Innovation Grant (2 years; \$60,000; Co-PI), 2019

Cornell Engaged Planning Grant (1 year; \$30,000; Co-PI), 2019

Cornell Institute for the Social Sciences Collaborative Project (3 years; Co-PI), 2018

SPICE (Student Project for Intellectual Enhancement) grant (\$1,500) for the Stanford Workshop on Questionnaire Design, Stanford Office of the Vice Provost for Graduate Education, 2014

Faculty Seed Grant for Innovation in Researching Online Courses (\$7,100), Stanford Office of the Vice Provost for Online Learning, 2013

PUBLICATIONS

Refereed Journal Articles

Kizilcec, R. F., Reich, J., Yeomans, M., Dann, C., Brunskill, E., Lopez, D., Turkay, S., Williams, J., & Tingley, D. (2020). Scaling Up Behavioral Science Interventions in Online Education. *Proceedings of the National Academy of Sciences (PNAS)*, *117*(26), 14900-14905.

Chirikov, I., Semenova, T. Maloshonok, N., Bettinger, E., Kizilcec, R. F. (2020). Online Education Platforms Scale College STEM Instruction with Equivalent Learning Outcomes at Lower Cost. *Science Advances*, *6*(15).

Rizvi, S., Rienties, B., Rogaten, J., Kizilcec, R. F. (2019). Investigating Variation in Learning Processes in a FutureLearn MOOC. *Journal of Computing in Higher Education*, *32*, 162-181.

Davis, D., Kizilcec, R. F., Hauff, C., & Houben, G.-J. (2018). Scaling Effective Learning Strategies: Retrieval Practice and Long-Term Knowledge Retention in MOOCs. *Journal of Learning Analytics*, *5*(3), 21-41.

Maldonado-Mahauad, J., Pérez-Sanagustín, M., Kizilcec, R. F., Morales, N., & Munoz-Gama, J. (2018). Mining theory-based patterns from Big data: Identifying self-regulated learning strategies in Massive Open Online Courses. *Computers in Human Behavior*, *80*, 179-196.

Kizilcec, R. F., Saltarelli, A., Reich, J., & Cohen, G. L. (2017). Closing global achievement gaps in MOOCs. *Science*, *355*(6322), 249.

Kizilcec, R. F. & Cohen, G. L. (2017). Eight-minute self-regulation intervention raises educational attainment at scale in individualist but not collectivist cultures. *Proceedings of the National Academy of Sciences (PNAS)*, *114*(17), 4348–4353.

Kizilcec, R. F., Perez-Sanagustin, M., & Maldonado, J. J. (2017). Self-Regulated learning strategies predict learner behavior and goal attainment in Massive Open Online Courses. *Computers & Education*, *104*, 18-33.

Eckles, D., Kizilcec, R. F., & Bakshy, E. (2016). Estimating peer effects in networks with peer encouragement designs. *Proceedings of the National Academy of Sciences (PNAS)*, *113*(27), 7316-7322.

Li, J., Kizilcec, R. F., Bailenson, J. N., & Ju, W. (2016). Social Robots and Virtual Agents as Lecturers for Video Instruction. *Computers in Human Behavior*, 55(B), 1222-1230.

Kizilcec, R. F. & Schneider, E. (2015). Motivation as a Lens to Understand Online Learners. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 22(2).

Kizilcec, R. F., Bailenson, J. N., & Gomez, C. J. (2015). The Instructor's Face in Video Instruction: Evidence from Two Large-Scale Field Studies. *Journal of Educational Psychology*, 107(3), 724-739.

Kizilcec, R. F., Schneider, E., Cohen, G. L., & McFarland, D. A. (2014). Encouraging Forum Participation in Online Courses with Collectivist, Individualist, and Neutral Motivational Framings. *eLearning Papers*, 37, 13-22.

Thille, C., Schneider, D. E., Kizilcec, R. F., Piech, C., Halawa, S. A., & Greene, D. K. (2014). The Future of Data-Enriched Assessment. *Research & Practice in Assessment*, 9(2), 5-16.

Aymerich-Franch, L., Kizilcec, R. F., & Bailenson, J. N. (2014). The Relationship between Virtual Self Similarity and Social Anxiety. *Frontiers in Human Neuroscience*, 8(944).

Refereed and Published Proceedings

Kizilcec, R. F. & Chen, M. (2020). Student Engagement in Mobile Learning via Text Message. In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.

Chen, Y. & Kizilcec, R. F. (2020). Examining Sources of Variation in Student Confusion in College Classes. In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.

Kizilcec, R. F., Saltarelli, A. J., Bonfert-Taylor, P., Goudzwaard, M., Hamonic, E., & Sharrock, R. (2020). Welcome to the Course: Early Social Cues Influence Women's Persistence in Computer Science. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI)*.

Varanasi, R. A., Kizilcec, R. F., & Dell, N. (2019). How Teachers in India Reconfigure their Work Practices around a Teacher-Oriented Technology Intervention. In *Proceedings of the ACM Conference on Computer-Supported Cooperative Work (CSCW)*.

Kizilcec, R. F. & Saltarelli, A. (2019). Can a diversity statement increase diversity in MOOCs? In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.

Kizilcec, R. F. & Goldfarb, D. (2019). Growth Mindset Predicts Student Achievement and Behavior in Mobile Learning. In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.

Kizilcec, R. F. & Saltarelli, A. (2019). Psychologically Inclusive Design. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)*.

Kizilcec, R. F., Bakshy, E., Eckles, D., & Burke, M. (2018). Social Influence and Reciprocity in Online Gift Giving. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI)*.

Chaturapruek, S., Dee, T. S., Johari, R., Kizilcec, R. F., & Stevens, M. L. (2018). How a data-driven course planning tool affects college students' GPA: Evidence from two field experiments. In *Proceedings of the Fifth ACM Conference on Learning at Scale (L@S)*.

- Davis, D., Kizilcec, R. F., Hauff, C., & Houben, G.-J. (2018). The Half-Life of MOOC Knowledge: A Randomized Trial Evaluating the Testing Effect in MOOCs. In *Proceedings of the International Conference on Learning Analytics and Knowledge (LAK)*.
- Kizilcec, R. F., Davis, G. M., & Cohen, G. L. (2017). Towards equal opportunities in MOOCs: Affirmation reduces gender & social-class achievement gaps in China. In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.
- Davis, D., Jivet, I., Kizilcec, R. F., Chen, G., Hauff, C., & Houben, G.-J. (2017). Follow the Successful Crowd: Facilitating Social Comparison Raises MOOC Completion Rates. In *Proceedings of the International Conference on Learning Analytics and Knowledge (LAK)*.
- Kizilcec, R. F. (2016). How Much Information? Effects of Transparency on Trust in an Algorithmic Interface. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)*.
- Kizilcec, R. F., Perez-Sanagustin, M., & Maldonado, J. J. (2016). Recommending Self-Regulated Learning Strategies Does Not Improve Performance in a MOOC. In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.
- Kizilcec, R. F., & Halawa, S. A. (2015). Attrition and Achievement Gaps in Online Learning. In *Proceedings of the ACM Conference on Learning at Scale (L@S)*.
- Krause, M., & Kizilcec, R. F. (2015). To Play or not to Play: Response Quality and Task Complexity in Games and Paid Crowdsourcing. In *Proceedings of the AAAI Conference on Human Computation & Crowdsourcing (HCOMP)*.
- Kizilcec, R. F., Papadopoulos, K., & Sritanyaratana, L. (2014). Showing Face in Video Instruction: Effects on Information Retention, Visual Attention, and Affect. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)*.
- Williams, J. J., Kizilcec, R. F., Klemmer, S., & Russell, D. (2014). Innovations for Learning at Scale Workshop. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI)*.
- Zhang, K. & Kizilcec, R. F. (2014). Anonymity in Social Media: Effects of Content Controversiality and Social Endorsement on Sharing Behavior. In *Proceedings of the AAAI International Conference on Weblogs and Social Media (ICWSM)*.
- Kizilcec, R. F., Piech, C., & Schneider, E. (2013). Deconstructing Disengagement: Analyzing Learner Subpopulations in Massive Open Online Courses. In *Proceedings of the International Conference on Learning Analytics and Knowledge (LAK)*.
- Kizilcec, R. F. (2013). Collaborative Learning in Geographically Distributed and In-person Groups. In *Proceedings of the Conference on Artificial Intelligence in Education (AIED)*.

Book Chapters

- Kizilcec, R. F. & Lee, H. (forthcoming). Algorithmic Fairness in Education. In W. Holmes & K. Porayska-Pomsta (Eds.), *Ethics in Artificial Intelligence in Education*, Taylor & Francis.
- Kizilcec, R. F. & Brooks, C. (2017). Diverse Big Data and Randomized Field Experiments in MOOCs. In C. Lang, G. Siemens, A. Wise, D. Gašević (Eds.), *Handbook of Learning Analytics* (pp. 211-222). Society for Learning Analytics Research.

INVITED TALKS

- 2020 **AERA Educational Data Science Mini-conference**, Stanford University, invited talk
- 2019 **Singapore Management University**, “Communication, Data, and Design” colloquium talk
- 2019 **National University of Singapore**, ALSET seminar, invited talk
- 2019 **China Positive Education Conference**, Tsinghua University, invited keynote
- 2018 **Northeast Big Data in Education Conference**, CMU, invited keynote
- 2018 **University of Michigan**, Academic Innovation speaker series, talk on inclusive learning
- 2017 **Higher School of Economics**, Russia, invited keynote at higher education conference
- 2017 **Udemy, Inc.**, talk on supporting continued engagement with online learning at scale
- 2017 **Kahn Academy**, talk on supporting continued engagement with online learning at scale
- 2016 **Pontifical Catholic U. of Chile**, talk on social psychological barriers in higher education
- 2016 **Rosetta Stone**, talk on psychological factors in online courses
- 2016 **EdTech Meetup RheinMain**, Germany, talk on online education research
- 2016 **Pratham Symposium**, Stanford, panel on worldwide challenges in education
- 2016 **MediaX Conference**, Stanford, panel on digital augmentation in education
- 2016 **Learning Summit**, Stanford, panel discussion on inclusive learning environments
- 2016 **TU Delft**, the Netherlands, talk on psychological interventions in online learning
- 2016 **Coursera Partners Conference**, Holland, talk on strategies to support active learning in MOOCs
- 2015 **UC Berkeley**, Institute of Design, talk on psychological interventions in online learning
- 2015 **MIT**, xTalk series, talk on psychological interventions in online learning
- 2015 **University of Michigan**, MOOC research summit, talk on psychological causes of achievement gaps in online learning
- 2015 **Coursera, Inc.**, talk on learner motivation, social cues, and achievement gaps in online learning
- 2015 **Digital October Center**, Moscow, Russia, talk on instructional design in MOOCs
- 2014 **MediaX Conference**, Stanford, talk on market segmentation of online interactions based on motivation

SELECTED CONFERENCE PRESENTATIONS (NON-ARCHIVAL)

- 2020 **IC2S2**, “The Limits of Scalable Interventions: Evidence from 248 Online Courses”
- 2019 **CODE@MIT**, “Broadening Participation with Diversity Statements”
- 2019 **CODE@MIT**, “The Limits of Scalable Interventions”
- 2019 **AI100 Prediction in Practice**, “On the Psychology of AI in Practice”

- 2018 **IC2S2**, “Heterogenous Effects of Incentives in Mobile Learning in Africa”
- 2018 **CODE@MIT**, “Criteria-based Randomization”
- 2016 **BayLearn Conference**, “Psychologically Welcoming Learning Environments”
- 2016 **SPSP**, “Closing the Global Achievement Gap in Online Learning”
- 2015 **CODE@MIT**, “Peer encouragement designs: Estimating peer effects of social feedback”
- 2014 **eMOOCs**, “Encouraging Forum Participation [...] with Motivational Framings”
- 2014 **Learning with MOOCs**, “The Promise of Social Learning & Annotation”

TEACHING

Courses

- Fall 2020 INFO 4100: Learning Analytics, Cornell University
- Spring 2020 INFO 4800: Behavioral Science Interventions, Cornell University (with Neil Lewis Jr.)
- Sp, Fa 2019 INFO 5200: Introduction to Learning Analytics, Cornell University
- Fall 2018 INFO 6750: Causal Inference and Design of Experiments, Cornell University

Invited and ad-hoc teaching

- 2016 **Invited Guest Lecture**, Learning Analytics Seminar, Stanford University
- 2014, 2015 **Teaching Assistant**, “Online Learning Research Methods”, Stanford University
- 2014 **Invited Guest Lecture**, Learning Analytics Seminar, George Mason University
- 2014 **Co-Instructor**, Workshop on questionnaire design, Stanford University
- 2010, 2011 **Technology Camp Director**, TIC Summer Camp, McLean, VA.
Held teacher-training workshops, designed and supervised programming classes.
- 2009 **Technology Camp Counselor**, TIC Summer Camp, McLean, VA.
Taught programming and web design to kids (ages 7 to 16).

ADVISING

Doctoral students

- Youjie Mina Chen (Cornell Information Science)
- Kimberly Williamson (Cornell Information Science)
- Ji Yong Cho (Cornell Information Science)
- Julia Proft (Cornell Computer Science; co-advised)

Rama Varanasi (Cornell Information Science; co-advised)

Amanda Purington (Cornell Communication; co-advised)

Saman Rizvi (Open University; co-advised with Bart Rienties)

Alice Kathmandu (Stanford GSE; co-advised with Geoffrey Cohen, Hazel Markus)

Masters' students

Thomas Chen (Cornell CIS)

Jancey Taveras (Cornell CIS)

Camille Lee (Cornell CIS)

Kathryn Papadopoulos (Stanford in Symbolic Systems; now at Google)

Undergraduate students

Max Chen (Cornell CIS)

Daniel Goldfarb (Cornell CIS)

Anna Kambhampaty (Cornell CIS)

Souleiman Benhida (Cornell CIS)

Johnny Winston (Stanford Symbolic Systems)

Lalida Sritanyaratana (Stanford HCI course community teaching assistant; now at Google)

PROFESSIONAL SERVICES

2020	Program Co-Chair , ACM Learning at Scale
2019, '21	Program Committee Member , ACM SIG CHI
2019 –	Associate Editor , <i>Computer-Based Learning in Context</i>
2019	Program Committee Member , ACM CSCW
2017-19, '15	Program Committee Member , ACM Learning at Scale
2017	Program Committee Member , eMOOCs
2017	Program Committee Member , Coursera Partners Conference
2016	Program Committee Member , Learning with MOOCs Conference
Since 2016	Reviewer , Computers & Education
Since 2016	Reviewer , IEEE Transactions on Learning Technologies
Since 2014	Reviewer , ACM Learning @ Scale Conference

Since 2013 **Reviewer**, ACM CHI Human Factors in Computing Systems Conference

2017 **Reviewer**, Journal of Learning Analytics

2017 **Reviewer**, International Journal of Artificial Intelligence in Education

2017 **Reviewer**, International Conference on Learning Analytics & Knowledge

2016 **Reviewer**, ACM CSCW Conference

2016 **Reviewer**, Psychological Science

2016 **Reviewer**, Oxford University Press

2016, 2014 **Reviewer**, Journal of Computer Assisted Learning

2015 **Reviewer**, Computers in Human Behavior

2015 **Reviewer**, IEEE Transactions on Signal Processing

2014 **Reviewer**, ACM TOCHI Transactions on Computer-Human Interaction

2014 **Workshop Co-Organizer**, ACM CHI Human Factors in Computing Systems Conference

SELECTED MEDIA COVERAGE

Forbes, The “Depressing” And “Disheartening” News About MOOCs, June 2020

EdSurge, Massive Study of Online Teaching Ends With Surprising - and ‘Deflating’ – result, June 2020

Harvard Business Review, We Need Transparency in Algorithms, But Too Much Can Backfire, July 2018

Xinhua News, Exercise devised to boost completion rates of some online learning courses, April 2017

The Australian, Online Primer Fails in Collectivist Cultures, April 2017

EdSurge, Study Finds Tactics to Help Close Global MOOC Achievement Gap, February 2017

The Australian, Welcome effort boosts MOOCs, February 2017

PBS Rewire, ‘Taking an Online Course? Writing Out Your Reasons Why Might Help You Finish’, January 2017

Inside Higher Ed, A Sense of Belonging on Inside Higher Ed, January 2017

Education Week, Practical Guidance from MOOC Research: Student Diversity, July 2015

BBC, Moocs data offers promise of perfect teaching, October 2013

ACM Tech News, Learning analytics at Stanford takes huge leap forward with MOOCs, April 2013