

Saurabh Khanna

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Faculty of Social and Behavioural Sciences
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APPOINTMENTS

- 2024– University of Amsterdam
Assistant Professor, Department of Communication Science
- 2024– University of Oxford
Research Associate, Pembroke College
- 2023–24 University of Oxford
Junior Research Fellow, Pembroke College

EDUCATION

- Ph.D. Education Policy [Computer Science minor], Stanford University, 2023
- M.A. Economics, Stanford University, 2021
- M.A. Education, Tata Institute of Social Sciences, 2017
- B.S. Computer Science Engineering, BITS Pilani, 2012

RESEARCH AREAS

Measuring diversity and incompleteness in information on the internet
Misinfotainment and the blurring lines between political and entertainment communication

RESEARCH AFFILIATIONS

- 2021– Stanford Institute for Human-Centered Artificial Intelligence
- 2019– Immigration Policy Lab, Stanford University & ETH Zürich
- 2019– Public Knowledge Project, Simon Fraser University
- 2021–23 Stanford Data Science
- 2021–23 Stanford GCSI Lab & World Health Organization
- 2021–23 Stanford Center for Open and Reproducible Science
- 2018–19 The World Bank
- 2015–17 Connected Learning Initiative [Tata Institute of Social Sciences & Massachusetts Institute of Technology]

GRANTS AND AWARDS

- 2023 Technology Ethics & Policy Fellowship, Stanford University [\$12,000]

- 2021-23 Stanford Data Science Scholarship [\$52,984]
- 2022-23 Stanford Institute for Human-Centered Artificial Intelligence Fellowship [\$2,000]
- 2022-23 Digital Humanities Fellowship, Stanford Center for Spatial and Textual Analysis [\$1,500]
- 2018-21 William R. and Sara Hart Kimball Fellowship, Stanford University [\$138,600]
- 2021 Design Challenge Research Award, Stanford University and StartX [\$9,000]
- 2021-22 Karr Fellowship, Center for Education Policy Analysis, Stanford [\$6,000]
- 2021 Digital Learning Design Challenge Grant, Stanford University and StartX [\$1,500]
- 2020 Stanford Impact Labs Research Fellowship [\$3,500]
- 2020 Stanford Data Challenge Lab Member [30 Stanford students selected]
- 2019 Immigration Policy Lab Collaborative Research Fellow [\$4,500]
- 2017 Institute Silver Medal Award, Tata Institute of Social Sciences
- 2006-12 National Talent Search Examination Scholar, Government of India [Top 0.2% of 500000]
- 2008 All India Rank 562, All India Engineering Entrance Examination [Top 0.05% of 1000000]

PUBLICATIONS

Journal Articles

- 2023 Ulitzsch, E., Khanna, S., Rhemtulla, M., Domingue, B. A Graph-theory Based Similarity Metric Enables Comparison of Sub-population Psychometric Networks. *Psychological Methods*. doi:10.1037/met0000625
- 2022 Khanna, S., Ball, J., Alperin, J. P., & Willinsky, J. Recalibrating the Scope of Scholarly Publishing: A Modest Step in a Vast Decolonization Process. *Quantitative Science Studies*. doi:10.1162/qss_a_00228
- 2022 Loyalka, P., Shi, Z., Li, G., Kardanova, E., Chirikov, I., Yu, N., Hu, S., Wang, H., Ma, L., Guo, F., Liu, O. L., Bhuradia, A., Khanna, S., Li, Y., & Murray, A. The Effect of Faculty Research on Student Learning in College. *Educational Researcher*, 51(4), 265–273. doi:10.3102/0013189X221090229
- 2021 Loyalka, P., Liu, O. L., Li, G., Kardanova, E., Chirikov, I., Hu, S., Yu, N., Ma, L., Guo, F., Beteille, T., Tognatta, N., Gu, L., Ling, G., Federiakin, D., Wang, H., Khanna, S., Bhuradia, A., Shi, Z., & Li, Y. Skill Levels and Gains in College STEM Education in China, India, Russia, and the United States. *Nature Human Behavior* doi:10.1038/s41562-021-01062-3
- 2021 McFarland, D. A., Khanna, S., Domingue, B. W., & Pardos, Z. A. Education Data Science: Past, Present, Future. *AERA Open*. doi:10.1177/23328584211052055
- 2020 Silverman, R., Johnson, E., Keane, K., & Khanna, S. Beyond decoding: A meta-analysis of the effects of language comprehension interventions on K-5 students' language and literacy outcomes. *Reading Research Quarterly* doi:10.1002/rrq.346
- 2019 Loyalka, P., Liu, O. L., Li, G., Chirikov, I., Kardanova, E., Gu, L., Ling, G., Yu, N., Guo, F., Ma, L., Hu, S., Johnson, A. S., Bhuradia, A., Khanna, S., Froumin, I., Shi, J., Choudhury, P. K., Beteille, T., Marmolejo, F., & Tognatta, N. Computer science skills across China, India, Russia, and the United States. *Proceedings of the National Academy of Sciences*, 201814646 doi:10.1073/pnas.1814646116
- 2017 Khanna, S. Through the Sociological Lens: Learning Mathematics in a Mumbai Classroom. *For the Learning of Mathematics* 37(3), 24-26. jstor.org/stable/26548466

Book Chapters

- 2023 Khanna, S., & Willinsky, J. What Those Responsible for Open Infrastructure in Scholarly Communication Can Do about Possible Predatory Practices. *Predatory Practices in Scholarly*

Working Papers

- Khanna, S. Knowing Unknowns in an Age of Incomplete Information.
- Fairlie, R., Khanna, S., Loyalka, P., Sachdeva, G. Affirmative Action, Quality of Instruction and Lower-Caste Student-Faculty Interactions: Evidence from Randomly Assigned Classes in Engineering Colleges in India. Link. [Under Review]
- Silverman, R., Keane, K., Hammond, E.M.D., & Khanna, S. The Effects of Educational Technology Interventions on Literacy in Elementary School: A Meta-Analysis. [Under Review]
- Khanna, S., Smith, S., Domingue, B. W., Beteille, T., Tognatta, N., & Loyalka, P. Does Diversity Reduce Segregation? Experimental Evidence from a Large-Scale, Nationally Representative, Longitudinal Study of Colleges in India.
- Fei, J., Hotard, M., Ingham, H., Khanna, S., Lawrence, D., Tesfaye, B., Weinstein, J., Yassenov, V. & Hainmueller, J. Automated Chat Application Surveys Using WhatsApp. *SocArXiv* <https://repec.iza.org/dp15263.pdf> [Under Review]
- Khanna, S., Hainmueller, J., Lawrence, D., Laitin, D. Gender Gap in Refugee Integration.
- Erhardt, K., Khanna, S., South, T., Longpre, S., Schroeder, H., Roy, D., Pentland, A. A Revolution in Information Warfare: Throttling, Deamplification, and Deplatforming.
- Khanna, S. Coauthorship Networks and Collaboration in Education for the Last 50 Years.
- Loyalka, P., Sylvia, S., Li, G., Ahmed, I., Chirikov, I., Chirikova, E., Khanna, S., Liu, O. L., Kardanova, E., Bhuradia, A., & Liu, D. The Effect of Sleep on Learning: A Longitudinal Study of Undergraduates in China, India, and Russia.
- Loyalka, P., Mistree, D., Fairlie, R., & Khanna, S. English Language Skills Reduce Poverty. [Under Review]

Conference Proceedings

- 2023 Khanna, S. Measuring Information Completeness. *International Conference on Statistics and Data Science, Lisbon*
- 2023 Khanna, S. Recalibrating the Scope of Scholarly Publishing: A Modest Step in a Vast Decolonization Process. *52nd LIBER Annual Conference. Open and Trusted: Reassessing Research Library Values, Budapest*
- 2023 Khanna, S. Knowing Unknowns in an Age of Incomplete Information. *iConference 2023. Normality, Virtuality, Inclusivity, Physicality, Barcelona*
- 2022 Khanna, S. Invisible Information in Ranked Contexts. *ACM Conference on Fairness, Accountability, and Transparency (FAccT), Seoul*
- 2022 Fairlie, R., Khanna, S., Loyalka, P., Sachdeva, G. Affirmative Action, Quality of Instruction and Lower-Caste Student-Faculty Interactions: Evidence from Randomly Assigned Classes in Engineering Colleges in India. *IGIDR Second Biennial Conference on Development, Mumbai*
- 2022 Khanna, S. How Much Do We Not Know? Estimation and Implications. *Stanford Data Science Conference*
- 2022 Khanna, S. Visibility Curves & The Internet. *iConference 2022. Information for a Better World: Shaping the Global Future*
- 2021 Khanna, S. Invisible Knowledge & The Internet: Estimation and Implications. *Stanford HAI & ETH AI Data-Centric AI Workshop*
- 2022 Khanna, S. Knowing Unknowns in an Age of Information Overload. *OpenSciComm, Belgrade*

- 2021 Khanna, S., Raoni, J., Smecher, A., Alperin, J. P., Ball, J. Location of known journals using PKP's Open Journal Systems. *Open Publishing Fest*
- 2020 Khanna, S. Is the Internet Impartial? Diversity in Knowledge Recommendation in Online Networks. *2020 Sunbelt Conference, Paris*
- 2020 Khanna, S., Loyalka, P. Friendship Networks in College. *Conference on Educational Data Science, Stanford*
- 2020 Khanna, S., Loyalka, P. Affirmative Action and Social Integration in College. *SREE Spring 2020 Conference, Practical Significance and Meaningful Effects: Learning and Communicating What Matters, Arlington*
- 2017 Khanna, S., Gajinkar, A., Roy, A., Chatterji, A., Bapat, A., Bose, A. Rigor as Familiarity in Mathematics Assessments. *41st Annual Meeting of the International Group for the Psychology of Mathematics Education, Singapore*
- 2017 Bapat, A., Khanna, S., Srinivas, S., Thirumalai, B., Kumar, R., Rahaman, J., Chougale, S., Bose, A. Facilitating Geometry Learning through Blended Curriculum. *41st Annual Meeting of the International Group for the Psychology of Mathematics Education, Singapore*
- 2016 Srinivas, S., Khanna, S., Rahaman, J., & Kumar, V. Designing a Game-Based Learning Environment to Foster Geometric Thinking. *2016 IEEE Eighth International Conference on Technology for Education (T4E)* (pp. 72-79). IEEE <https://ieeexplore.ieee.org/document/7814798>
- 2016 Khanna, S. Cost-effective pedagogies for implementing efficient inclusive schooling. *6th International Conference on Science of Human Learning, Delhi*
- 2016 Khanna, S. Designing evidence based games to assess mathematical thinking. *TSG 42 of the 13th International Congress on Mathematics Education, Hamburg*

Datasets

- 2022 Khanna, S., Raoni, J., Smecher, A., Alperin, J. P., Ball, J., Willinsky, J. Location of known journals using PKP's Open Journal Systems V2. doi:10.7910/DVN/OCZNVY
- 2021 Khanna, S., Raoni, J., Smecher, A., Alperin, J. P., Ball, J. Location of known journals using PKP's Open Journal Systems V1. *Open Publishing Fest*. doi:10.7910/DVN/OCZNVY

Media Coverage

- 2023 Beyond Web of Science and Scopus there is already an open bibliodiverse world of research – We ignore it at our peril. London School of Economics Impact
- 2021 Many science courses 'fail to improve critical thinking'. Times Higher Education
- 2021 Supertest evaluates performance of engineering students in Russia, U.S., India, China. EurakAlert
- 2021 Computer science college seniors in U.S. outperform peers in China, India and Russia, new research says. phys.org
- 2019 Who Trains the Best Computer Scientists? World Bank Blogs
- 2019 U.S. students excel in computer science, outscoring China, India and Russia, Stanford study says. Mercury News
- 2019 U.S. College Seniors Beat Peers from China, India, Russia on Computer Science Exam. Campus Technology
- 2019 Study shows US computer science graduates have the edge. University World News

INVITED TALKS

- 2023 Misinfotainment: The blurring lines between evidence and entertainment on the Internet. Pembroke College, University of Oxford
- 2023 Decoding Data: Turning Numbers into Knowledge. Pembroke College, University of Oxford
- 2023 Computer Science for Social Good. Pembroke College, University of Oxford
- 2023 DOAJ at 20: Global
- 2023 Forum for Open Research in MENA (FORM)
- 2023 Public Knowledge Project Annual General Meeting
- 2022 Leveraging Git for Research. Stanford Graduate School of Education
- 2021 Invisible Knowledge and the Internet: Estimation and Implications. Leverhulme Centre for Demographic Science, University of Oxford
- 2021 Assessing Fairness in Internet Search. Stanford Social Entrepreneurial Students' Association
- 2020 Open-source tools for analyzing educational survey data. All India Council for Technical Education, Ministry of Human Resource Development (MHRD), Government of India
- 2017 Reservation under the Right to Education Act. Quality Education Support Trust
- 2015 Identity and the Textbook. Center for Education, Innovation and Action Research

COURSES TAUGHT

Stanford University

EDUC 306Y: Education and Economic Development

SOC 302B: Education Data Science II [Teaching Assistance]

EDUC 306A: Economics of Education in the Global Economy [Teaching Assistance]

EDUC 200A: Introduction to Data Analysis and Interpretation [Teaching Assistance]

General

Leveraging Git for Research. Stanford Graduate School of Education [content]

Assessing Fairness in Internet Search. Stanford Social Entrepreneurial Students' Association

Open-source tools for analyzing educational survey data. All India Council for Technical Education, Ministry of Human Resource Development, Government of India [content]

SERVICE

Academic Peer Review

Journal of Open Source Software

Science Advances

Society for Research on Educational Effectiveness

iConference

Student Mentorship

Hansol Lee, PhD in Education Data Science, Stanford University

Jodi Anderson Jr., MA in Policy Organization and Leadership Studies, Stanford University

Aparajitha Suresh, MA in International Education Policy Analysis, Stanford University

Vehbi Tandogan, MA in International and Comparative Education, Stanford University

Meng Guo, MA in International Education Policy Analysis, Stanford University

Pok Jing Ho, MA in International and Comparative Education, Stanford University

INDUSTRY EXPERIENCE

2012-13 Software Engineer, Juniper Networks, Bengaluru

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