

Serina Chang

serinac@cs.stanford.edu • <https://serinachang5.github.io>

Last updated: Jan. 7, 2022

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> <p>[1] 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. IAAI 2022.</p> <p>[2] 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.</p> <p>[3] 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.</p> <p>[4] 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 #5 most online impact among 84,000+ papers ever published by <i>Nature</i> (Altmetric).</p> <p>[5] Serina Chang and Kathleen McKeown. Automatically inferring gender associations from language. EMNLP 2019 (short paper). Oral presentation.</p> <p>[6] 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.</p> <p>[7] Jessica Ouyang, Serina Chang, and Kathleen McKeown. Crowd-sourced iterative annotation for narrative summarization corpora. EACL 2017 (short paper). Oral presentation.</p>
WORKING PAPERS	<p>[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).</p> <p>[2] Dallas Card, Serina Chang, Chris Becker, Julia Mendelsohn, Rob Voight, Leah Boustan, Ran Abramitzky, and Dan Jurafsky. Computational analysis of 140 years of U.S. political speeches reveals more positive but increasingly polarized framing of immigration. Under review, 2021.</p>

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 	
	INVITED TALKS	
	Stanford, Fundamental Concepts in MS&E (MS&E 302), Guest Lecture	2021
	Cornell Tech, Urban Data (INFO 5430), Guest Lecture	2021
	OECD-ODISSEI Webinar on Open Data Infrastructure	2021
SERVICE	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
LEADERSHIP	Placekey Community Seminar	2020
	Stanford, Stats ML Retreat	2020
	Columbia, NLP Seminar	2019
	Columbia, Emerging Scholars Program (COMS 1404), Guest Lecture	2018
	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 (October, November) 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 	
	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