

SHREEHARSH KELKAR

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ACADEMIC POSITIONS

2016- Lecturer, Interdisciplinary Studies Field Major
University of California, Berkeley

EDUCATION

2010-2016 Ph.D., Massachusetts Institute of Technology
History, Anthropology, and Science, Technology, and Society
2016 Graduate Certificate, Kaufman Teaching Certificate Program (KTCP), MIT
2004-06 Arizona State University
Electrical Engineering (Concentration: Arts, Media and Engineering)
2002-03 M.S., Columbia University
Electrical Engineering
1998-2002 B.E., VJTI, University of Mumbai (India)
Electronics Engineering

Ph.D. Dissertation Title: “Platformizing Higher Education: Computer Science and the Making of MOOC Infrastructure”

Dissertation Committee: Graham Jones (chair), Susan Silbey, Jennifer Light, Natasha Schüll (New York University), Christopher Kelty (UCLA)

Qualifying Exam Fields:

- “Science and Technology Studies” (with Stefan Helmreich)
- “History and Anthropology of Computing” (with Natasha Schüll)
- “Modernity and Expertise” (with Graham Jones)

Research and Teaching Areas: Science and Technology Studies; History and Anthropology of Computing, Software Studies; Platform Studies; Algorithm Studies; Engineering Studies; Human-Computer Interaction; Computer-Supported Cooperative Work; North America

AWARDS AND FELLOWSHIPS

- 2016 Honorable Mention, David Hakken Prize for Best Student Paper, Committee for the Anthropology of Science, Technology, and Computing (CASTAC)
- 2015-16 Research Assistant, Project: MOOCs and the Ethnography of Media Socialization
- 2014-15 Visiting Student Researcher, School of Information, University of California, Berkeley. Mentor: Paul Duguid
- 2014 Doctoral Dissertation Research Improvement Grant (DDRIG), National Science Foundation (NSF). Amount: \$13380
- 2013 Dissertation Fieldwork Grant, Wenner-Gren Foundation for Anthropological Research. Amount: \$19800
- 2013-15 MIT STS Fellowship
- 2010-12 Research Assistant, Project: Predictive Modeling of the Emergence and Development of Scientific Fields.
- 2012 Values in Design (VID) Fellow.
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PUBLICATIONS

Peer-Reviewed Articles

- 2017 “Engineering a Platform: The Construction of Interfaces, Users, Organizational Roles, and the Division of Labor,” *New Media and Society*. Epub ahead of print 3 September. DOI: 10.1177/1461444817728682.

Editor-Reviewed Articles

- 2014 “The MOOC as Laboratory: The Implications of A/B Testing in Higher Education,” *American Anthropologist*, 116(4): 829-38. Part of the “Vital Topics” forum Anthropology in and of MOOCs. Editor: Graham Jones.

Book Reviews

- 2015 Review of “Delete: A Design History of Computer Vapourware” by Paul Atkinson. *Journal of Design History*. 28(2): 209-10.

Selected Web Writing

The Platypus Blog is hosted by the Committee on the Anthropology of Science, Technology, and Computing (CASTAC). The SKAT Blog is hosted by the Science, Knowledge and Technology (SKAT) section of the American Sociological Association (ASA).

- 2017 “A Media Ecosystem for an Age of Fracture.” *SKAT Blog*.
<https://asaskat.com/2017/01/12/a-media-ecosystem-for-an-age-of-fracture/>
- 2017 “Three Perspectives on Fake News.” *Platypus Blog*.
<http://blog.castac.org/2017/05/on-fake-news/>
- 2017 “How (Not) to Talk about AI.” *Platypus Blog*.
<http://blog.castac.org/2017/04/how-not-to-talk-about-ai/>
- 2015 “Trusting Experts: Can We Reconcile STS and Social Psychology?”
Platypus Blog, 22 Sep 2015. <http://blog.castac.org/2015/09/trusting-experts/>
- 2015 “How Influential was Alan Turing? The Tangled Invention of Computing
and Its Historiography,” *Platypus Blog*, 24 March 2015.
<http://blog.castac.org/2015/03/how-influential-was-turing/>
- 2014 “What’s the Matter with Artificial Intelligence?” *Platypus Blog*, 18 Feb
2014. <http://blog.castac.org/2014/02/whats-the-matter-with-artificial-intelligence/>

Peer-Reviewed Computer Science Publications

- 2010 Shreeharsh Kelkar, Ajita John and Doree Duncan Seligmann. “Some
Observations on the ‘Live’ Collaborative Tagging of Audio Conversations
in the Enterprise,” *ACM Conference on Human Factors in Computing
Systems (CHI)*. Atlanta, GA. Acceptance rate: 22%.
- 2009 Shreeharsh Kelkar, Ajita John and Doree Duncan Seligmann. “Visualizing
Search Results as Web Conversations,” *Workshop on Web Search
Summarization and Presentation, International Conference on the World
Wide Web (WWW)*. Madrid, Spain. Acceptance rate: 9 of 21.
- 2007 Adithya Renduchintala, Shreeharsh Kelkar, Ajita John and Doree Duncan
Seligmann. “Designing for Persistent Audio Conversations in the
Enterprise,” *ACM Conference on Designing for User Experience (DUX)*.
Chicago, IL.
- 2007 Shreeharsh Kelkar, Ajita John and Doree Duncan Seligmann. “An
Activity-based Perspective of Collaborative Tagging” *International
Conference on Weblogs and Social Media (ICWSM)*. Boulder, CO.
Acceptance rate: 20%.

TEACHING EXPERIENCE

Instructor

Technology and Values

Spring 2018

UC-Berkeley, Interdisciplinary Studies

This course teaches students to pick apart the black-box of science and technology and look for values, not just in terms of bad actors, corruption, or "implications," but in the processes that constitute modern technoscience itself. These processes include: the ways in which researchers construct problems, solutions, facts, and artifacts; the norms, standards, stories, and patronage relations that underlie science and technology; and finally, how the future is imagined and realized. Readings will include academic and

journalistic texts as well as science fiction. By the end of this class, students will be able to articulate sophisticated theories of technology and technological change, and, analyze in concrete detail the relationship between technology and values.

The Social Life of Computing

Fall 2017

UC-Berkeley, Interdisciplinary Studies

This course introduces students to the technical, social, business, and political entanglements of computing from its late 19th century origins to the 21st century software industry and social media platforms. The topics covered include the intersections of computing with: calculation, capitalism, intelligence, mind, gender, expertise, work, automation, identity, citizenship, and democracy, among others. Students will learn to see computing as a “social” phenomenon: as a technology that is being put to use, in very particular ways, by particular groups of people.

Introduction to Science, Society and Ethics

Spring 2017

UC-Berkeley, Interdisciplinary Studies

This course surveys the entanglements of science and technology with states, publics, and the question of expertise and governance. Students gain a conceptual understanding of science-state-society relations and explore controversies ranging from race science, standardized testing, technological disasters, GMOs, financial instruments, to net neutrality and digital privacy.

Senior Thesis

Fall 2016, Spring 2017, Fall 2017, Spring 2018

UC-Berkeley, Interdisciplinary Studies

Students write a sustained, original, and critical examination of a central interdisciplinary research question, under the guidance of the instructor.

Interdisciplinary Research Methods

Fall 2016, Spring 2017, Fall 2017

UC-Berkeley, Interdisciplinary Studies

The course introduces undergraduate students to research design and a variety of social science research methods including surveys, interviewing, participant-observation, experimentation, and digital research. Students participate in exercises and group-work, write peer reviews of research, and a prospectus laying out their senior thesis.

Teaching Assistant

Physics in the 20th Century: Einstein, Oppenheimer, Feynman

Spring 2013

MIT, Physics & Science, Technology, and Society

Instructor: David Kaiser

- Held office hours, graded papers

Neuroscience and Society

Fall 2012

MIT, Science, Technology, and Society

Instructor: Natasha Schüll

- Led recitation sessions, held office hours, graded papers

Other Teaching Experiences

What is Social Science? As Seen Through the Foundation Novels of Isaac Asimov

Instructor, Nov 2013, Educational Studies Program (ESP), MIT

- Conceived and executed 3-hour class for high-school students
 - Course explored foundations of, and the distinctions between, quantitative and qualitative social science, concentrating on the disciplines of economics, sociology and political science using Asimov's *Foundation* trilogy as the main text.
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INVITED TALKS

- 2/2017 "Fake News in the New Media Landscape." UC-Berkeley, part of the series on "The 2016 Elections: A Semester-long Teach-In."
- 5/2016 "Platformizing Higher Education: Styles of Learning Research in the World of MOOCs." MediaLab, Sciences Po, Paris.
- 5/2016 "Platformizing Higher Education: Styles of Learning Research in the World of MOOCs," at the CharlesRiverX Colloquium (formerly formerly the HarvardX/MITx Friday Research Colloquium)
- 3/2016 "Platformizing Higher Education: Computer Science and the Making of MOOC Infrastructures." Faculty of Engineering, Bilkent University, Ankara, Turkey.
- 3/2016 "Platformizing Higher Education: Computer Science and the Making of MOOC Infrastructures." STS Circle, Harvard University.
- 11/2014 "The Social Organization of MOOCs: the relationship between work-roles, work-places and institutions," Berkeley Institute of Design Seminar, UC-Berkeley
- 7/2014 "MOOCs, Software, and the Study of Learning: What changes are afoot?" Learning Analytics Summer Institute, Open University, UK
- 10/2013 "MOOCs as Infrastructures: Circulating Objects and Institutional Changes" Lytics Lab Seminar, Stanford University.
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CONFERENCE PRESENTATIONS

Topic: Massive Open Online Courses (MOOCs)

- 11/2017 "Engineering a Platform: The Construction of Interfaces, Users, Organizational Roles, and the Division of Labor." Presented at the panel on Remodeling Democracy: Codes and Software as Sites of Political Reimagining at the annual meeting of Special Interest Group on Computers, Information and Society (SIGCIS), Philadelphia.
- 11/2017 "The Unreasonable Success of Intelligent Tutoring Systems." Presented at the panel on History of AI and Its Discontents at the annual meeting of the Society for the History of Technology (SHOT), Philadelphia.

- 8/2017 “Seeing Like a Platform: The Tensions of Data-Driven Knowledge Production around MOOCs.” Presented at the panel on Studying Data Critically at the annual meeting of Social Studies of Science (4S), Boston.
- 11/2016 “The Instructor in a World of Artificial Intelligence.” Presented at the panel on Learning to Labor in the Digital Economy at the annual meeting of American Anthropological Association (AAA), Minneapolis.
- 4/2016 “Reconfiguring Educational Expertise: MOOCs, Computer Science, and the Study of Learning.” Presented at the panel on The Politics of Numbers at the conference on Expertise from Margin to Center: Science, Politics, and Democracy, Columbia University, New York.
- 11/2015 “The Ideological Uses of Data: Observations from the Domain of Online Learning.” Presented at the panel on Anthropologies of Data at the annual meeting of American Anthropological Association (AAA), Denver.
- 11/2015 “When New and Old Experts Collide: Computer Science and the Study of Learning.” Presented at the panel on Digital STS Theory and Practice: Expertise, Labor, Making at the annual meeting of the Society for the Social Studies of Science (4S), Denver, CO.
- 12/2014 “Platformizing Higher Education: Computer Science and the Making of MOOC Infrastructure.” Presented at the panel on On Things Immaterial: Data, Users and Participation in Digital Technologies at the annual meeting of the American Anthropological Association (AAA), Washington, DC.
- 11/2013 “Platformizing” Higher Education: MOOCs and the Changing Labors of Educators.” Presented at the panel on (Invisible) Internet Infrastructure Labor at the annual meeting of the Association of Internet Researchers (AoIR), Denver, CO.
- 10/2013 “MOOCs as Infrastructures: Structuring the Sciences of Learning.” Presented at the panel on Structuring Infrastructures at the annual meeting of the Society for the Social Studies of Science (4S), San Diego, CA.

Topic: Social History of the IIT-JEE Engineering Entrance Examination

- 11/2013 “The Elite’s Last Stand: Negotiating Fairness and Toughness in the IIT-JEE.” Presented at a panel on Nurturing the Nation, Cultivating Innovation, at the annual meeting of the History of Science Society (HSS), Boston, MA.
- 10/2012 “Subjective Vs. Objective: The Problems of the IIT Joint Entrance Examination (JEE).” Presented at a panel on Re-envisioning/Redesigning Engineering Education + Contemporary issues and the normative dimension of Engineering Education at the annual meeting of the Society for the Social Studies of Science (4S), Copenhagen, Denmark.

Other Topics: Machine Learning

- 10/2013 Discussant and co-organizer (with Göde Both) at the panel on Machine Learning Worlds: Politics and Practices, at the annual meeting of the Society for the Social Studies of Science (4S), San Diego, CA.

ACADEMIC AND OTHER VOLUNTARY SERVICE

- 2016- Reviewer for *The Journal of Anthropological Research*
2013 - Contributing Editor for the Platypus Blog, The Committee for the Anthropology of Science, Technology, and Computing (CASTAC) (<http://blog.castac.org>)
2014 HASTS Student Representative, Department of Anthropology
2013 Member, Committee on Intellectual Property, MIT
2012-13 Member, Digital Learning Subcommittee, MIT
2012 Co-organizer, North East STS Graduate Student Conference
2011-12 HASTS Representative, Graduate Student Council (GSC), MIT
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PROFESSIONAL EXPERIENCE

Xerox Research Center (XRCW), Work Practice Group, Webster, NY

Research Intern, Summer 2012. Mentor: Patricia Swenton-Wall,
Documented the workflow and practices of Quality Abstractors (QAs) at two hospital sites; observations will be used by the design team as inputs for their next version of the software. QAs work in the hospital back-office and are tasked with monitoring the progress of patients through the hospital. They decide whether patients have received a quality of care commensurate with federal regulations and sometimes communicate with clinicians to make sure that certain measures are taken for the patients still in the hospital. We realized that the work of the QAs involved a lot of uncertainty, which they managed by making lists of patients and by keeping track of their decision-making process for each patient.

Avaya Labs Research, Collaborative Applications Group, Basking Ridge, New Jersey

Research Scientist, October 2007 – August 2010 Manager: Doree Duncan Seligmann

Research Intern, June 2006 – September 2007 Mentor: Ajita John

Worked on applying the tools of Web 2.0 like wikis, blogs, tagging, social bookmarking, etc to the artifacts of voice communication. Work included system design and prototyping, information visualization, computational modeling, and studies of user experience. (See also *Peer-Reviewed Computer Science Publications* above)

Developed the *Live Conference Dashboard* (LCD), a tool that allows participants in an audio conference to see speaker turns (i.e. who is speaking) and collaboratively tag the ongoing conference, portions of the conference or instants of it (i.e. apply free-form keywords that are visible to other participants).

Also built *Echoes*, a web-based tool that takes the data from the LCD and visualizes it as an enterprise social network, allowing users to see the relationships between people, conversations and topics (tags).

Both LCD and Echoes came to be included as part of the Avaya Emerging Products and Technologies Portfolio.

Mitsubishi Electric Research Labs (MERL), Cambridge, MA

Research Intern, June-August 2003

Mentor: Ajay Divakaran

Developed a compressed domain feature extraction tool to extract MPEG-7 descriptors from MPEG2 bitstream using the Intel MPEG2 decoder and Intel Performance Primitives.

Extracted features from AC3 audio stream and used them for speech/music discrimination.

PATENTS

System and Method for Displaying a Tag History of a Media Event, United States Patent Office Serial Number: 9021118, Granted: 04/28/2015.

System and Method for Aggregating and Presenting Tags, United States Patent Office Serial Number: 8849879, Granted: 09/30/2014.

Method and System for Live Collaborative Tagging of Audio Conferences United States Patent Office Serial Number: US8391455, Granted: 03/05/2013.

Method for Determining Communicative Value, United States Patent Office Serial Number: US8234305, Granted: 07/31/2012.

PROFESSIONAL AFFILIATIONS

Society for the Social Studies of Science (4S), American Anthropological Association (AAA), Society for the History of Technology (SHOT), American Sociological Association (ASA), Association for Computing Machinery (ACM).

LANGUAGES

English (fluent); Marathi (fluent); Hindi (fluent).

REFERENCES

Graham Jones

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Massachusetts Institute of Technology

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