

Serina Chang

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| ACADEMIC POSITIONS | University of California, Berkeley , Berkeley, CA | Starting July 2025 |
| | Assistant Professor, Department of Electrical Engineering and Computer Science (50%), UCSF UC Berkeley Joint Program in Computational Precision Health (50%) | |
| | Microsoft Research , New York, NY | 2024-2025 |
| | Postdoctoral Researcher, Computational Social Science group | |
| EDUCATION | Stanford University , Stanford, CA | 2019-2024 |
| | Ph.D., Computer Science | |
| | <i>Advisors:</i> Jure Leskovec, Johan Ugander; <i>Thesis committee:</i> Dan Jurafsky, Eric Horvitz <i>Dissertation:</i> “ Computational Methods for Human Networks and High-Stakes Decisions ” | |
| | Columbia University , New York, NY | 2015-2019 |
| | B.A., Computer Science (major), Sociology (concentration), <i>magna cum laude</i> <i>Advisor:</i> Kathleen McKeown | |
| HONORS | Rising Stars in Data Science , University of Chicago and University of California San Diego | 2023 |
| | EECS Rising Stars , Georgia Institute of Technology | 2023 |
| | Future Faculty Symposium Scholar , Cornell University | 2023 |
| | PhD Fellowship, Computational Social Science , Meta | 2022 |
| | Best Paper Award , KDD 2021 (Applied Data Science Track) | 2021 |
| | Graduate Research Fellowship , National Science Foundation | 2019 |
| | The Finch Family Fellowship , Stanford University, School of Engineering | 2019 |
| | Outstanding Undergraduate Researcher Award , Computing Research Association | 2019 |
| | Phi Beta Kappa , Columbia University | 2019 |
| | Theodore R. Bashkow Award , Columbia University, Computer Science | 2019 |
| | Academic Excellence Award , Columbia University, Computer Science | 2019 |
| | King’s Crown Leadership Award, Innovation and Enhancement , Columbia University | 2018 |
| | Dean’s List (all semesters) , Columbia University | 2015-2019 |
| PAPERS | *indicates co-first authorship. †indicates a student I mentored during my PhD. | |
| | [18] ChatBench: From Static Benchmarks to Human-AI Evaluation Serina Chang , Ashton Anderson, and Jake Hofman ACL 2025 (main) Accepted at IC ² S ² 2025 (oral) | |
| | [17] Language Model Fine-Tuning on Scaled Survey Data for Predicting Distributions of Public Opinions Joseph Suh*, Erfan Jahanparast*, Suhong Moon*, Minwoo Kang*, and Serina Chang ACL 2025 (main) Accepted at American Association for Public Opinion Research (AAPOR) Conference 2025 (oral) | |
| | [16] LLMs generate structurally realistic social networks but overestimate political homophily Serina Chang *, Alicja Chaszczewicz*†, Emma Wang†, Maya Josifovska†, Emma Pierson, and Jure Leskovec ICWSM 2025 Also presented at IC ² S ² 2024 as Plenary Talk (2.8% of submissions) | |
| | [15] Learning production functions for supply chains with graph neural networks Serina Chang , Zhiyin Lin†, Benjamin Yan†, Swapnil Bembde, Qi Xiu, Chi Heem Wong, Yu Qin, Frank Kloster, Xi Luo, Raj Palleti, and Jure Leskovec AAAI 2025 (oral, 4.9% of submissions) Also presented at Stanford Graph Learning Workshop 2023 and Stanford Causal Science Conference 2023 | |

- [14] [Artificial intelligence for modelling infectious disease epidemics](#)
Moritz U. G. Kraemer*, Joseph L.-H. Tsui*, **Serina Chang***, Spyros Lytras, Mark P. Khurana, Samantha Vanderslott, Sumali Bajaj, Neil Scheidwasser, Jacob Liam Curran-Sebastian, Elizaveta Semenova, Mengyan Zhang, H. Juliette T. Unwin, Oliver J. Watson, Cathal Mills, Abhishek Dasgupta, Luca Ferretti, Samuel V. Scarpino, Etien Koua, Oliver Morgan, Houriiyah Tegally, Ulrich Paquet, Loukas Moutsianas, Christophe Fraser, Neil M. Ferguson, Eric J. Topol, David A. Duchêne, Tanja Stadler, Patricia Kingori, Michael J. Parker, Francesca Dominici, Nigel Shadbolt, Marc A. Suchard, Oliver Ratmann, Seth Flaxman, Edward C. Holmes, Manuel Gomez-Rodriguez, Bernhard Schölkopf, Christl A. Donnelly, Oliver G. Pybus, Simon Cauchemez, and Samir Bhatt
Nature 2025
- [13] [Measuring vaccination coverage and concerns of vaccine holdouts from web search logs](#)
Serina Chang, Adam Fourney, and Eric Horvitz
Nature Communications 2024
Also presented at KDD 2023 Workshop on Epidemiology Meets Data Mining and Knowledge Discovery (oral); KDD 2023 Workshop on Data Science for Social Good (oral); IC²S² 2024 (oral)
- [12] [Inferring dynamic networks from marginals with iterative proportional fitting](#)
Serina Chang*, Frederic Koehler*, Zhaonan Qu*, Jure Leskovec, and Johan Ugander
ICML 2024
Also presented at *Learning on Graphs* 2023
- [11] [Estimating geographic spillover effects of COVID-19 policies from large-scale mobility networks](#)
Serina Chang, Damir Vrabac†, Jure Leskovec, and Johan Ugander
AAAI 2023
Also presented at KDD 2022 Workshop on Data-driven Humanitarian Mapping and Policymaking (oral); IC²S² 2022
- [10] [Computational analysis of 140 years of US political speeches reveals more positive but increasingly polarized framing of immigration](#)
Dallas Card, **Serina Chang**, Chris Becker, Julia Mendelsohn, Rob Voigt, Leah Boustan, Ran Abramitzky, and Dan Jurafsky
PNAS 2022
Also presented at *Conference on New Directions in Analyzing Text as Data (TADA)* 2021 (oral)
- [9] [To recommend or not? A model-based comparison of item-matching processes](#)
Serina Chang and Johan Ugander
ICWSM 2022 (oral)
Also presented at IC²S² 2021 (oral)
- [8] [Data-driven real-time strategic placement of mobile vaccine distribution sites](#)
Zakaria Mehrab, Mandy Wilson, **Serina Chang**, Galen Harrison, Bryan L. Lewis, Alex Tellionis, Justin Crowe, Dennis Kim, Scott Spillman, Kate Peters, Jure Leskovec, and Madhav Marathe
IAAI 2022
- [7] [Supporting COVID-19 policy response with large-scale mobility-based modeling](#)
Serina Chang, Mandy Wilson, Bryan Lewis, Zakaria Mehrab, Komal K. Dudakiya, Emma Pierson, Pang Wei Koh, Jaline Gerardin, Beth Redbird, David Grusky, Madhav Marathe, and Jure Leskovec
KDD 2021 (oral)
Best Paper Award, Applied Data Science Track (1 out of 705 submissions)
- [6] [Mobility network models of COVID-19 explain inequities and inform reopening](#)
Serina Chang*, Emma Pierson*, Pang Wei Koh*, Jaline Gerardin, Beth Redbird, David Grusky, and Jure Leskovec
Nature 2021
Also presented at Networks 2021 (oral); NeurIPS 2020 COVID-19 Symposium (invited talk); NeurIPS 2020 Machine Learning for Health Workshop
Coverage in 650+ news outlets, including *The New York Times* and *The Washington Post*; ranked as #3 most online impact among 901 similar-age papers published by *Nature* ([metrics](#))
- [5] [Epidemic dynamics in inhomogeneous populations and the role of superspreaders](#)
Kyle Kawagoe*, Mark Rychnovsky*, **Serina Chang**, Greg Huber, Lucy M. Li, Jonathan Miller, Reuven Pnini, Boris Veytsman, and David Yllanes
Physical Review Research 2021

- [4] The socioeconomic mobility gap: disparities in the COVID-19 pandemic
Maya Josifovska[†], **Serina Chang**, and Jure Leskovec
Presented at IC²S² 2021
- [3] [Automatically inferring gender associations from language](#)
Serina Chang and Kathleen McKeown
EMNLP 2019 (oral, short paper)
- [2] [Detecting gang-involved escalation on social media using context](#)
Serina Chang, Ruiqi Zhong, Ethan Adams, Fei-Tzin Lee, Siddharth Varia, Desmond Patton, William Frey, Chris Kedzie, and Kathleen McKeown
EMNLP 2018 (oral, long paper)
- [1] [Crowd-sourced iterative annotation for narrative summarization corpora](#)
Jessica Ouyang, **Serina Chang**, and Kathleen McKeown
EACL 2017 (oral, short paper)

**INVITED
TALKS**

| | |
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| Berkeley Biostatistics Seminar | 2025 (upcoming) |
| UVA Workshop on Social Contagions, Artificial Intelligence, and Democracy (Keynote) | 2025 |
| Frontiers in Computational Health, Berkeley, CA | 2025 |
| CHI 2025 Panels, “Human Subjects Research in the Age of Generative AI: Opportunities and Challenges of Applying LLM-Simulated Data to HCI Studies” | 2025 |
| Princeton, Machine Behavior (COS 598B) | 2025 |
| UCSF, Deep Learning for Biological and Clinical Research (BMI/BioE 212) | 2025 |
| Stanford, AI Agents and Simulations (CS 222) | 2024 |
| MIT, Initiative on Digital Economy (IDE) Seminar | 2024 |
| Learning on Graphs Conference, NYC Meetup | 2024 |
| Berkeley, Computational Precision Health Doctoral Seminar | 2024 |
| CMU, AI and Emerging Economies (Course 94-894) | 2024 |
| Cornell Tech, Urban Data (INFO 5430) | 2024 |
| Public Health Insight Podcast | 2024 |
| Oxford, Networks Seminar | 2024 |
| Stanford, Big Data Methods for Behavioral, Social, and Population Health Research (EPI 270) | 2024 |
| CMU School of Computer Science, Machine Learning Department | 2024 |
| Berkeley, EECS Department & Computational Precision Health | 2024 |
| University of Illinois Urbana-Champaign, Department of Computer Science | 2024 |
| AAAI’24 Workshop on Graphs and More Complex Structures for Learning and Reasoning | 2024 |
| University of Washington, Paul G. Allen School of Computer Science & Engineering | 2024 |
| Microsoft Research NYC, Computational Social Science | 2024 |
| Columbia Business School, Decision, Risk, and Operations Division | 2024 |
| Cornell, Departments of Computer Science & Information Science | 2023 |
| Johns Hopkins, Department of Computer Science | 2023 |
| MIT, Department of Political Science & Schwarzman College of Computing | 2023 |
| NYU Stern School of Business, Department of Technology, Operations, and Statistics | 2023 |
| Learning on Graphs Conference, Stanford Meetup | 2023 |
| Northeastern, Network Science Institute Seminar | 2023 |
| Cornell Tech, Applied Data Science: Decision-Making Beyond Prediction (ORIE 5355) | 2023 |
| Stanford, Graph Learning Workshop | 2023 |
| Columbia, Analysis of Networks and Crowds (COMS 6998) | 2023 |
| Cornell Tech, Data Science for Social Change (CS 6382) | 2023 |
| NSF Predictive Intelligence for Pandemic Prevention (PIPP), PandEval Research Team | 2023 |
| NIH National COVID Cohort Collaborative (N3C), Machine Learning Seminar | 2023 |
| Stanford, Algorithmic Fairness Seminar | 2023 |
| Stanford, Networks (MS&E 135) | 2023 |
| Meta, Computational Social Science Seminar | 2023 |
| Stanford, Introduction to Computational Social Science (MS&E 231) | 2022 |
| Stanford, Fundamental Concepts in MS&E (MS&E 302) | 2022 |
| Cornell Tech, Urban Data (INFO 5430) | 2022 |

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| | Stanford, Big Data Methods for Behavioral, Social, and Population Health Research (EPI 270) | 2022 |
| | OECD-ODISSEI Webinar on Open Data Infrastructure | 2021 |
| | Data Science Connect Conference | 2021 |
| | March for Science Podcast | 2021 |
| | PathCheck Global Health Innovators Seminar | 2021 |
| | Stanford, Networks (MS&E 135) | 2021 |
| | Diaries of Social Data Research Podcast | 2021 |
| | NeurIPS, COVID-19 Symposium | 2020 |
| | AI Science Spotlight Series | 2020 |
| | Global Pervasive Computational Epidemiology Seminar | 2020 |
| | The Octavian Report Podcast | 2020 |
| | Placekey Community Seminar | 2020 |
| | Stanford, Stats ML Retreat | 2020 |
| | Columbia, NLP Seminar | 2019 |
| | Columbia, Emerging Scholars Program (COMS 1404) | 2018 |
| WORK EXPERIENCE | AI Advisor , United Nations Development Programme (UNDP) | 2024 |
| | ▪ Served as AI Advisor on “Project Vision: AI Unveils Tomorrow”, which seeks to use AI to analyze how countries are responding to impending risks (e.g., climate change, pandemics, democratic backsliding) and adapting their development strategies | |
| | Research Intern , Microsoft Research | 2022-2024 |
| | ▪ Developed graph machine learning methods to detect user intents from search logs and derive insights for public health. See Chang, Fournay, and Horvitz, “Measuring vaccination coverage and concerns of vaccine holdouts from web search logs”, <i>Nature Communications</i> (2024). | |
| | Software Engineering Intern , Google, Geo Assistant | 2018 |
| | ▪ Built a new, user-facing feature for Google Search and Assistant ▪ Implemented backend to parse queries in Search, worked with UX designer and PM to create frontend | |
| TEACHING | Engineering Practicum Intern , Google, Search Site Reliability Engineering (SRE) | 2017 |
| | ▪ Improved internal tools for monitoring and tracking requests to Google Now | |
| | Head course assistant (CA) , Stanford University, Machine Learning with Graphs (CS224W) | 2021 |
| | ▪ Managed team of 9 CAs and class of around 300 students; oversaw lecture slides, assignments, exams, and final projects ▪ Course material covers the foundations and state-of-the-art of machine learning with graphs, including representation learning, graph neural networks, reasoning over knowledge graphs, and algorithms for large-scale networks | |
| | Instructor , Girls Who Code, Summer Immersion Program | 2019 |
| | ▪ Served as the primary teacher for a classroom of 20 high school girls ▪ Taught a 7-week curriculum including Python, HTML, CSS, JavaScript, and Arduino | |
| MENTORSHIP | Instructional assistant , Columbia University, Data Structures in Java (COMS 3134) | 2017 |
| | ▪ Led discussion sections, held weekly office hours, and graded assignments and exams | |
| | Peer tutor , Columbia University, Computer Science Theory (COMS 3261) | 2017 |
| | Mentor , International Conference for Computational Social Science (IC ² S ²) | 2024 |
| | Mentor , Stanford Computer Science, CURIS (undergraduate summer research) | 2023 |
| | Mentor , Machine Learning for Health (ML4H), Career Mentorship Program | 2023 |
| | Mentor , Stanford Computer Science, Undergraduate Mentoring Program | 2022 |
| | Mentor , Stanford Engineering, Summer Undergraduate Research Fellowship | 2021 |
| | Research mentees (during PhD): Maya Josifovska, Zhiyin Lin, Daisuke Masuda, Emma Wang, Benjamin Yan (undergraduates); Damir Vrabac (master’s); Alicja Chaszczewicz, Jordan Troutman (PhD) | |

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| SERVICE | Organization | |
| | Co-Organizer, NeurIPS Workshop on Behavioral Machine Learning | 2024 |
| | Co-Organizer, KDD Workshop on Epidemiology meets Data Mining and Knowledge discovery | 2024 |
| | Program Chair, Machine Learning for Health (ML4H) | 2023 |
| | Co-Organizer, KDD Workshop on Data Science for Social Good | 2023 |
| | Panel Moderator, KDD Equity, Diversity & Inclusion (EDI) Day | 2023 |
| | Faculty Search Committee, Stanford Data Science and School of Engineering | 2023 |
| | Organizer, NYC Digital Humanities Week, Using Computation to Analyze Gender in Film | 2019 |
| | Journal reviewer | |
| | The New England Journal of Medicine AI (NEJM AI) | 2024 |
| | Proceedings of the National Academy of Sciences | 2024 |
| | Science Advances | 2023 |
| | Nature Human Behaviour | 2022 |
| | American Journal of Sociology | 2021 |
| | ACM Transactions on Spatial Algorithms and Systems | 2021 |
| | npj Urban Sustainability | 2021 |
| | Conference reviewer | |
| | ACL Rolling Review | 2025 |
| | WWW | 2025 |
| | AAAI | 2025 |
| | Machine Learning for Health | 2024 |
| | International Conference on Computational Social Science (IC ² S ²) | 2024 |
| | KDD, epiDAMIK Workshop | 2024 |
| | AAAI | 2024 |
| | EMLNP | 2024 |
| | Machine Learning for Health | 2023 |
| | ACL Rolling Review | 2023 |
| | ICWSM | 2023 |
| | KDD, epiDAMIK Workshop | 2023 |
| | KDD, Data Science for Social Good Workshop | 2023 |
| | ACL Rolling Review | 2022 |
| | Machine Learning for Health | 2022 |
| | ACL, NLP for Positive Impact Workshop | 2022 |
| | KDD, epiDAMIK Workshop | 2022 |
| | ACL-IJCNLP | 2021 |
| | Machine Learning for Health | 2021 |
| | ACL, NLP for Positive Impact Workshop | 2021 |
| | ICLR, AI for Public Health Workshop | 2021 |