

# Saurabh Khanna

Department of Communication Science  
Faculty of Social and Behavioural Sciences  
University of Amsterdam

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## APPOINTMENTS

- 2024– University of Amsterdam  
Assistant Professor [tenured], Department of Communication Science
- 2024– University of Oxford  
Research Fellow, Pembroke College
- 2023–24 University of Oxford  
Junior Research Fellow [Nigel James Data Science 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 AFFILIATIONS

- 2019– Public Knowledge Project, Stanford University & Simon Fraser University
- 2019– Immigration Policy Lab, Stanford University & ETH Zürich
- 2021–23 Stanford Institute for Human-Centered Artificial Intelligence
- 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 CLIx [Tata Institute of Social Sciences & Massachusetts Institute of Technology initiative]

## GRANTS AND AWARDS

- 2025–27 Fair and Resilient Societies Grant (Principal Investigator), University of Amsterdam [EUR 216900]
- 2025 Responsible AI Innovation (Principal Investigator), University of Amsterdam [EUR 8000]
- 2024–25 ASCoR Collaborative Grant (Principal Investigator), University of Amsterdam [EUR 25000]
- 2024 Digicom Lab Seed Grant (Principal Investigator), University of Amsterdam [EUR 4500]
- 2024 Social and Behavioural Data Science Centre Valorization Grant (Principal Investigator), University of Amsterdam [EUR 1500]

- 2024 ARILS Methods and Interdisciplinary Research Fund (led by Jef Ausloos), University of Amsterdam [EUR 8000]
- 2024 Social and Behavioural Data Science Centre Interdisciplinary Grant (led by Zak Witkower), University of Amsterdam [EUR 10000]
- 2023 Technology Ethics & Policy Fellowship, Stanford University [USD 12000]
- 2021-23 Stanford Data Science Scholarship [USD 52984]
- 2022-23 Stanford Institute for Human-Centered Artificial Intelligence Fellowship [USD 2000]
- 2022-23 Digital Humanities Fellowship, Stanford Center for Spatial and Textual Analysis [USD 1500]
- 2018-21 William R. and Sara Hart Kimball Fellowship, Stanford University [USD 138600]
- 2021 Design Challenge Research Award, Stanford University and StartX [USD 9000]
- 2021-22 Karr Fellowship, Center for Education Policy Analysis, Stanford [USD 6000]
- 2021 Digital Learning Design Challenge Grant, Stanford University and StartX [USD 1500]
- 2020 Stanford Impact Labs Research Fellowship [USD 3500]
- 2020 Stanford Data Challenge Lab Member [30 Stanford students selected]
- 2019 Immigration Policy Lab Collaborative Research Fellow [USD 4500]
- 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

- 2025 Loyalka, P., Mistree, D., Fairlie, R., & Khanna, S. Job Training, English Language Skills, and Employability: Evidence from an Experiment in Urban India. *Economic Development and Cultural Change*, 73(4). doi:10.1086/734458
- 2024 Silverman, R. D., Darling-Hammond, E., Keane, K., & Khanna, S. (2024). The Effects of Educational Technology Interventions on Literacy in Elementary School: A Meta-Analysis. *Review of Educational Research*. doi:10.3102/00346543241261073
- 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 Communication and Publishing: Causes, Forms, Implications, and Solutions*. London Routledge. doi:10.1590/SciELOPreprints.3474

#### **Working Papers**

[In reverse chronological order of project initiation]

Khanna, S. Invisible Information: Theory, Measurement, and Boosting

Khanna, S., van Driel, I., Sumter, S., Billedo, C., Taylor, L., Eisele, O. PictoPercept: Uncovering Hidden Biases through Visual Wikisurveys

Peter, J. & Khanna, S. Discovering Heterogeneity in Media Effects using Machine Learning Approaches

The Evolution of Innovation in Communication Science over the last 100 years

Khanna, S., & Olivaz, D. AI-Mediated Communication with Non-Human Animals: Implications for Human Empathy and Conservation

Joshi, M., Loyalka, P., Khanna, S., Glewwe, P. Impact of active learning on STEM achievement: Systematic review and new causal evidence

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*]

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., Yasanov, 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.

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**

- 2024 Giebel, S., Khanna, S., Marbach, L., Soysal, Y. Defining Diversity Discourse in Global Higher Education: Computationally Comparing India, the UK, and Germany. *American Sociological Association Annual Conference, Montreal*
- 2024 Giebel, S., Khanna, S., Marbach, L., Soysal, Y. Defining Diversity Discourse in Global Higher Education: Computationally Comparing India, the UK, and Germany. *16th European Sociological Association Conference, Porto*
- 2024 Khanna, S. Incomplete Information. Theory, Measurement, and Boosting. *European Communication Science Event, Nijmegen*
- 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

- 2024 Khanna, S., Raoni, J., Smecher, A., Alperin, J. P., Ball, J., Willinsky, J. Location of known journals using PKP's Open Journal Systems V3. doi:[10.7910/DVN/OCZNVY](https://doi.org/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](https://doi.org/10.7910/DVN/OCZNVY)

## Media Coverage

- 2024 Global Biases in Research Metrics and Fairness in Knowledge Propagation. Knowledge Equity Network
- 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

- 2024 Global Biases in Research Metrics and Fairness in Knowledge Propagation. Knowledge Equity Network, University of Leeds
- 2024 Generative AI and Communication. Digital Communications Lab, University of Amsterdam
- 2024 Knowing Unknowns. Social and Behavioural Data Science Centre, University of Amsterdam
- 2024 Invisible Information: Theory, Measurement, and Boosting. AI, Media and Democracy Lab
- 2024 PictoPercept: Innovating bias assessment through pairwise visual wikisurveys. Digital Communications Lab, University of Amsterdam
- 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

### **University of Amsterdam**

Computational Communication Science  
Digital Analytics  
Always Connected: Insights in Youth, Media, and Technology  
Entertainment Communication

### **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]

### **Open access resources created**

The (In)visible Hub  
PictoPercept  
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 Social Computing (Guest Editor)  
Quantitative Science Studies  
Journal of Open Source Software  
Educational Researcher

AERA Open  
ICA (International Communication Association) Computational Methods Division  
FAccT (ACM Fairness, Accountability, and Transparency)  
AISTATS (Society for Artificial Intelligence and Statistics)  
SREE (Society for Research on Educational Effectiveness)  
iConference

#### **University**

TLC FMG AI Team, University of Amsterdam  
Advisory Board Member, Digital Communications Lab, University of Amsterdam

#### **Student Mentorship**

Chia-Ai Hsu, MSc in Communication Science, University of Amsterdam  
Bohao Hu, MSc in Communication Science, University of Amsterdam  
Ruslan Pinskii, MSc in Communication Science, University of Amsterdam  
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