

Serina Chang

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Last updated: Oct. 24, 2021

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| EDUCATION | <p>Stanford University, Stanford, CA 2019-present Ph.D. candidate, Computer Science Advised by Prof. Jure Leskovec and Prof. Johan Ugander</p> <p>Columbia University, New York, NY 2015-2019 B.A., Computer Science, concentration in Sociology, <i>magna cum laude</i> Advised by Prof. Kathleen McKeown GPA: 3.97/4.00, Dean's List (all semesters)</p> |
| HONORS | <p>Best Paper Award, KDD 2021 (Applied Data Science Track) 2021</p> <p>Outstanding Undergraduate Researcher Award, Computing Research Association 2019</p> <p>Graduate Research Fellowship, National Science Foundation 2019</p> <p>The Finch Family Fellowship, Stanford University, School of Engineering 2019</p> <p>Phi Beta Kappa, Columbia University 2019</p> <p>Theodore R. Bashkow Award, Columbia University, Computer Science 2019</p> <p>Academic Excellence Award, Columbia University, Computer Science 2019</p> <p>Collegiate Award Finalist, National Center for Women and Information Technology 2018</p> <p>King's Crown Leadership Award, Innovation and Enhancement, Columbia University 2018</p> |
| PUBLICATIONS | <p>*indicates co-first authorship.</p> <ol style="list-style-type: none">[1] Serina Chang, Mandy L. Wilson, Bryan Lewis, Zakaria Mehrab, Komal K. Dudakiya, Emma Pierson, Pang Wei Koh, Jaline Gerardin, Beth Redbird, David Grusky, Madhav Marathe, and Jure Leskovec. Supporting COVID-19 policy response with large-scale mobility-based modeling. KDD 2021 (Applied Data Science Track, Best Paper Award). Oral presentation.[2] Kyle Kawagoe*, Mark Rychnovsky*, Serina Chang, Greg Huber, Lucy M. Li, Jonathan Miller, Reuven Pnini, Boris Veytsman, and David Yllanes. Epidemic dynamics in inhomogeneous populations and the role of superspreaders. <i>Physical Review Research</i>, 2021.[3] Serina Chang*, Emma Pierson*, Pang Wei Koh*, Jaline Gerardin, Beth Redbird, David Grusky, and Jure Leskovec. Mobility network models of COVID-19 explain inequities and inform reopening. <i>Nature</i>, 2020. Also presented at Networks 2021 (oral) and NeurIPS 2020 ML for Health Workshop. Coverage in 380+ news outlets, including The New York Times, The Washington Post, Bloomberg, CNN, Fox Business, Wired, NPR, The Telegraph, MIT Technology Review, and Nature News. Ranked at #4 most online impact among 83,000+ papers ever published by <i>Nature</i> (Altmetric).[4] Serina Chang and Kathleen McKeown. Automatically inferring gender associations from language. EMNLP 2019 (short paper). Oral presentation.[5] Serina Chang, Ruiqi Zhong, Ethan Adams, Fei-Tzin Lee, Siddharth Varia, Desmond Patton, William Frey, Chris Kedzie, and Kathleen McKeown. Detecting gang-involved escalation on social media using context. EMNLP 2018 (long paper). Oral presentation.[6] Jessica Ouyang, Serina Chang, and Kathleen McKeown. Crowd-sourced iterative annotation for narrative summarization corpora. EACL 2017 (short paper). Oral presentation. |
| WORKING PAPERS | <ol style="list-style-type: none">[1] Serina Chang and Johan Ugander. To recommend or not? A model-based comparison of item-matching processes. Under review, 2021. Also presented at IC2S2 2021 (oral).[2] Zakaria Mehrab, Mandy L. Wilson, Serina Chang, Galen Harrison, Bryan L. Lewis, Alex Tellionis, Justin Crowe, Dennis Kim, Scott Spillman, Kate Peters, Jure Leskovec, and Madhav Marathe. Data-driven real-time strategic placement of mobile vaccine distribution sites. Under review, 2021.[3] Dallas Card, Chris Becker, Serina Chang, Julia Mendelsohn, Myera Rashid, Rob Voight, Leah Boustan, Ran Abramitzky, and Dan Jurafsky. Characterizations of immigrants over 140 years of American political speeches. Working paper, 2021. |

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| TEACHING & MENTORSHIP | Head course assistant (CA) , Stanford University, Machine Learning with Graphs (CS224W) | 2021 |
| | <ul style="list-style-type: none"> Managing CA team and class of over 300 students; overseeing 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 | |
| | Research mentor , Stanford University | 2020-present |
| | <ul style="list-style-type: none"> Mentoring students (PhD, masters, undergrad) in Prof. Leskovec's lab on research projects related to COVID-19 modeling | |
| | Mentor , Stanford Engineering, Summer Undergraduate Research Fellowship | 2021 |
| | Mentor , Stanford Computer Science, Undergraduate Mentoring Program | 2020 |
| | Instructor , Girls Who Code, Summer Immersion Program | 2019 |
| | <ul style="list-style-type: none"> 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 | |
| | Workshop organizer , NYC Digital Humanities Week | 2019 |
| | <ul style="list-style-type: none"> "Beyond Bechdel: Using Computation to Analyze Gender in Film," co-organized and co-taught with Kara Schechtman Introduced techniques in natural language processing and data science to analyze movies; provided sample code and data | |
| WORK EXPERIENCE | Instructional assistant , Columbia University, Data Structures in Java (COMS 3134) | 2017 |
| | Peer tutor , Columbia University, Computer Science Theory (COMS 3261) | 2017 |
| | Software Engineering Intern , Google, Geo Assistant | 2018 |
| | <ul style="list-style-type: none"> 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 | |
| | Engineering Practicum Intern , Google, Search Site Reliability Engineering (SRE) | 2017 |
| | <ul style="list-style-type: none"> Improved internal tools for monitoring and tracking requests to Google Now | |
| | Stanford, Fundamental Concepts in MS&E (MS&E 302), Guest Lecture | 2021 (scheduled) |
| | Harvard-BCH Machine Learning Club | 2021 (scheduled) |
| | Cornell Tech, Urban Data (INFO 5430), Guest Lecture | 2021 |
| | OECD-ODISSEI Webinar on Open Data Infrastructure | 2021 |
| INVITED TALKS | Data Science Connect Conference | 2021 |
| | March for Science Podcast | 2021 |
| | PathCheck Global Health Innovators Seminar | 2021 |
| | Stanford, Networks (MS&E 135), Guest Lecture | 2021 |
| | Diaries of Social Data Research Podcast | 2021 |
| | Stanford, Big Data Methods for Behavioral, Social, and Pop. Health (EPI 270), Guest Lecture | 2021 |
| | Stanford San Diego Alumni Club, Speaker Event | 2021 |
| | NeurIPS, COVID-19 Symposium | 2020 |
| | AI Science Spotlight Series | 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), Guest Lecture | 2018 |
| SERVICE | Journal reviewer for: | |
| | <ul style="list-style-type: none"> Nature Human Behavior American Journal of Sociology ACM Transactions on Spatial Algorithms and Systems npj Urban Sustainability | |
| | Conference reviewer for: | |
| | <ul style="list-style-type: none"> 2022: ACL Rolling Review 2021: Machine Learning for Health (ML4H) Symposium, ACL (NLP for Social Good Theme), ACL NLP for Positive Impact Workshop, ICLR AI for Public Health Workshop | |
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| LEADERSHIP | Womxn in CS (WiCS) , Columbia University, Academic Chair | 2016-2019 |
| | <ul style="list-style-type: none"> Founded WiCS Lightning Talks, a series for student researchers to share their research with student audiences Organized panels with faculty and mentorship events with upperclassmen to help students navigate academics in CS | |

Lean In at Columbia, Columbia University, Co-President & Senior Advisor 2016-2019

- Grew active membership by 5x to reach over 100 committed members attending weekly meetings
- Founded a mentorship program that connected over 70 student-mentor pairs
- Organized the first Lean In at CU conference, sponsored by Microsoft, Facebook, IBM, and others

Intercollegiate Chamber Music Festival (ICMF), NYC 2017-2019

- Co-founded with Cindy Liu and Dean Deng, in collaboration with the Chamber Music Society of Lincoln Center
- ICMF is an annual, weekend-long music festival for collegiate chamber musicians; events include a performers' showcase at Lincoln Center, masterclasses with world-renowned artists, and talks with industry leaders

ACTIVITIES

Music Performance Program (MPP), Columbia University 2015-2019

- Took lessons in chamber music and piano
- Selected 3 times to perform in MPP's end-of-year concert at Carnegie Weill Hall

Precollege Program, Manhattan School of Music (MSM) 2003-2015

- Took lessons in piano, violin, chamber music, orchestra, music theory, and ear training
- Recipient of the Rosetta Goodkind Scholarship and the Ralph Zola Scholarship
- Multi-time winner of MSM's concerto and chamber music competitions
- Featured on NPR's *From The Top*; recipient of the National YoungArts Merit Award; winner of international piano competitions including American Protégé, American Fine Arts Festival, and New York International Artists Association