ANSON KAHNG

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RESEARCH INTERESTS

Computational Social Choice, Theoretical Computer Science, Artificial Intelligence, Economics

ACADEMIC POSITIONS

University of Rochester, Rochester, NY *July 2022 - Present*
Assistant Professor in Computer Science (CS) and Data Science (GIDS)

University of Toronto, Toronto, ON *August 2021 - August 2022*
Postdoctoral Fellow in Computer Science
Advisor: Nisarg Shah

EDUCATION

Carnegie Mellon University, Pittsburgh, PA *August 2016 - August 2021*
Ph.D. in Computer Science
Advisor: Ariel Procaccia

Harvard University, Cambridge, MA *August 2012 - May 2016*
Bachelor of Arts in Computer Science, *cum laude*
Advisor: David Parkes

INDUSTRY EXPERIENCE

Microsoft Research, New York, NY *May 2019 - August 2019*
Graduate Research Intern
Supervised by David Pennock and Rupert Freeman. Worked on multi-winner elections and pari-mutuel wagering mechanisms.

Google, Mountain View, CA *June 2014 - August 2014*
Software Engineering Intern
Worked on datacenter software and repairs accuracy. Ran large-scale data mining and developed machine learning algorithms on fleet-wide datacenter statistics.

WORKING PAPERS

(α): alphabetical author ordering

Proportional Representation for Rankings in Content Recommendation
(α) Alina Chadwick, Anson Kahng, Kiet Nguyen, Joseph Saber, and Rebecca Salganik

Worst-Case Voting for Goods, Bads, and Committees
(α) Miles Frank, Anson Kahng, and Joseph Saber

End-to-End Fair Division
(α) Richard Z Huang, Anson Kahng, and Yicheng Wang

Automating Probabilistic Coherence in LLMs
(α) Milos Bisenic, Alina Chadwick, Anson Kahng, Jens Kipper, and Euan Seow

Why Vagueness Persists but Doesn't Proliferate in Natural Language
(α) Max Barlow, Quan Luu, Ruzica Vukovic, Anson Kahng, and Jens Kipper

Informed Stakeholder Needs: Facilitating Music Artists' Understanding of Recommender Systems
Karlijn Dinnissen, Rebecca Salganik, Alances Vargas, Jeroen Ooge, Anson Kahng, Judith Masthoff, and Hanna Hauptmann

JOURNAL PUBLICATIONS

(α): alphabetical author ordering

Optimized Distortion and Proportional Fairness in Voting *TEAC 2023*
(α) Soroush Ebadian, Anson Kahng, Dominik Peters, and Nisarg Shah
ACM Transactions on Economics and Computation (TEAC)
Supersedes EC 2022

High-Throughput Cryo-ET Structural Pattern Mining by Unsupervised Deep Iterative Subtomogram Clustering *PNAS 2023*
Xiangrui Zeng, Anson Kahng, Liang Xue, Julia Mahamid, Yi-Wei Chang, and Min Xu
Proceedings of the National Academy of Sciences (PNAS)

Liquid Democracy: An Algorithmic Perspective *JAIR 2021*
(α) Anson Kahng, Simon Mackenzie, and Ariel D. Procaccia
Journal of Artificial Intelligence Research (JAIR)
Supersedes AAAI 2018

The Fluid Dynamics of Liquid Democracy *TEAC 2021*
(α) Paul Gölz, Anson Kahng, Simon Mackenzie, and Ariel D. Procaccia
ACM Transactions on Economics and Computation (TEAC)
Supersedes WINE 2018

WeBuildAI: Participatory Framework for Fair and Efficient Algorithmic Governance *CSCW 2019*
Min Kyung Lee, Daniel Kusbit, Anson Kahng, Ji Tae Kim, Xinran Yuan, Allissa Chan, Ritesh Noothigattu, Daniel See, Siheon Lee, Alex Psomas, and Ariel D. Procaccia
Computer Supported Cooperative Work (CSCW)

CONFERENCE PUBLICATIONS

(α): alphabetical author ordering

Robustness and Feasibility of Voting in Linear Social Choice *ADT 2026*
(α) Alina Chadwick, Anson Kahng, and Euan Seow

Position: Regulating Algorithms Is Not Enough. A Study of Content Discovery in Online Platforms *ICML 2026*
Rebecca Salganik, Guillaume Salha-Galvan, Adelaida Afilipoaie, Gustavo Ferreira, Valdy Wiratama, Anson Kahng, Jian Kang, and Heritiana Ranaivoson

Dutch Books and Money Pumps: Rectifying Vulnerabilities in LLMs Through Rationality *HAR 2025*
(α) Alina Chadwick, Anson Kahng, and Jens Kipper
4th International Conference on Human and Artificial Rationalities (HAR-25)

When to Stop Getting Tested: The Theory of Diagnostic Tests *AAMAS 2025*
(α) Anson Kahng and Joseph Saber
24th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-25)
Extended abstract

FPBA: Flexible Percentile-Based Allocation for Multiple-Bits-Per-Cell RRAM *ASP-DAC 2025*
Junfei Liu and Anson Kahng
30th Asia and South Pacific Design Automation Conference (ASP-DAC-25)

Sampling Winners in Ranked Choice Voting *IJCAI 2024*
(α) Matthew Iceland, Anson Kahng, and Joseph Saber
33rd International Joint Conference on Artificial Intelligence (IJCAI-24)

Voting with Preference Intensities *AAAI 2023*
(α) Anson Kahng, Mohamad Latifian, and Nisarg Shah

37th AAAI Conference on Artificial Intelligence (AAAI-23)

Optimized Distortion and Proportional Fairness in Voting *EC 2022*
(α) Soroush Ebadian, Anson Kahng, Dominik Peters, and Nisarg Shah
23rd ACM Conference on Economics and Computation (EC-22)

Worst-Case Voting When the Stakes Are High *AAAI 2022*
(α) Anson Kahng and Gregory Kehne
36th AAAI Conference on Artificial Intelligence (AAAI-22)

District-Fair Participatory Budgeting *AAAI 2021*
(α) D Ellis Hershkowitz, Anson Kahng, Dominik Peters, and Ariel D. Procaccia
35th AAAI Conference on Artificial Intelligence (AAAI-21)

Mean Estimation from Multiple-Choice Questions *ICML 2020*
(α) Anson Kahng, Gregory Kehne, and Ariel D. Procaccia
37th International Conference on Machine Learning (ICML-20)

Proportionality in Approval-Based Elections With a Variable Number of Winners *IJCAI 2020*
(α) Rupert Freeman, Anson Kahng, and David M. Pennock
29th International Joint Conference on Artificial Intelligence (IJCAI-20)

HirePeer: *AAAI 2020*
Impartial Peer-Assessed Hiring at Scale in Expert Crowdsourcing Markets
Yasmine Kotturi, Anson Kahng, Ariel D. Procaccia, and Chinmay Kulkarni
34th AAAI Conference on Artificial Intelligence (AAAI-20)

Computationally-Aware Data Aggregation *ITCS 2020*
(α) Bernhard Haeupler, D Ellis Hershkowitz, Anson Kahng, and Ariel D. Procaccia
11th Innovations in Theoretical Computer Science (ITCS-20)

Paradoxes in Fair Machine Learning *NeurIPS 2019*
(α) Paul Gölz, Anson Kahng, and Ariel D. Procaccia
NeurIPS Spotlight Presentation (2.5% of submissions)
33rd Conference on Neural Information Processing (NeurIPS-19)

Statistical Foundations of Virtual Democracy *ICML 2019*
(α) Anson Kahng, Min Kyung Lee, Ritesh Noothigattu, Ariel D. Procaccia, and Alex Psomas
36th International Conference on Machine Learning (ICML-19)

The Fluid Dynamics of Liquid Democracy *WINE 2018*
(α) Paul Gölz, Anson Kahng, Simon Mackenzie, and Ariel D. Procaccia
14th Conference on Web and Internet Economics (WINE-18)

Liquid Democracy: An Algorithmic Perspective *AAAI 2018*
(α) Anson Kahng, Simon Mackenzie, and Ariel D. Procaccia
32nd AAAI Conference on Artificial Intelligence (AAAI-18)

Ranking Wily People Who Rank Each Other *AAAI 2018*
(α) Anson Kahng, Yasmine Kotturi, Chinmay Kulkarni, David Kurokawa, and Ariel D. Procaccia
32nd AAAI Conference on Artificial Intelligence (AAAI-18)

Making Right Decisions Based on Wrong Opinions *EC 2017*
(α) Gerdus Benadè, Anson Kahng, and Ariel D. Procaccia
18th ACM Conference on Economics and Computation (EC-17)

THESES

Computational Perspectives on Democracy *August 2021*
Carnegie Mellon University PhD Thesis

Advised by Ariel Procaccia

Timing Objectives in Dynamic Kidney Exchange *May 2016*
Harvard College Undergraduate Honors Thesis
Advised by David Parkes

GRANTS

University of Rochester CTSA Hub *1/2026 - 9/2030*
Co-I (Co-Investigator) of Element E with Jon Herington and Christopher Kanan.
Total grant size: $24,137,329 (my portion: $165,654).

UR GIDS Seed Funding Award *9/2025 - 8/2026*
Participatory Fair Division.
PI.
$30,000

UR GIDS Seed Funding Award *9/2024 - 8/2025*
Fairer and More Accurate Large Language Models via Social Choice and Crowdsourcing.
co-PI with Nikhil Garg (Cornell Tech).
$20,000

TEACHING

DSCC/CSC 462: Computational Introduction to Statistics *Fall 2026*
University of Rochester

CSC 289/489: Algorithmic Game Theory *Fall 2026*
University of Rochester

DSCC/CSC 462: Computational Introduction to Statistics *Fall 2025*
University of Rochester

CSC 289/489: Algorithmic Game Theory *Fall 2025*
University of Rochester

DSCC/CSC 462: Computational Introduction to Statistics *Fall 2024*
University of Rochester

CSC 289/489: Algorithmic Game Theory *Spring 2024*
University of Rochester

DSCC/CSC 462: Computational Introduction to Statistics *Fall 2023*
University of Rochester

CSC 289/489: Algorithmic Game Theory *Spring 2023*
University of Rochester

DSCC/CSC 462: Computational Introduction to Statistics *Fall 2022*
University of Rochester

Diversity, Equity, and Inclusion in Computer Science and Society (15-996B) *Spring 2021*
Carnegie Mellon, Pilot Course
Discussion Moderator and Graduate Teaching Assistant

Truth, Justice, and Algorithms (15-896), Carnegie Mellon *Fall 2018*
Graduate Teaching Assistant

Graduate Artificial Intelligence (15-780), Carnegie Mellon *Spring 2017*
Graduate Teaching Assistant

Networks (CS 134), Harvard University *Fall 2015*
Undergraduate Teaching Fellow

SERVICE

Conference Program Committee (PC) Member
WINE-26, EC-26, ICML-26 (Area Chair), AAAI-26, WINE-25, NeurIPS-25 (Area Chair), ICML-25 (Area Chair), FORC-25, IJCAI-25, AAMAS-25, AAAI-24, NeurIPS-24 (Area Chair), EAAMO-24, EC-24, IJCAI-24, FAccT-24, AAMAS-24, NeurIPS-23, EAAMO-23, EC-23, AAAI-23, AAMAS-22, EAAMO-22, EC-22, IJCAI-22, NeurIPS-22, AAAI-22, EAAMO-21, EC-21, ICML-21, IJCAI-21 (Senior Program Committee), AAAI-21, NeurIPS-20, ICML-20, AAAI-20, SAGT-19

Abbreviations:
AAAI: Annual AAAI Conference on Artificial Intelligence
AAMAS: International Conference on Autonomous Agents and Multiagent Systems
EAAMO: Equity and Access in Algorithms, Mechanisms, and Optimization
EC: ACM Conference on Economics and Computation
FAccT: ACM Conference on Fairness, Accountability, and Transparency
FORC: Foundations of Responsible Computing
ICML: International Conference on Machine Learning
IJCAI: International Joint Conference on Artificial Intelligence
NeurIPS: Conference on Neural Information Processing Systems
SAGT: International Symposium on Algorithmic Game Theory

Journal Reviews
Journal of Artificial Intelligence Research (JAIR), ACM Transactions on Economics and Computation (TEAC), Games and Economic Behavior (GEB), Artificial Intelligence Journal (AIJ), Social Choice and Welfare (SCW), Information Processing Letters (IPL), Mathematics of Operations Research (MOR)

Thesis Committees University of Rochester
Michael Chavrimootoo, Saiful Islam, Hanjia Lyu

Area Exam Committees University of Rochester
Hanjia Lyu, Tariq Adnan

AI for All Committee (University of Rochester) *Fall 2024*
Member of a committee to design an undergraduate class on "AI for All"

Eastern Great Lakes (EaGL) Theory of Computation Workshop *Fall 2023, Fall 2024*
Organizer (with Kaave Hosseini, Eshan Chattopadhyay, and Noah Stephens-Davidowitz)

Institute for Mathematics and Democracy (IMD) Summer Research Program *Summer 2024*
PI for a team of three high school students

UR Computer Science Faculty Recruiting Committee *Fall 2024 - Spring 2025*
Member of the faculty search committee

UR Computer Science Seminar Chair *Fall 2023 - Spring 2026*
Organized a weekly computer science department seminar

UR GIDS Faculty Search Committee Member *Fall 2023 - Spring 2024*
Member of the faculty search committee for computational social science

UR GIDS Masters Admissions Committee Member *Spring 2023 - Spring 2026*
Member of the masters admissions committee for the Goergen Institute of Data Science and Artificial Intelligence

UR Computer Science Publicity Committee Member *Fall 2023 - Spring 2024*
Member of the publicity committee for the computer science doctoral program

UR Computer Science Seminar Committee Member *Fall 2022 - Spring 2023*
Member of the seminar committee for the weekly computer science department seminar

CMU CSD DEI Working Group *September 2020 - August 2021*
Member of working group designing a mandatory course on DEI for all CSD PhD students
Received the CMU SCS Graduate Student Service Award in 2022

EAAMO Bridges (formerly Mechanism Design for Social Good (MD4SG)) *June 2018 - Present*
Civic Participation working group leader (with Paul Gölz) *September 2020 - May 2022*
Member of the Online Labor Markets and Bias working groups *June 2018 - September 2020*

Harvard EconCS Seminar Organizer *September 2020 - June 2021*
Joint with Mark York

Data Analysis Chair *February 2020 - June 2020*
EC-20

Speakers Club, Carnegie Mellon University *March 2019 - August 2021*
Graduate Student Member
Evaluate PhD students' speaking skills requirements.

CSD Doctoral Review Committee, Carnegie Mellon University *November 2017 - August 2021*
Graduate Student Member
Selected as a member of the Computer Science Department's doctoral program advisory committee.

CSD Ph.D. Mentor, Carnegie Mellon University *September 2017 - August 2021*
Graduate Student Mentor
Mentor junior Ph.D. students in the Computer Science Department

Random Distance Run Organizer *April 2017 - April 2021*
Organize an annual ∼50-person track race for CMU's School of Computer Science

Hack Harvard Organizer *January 2015 - November 2015*
Organized the first annual Hack Harvard, with 500+ participants, $25,000+ in sponsorship, and over 2,000 pounds of sponsored merchandise

TALKS

On Randomness in Ranked-Choice Voting *March 2026*
Banff International Research Station (BIRS)

URochester GIDS-AI 10th Anniversary Celebration *September 2025*

Probabilistic Ranked-Choice Voting
UR-RIT Theory Canal *February 2025*

Automating Ethical Decision-Making with Virtual Democracy
Brown CS Theory Seminar *May 2024*

Voting with Preference Intensities
AAAI '23 Presentation *February 2023*

Democra-CS: Computational Perspectives on Democracy
JMM: Mathematical Foundations of Democracy *January 2023*
UR-RIT Theory Canal *November 2022*
URCS Colloquium *September 2022*

District-Fair Participatory Budgeting
AAAI '21 Presentation *February 2021*
Harvard EconCS Seminar *September 2020*

Proportionality in Approval-Based Elections With a Variable Number of Winners

IJCAI '20 Presentation *January 2021*
GAIW workshop at AAMAS '20 *May 2020*

Statistical Foundations of Virtual Democracy
University of Toronto, Theory Lunch *April 2022*
CU Boulder, Guest lecture in CSCI 7000: Topics in Algorithmic Game Theory *February 2020*
ICML '19 Presentation *June 2019*
Computational Sustainability Open Graduate Seminar *April 2019*
Carnegie Mellon University, AI Seminar *March 2019*

Paradoxes in Fair Machine Learning
MD4SG Bias Working Group *January 2020*
NeurIPS '19 Spotlight Presentation (2.5% of submissions) *December 2019*

Incentivizing Effort in Impartial Ranking
MD4SG Online Labor Markets Working Group *November 2018*

Liquid Democracy: An Algorithmic Perspective
AAAI '18 Presentation *January 2018*

Impartial Rank Aggregation
AAAI '18 Presentation *January 2018*
Carnegie Mellon University, AI Seminar *December 2017*

Making Right Decisions Based on Wrong Opinions
EC '17 Presentation *June 2017*

STUDENTS (UNIVERSITY OF ROCHESTER)

Graduate Students
Joseph Saber *Joined Fall 2023*
Alina Chadwick *Joined Fall 2024*
Rebecca Salganik *Joined Fall 2025*

Master's Students
Divya Munot *Spring 2024*
Tanvi Shroff *Spring 2024*

Undergraduate Students
Christopher Bruinsma (URCS '23) *Spring 2023*
Quan Luu (URCS '23) *Spring 2023 - Fall 2024*
Yoo (Daniel) Choi (URCS '24) *Spring 2023 - Spring 2024*
Junfei Liu (URCS '24) *Spring 2023 - Fall 2024*
Matthew Iceland† (URCS '25) *Fall 2022 - Spring 2025*
Chengkai (Kai) Kang (URCS '25) *Spring 2023 - Fall 2024*
Kiet Nguyen (URCS '25) *Fall 2023 - Spring 2026*
Minh Nguyen (URCS '25) *Spring 2024 - Spring 2025*
Milos Bisenic (URCS '26) *Summer 2025 - Spring 2026*
Miles Frank† (URCS '26) *Spring 2025 - Spring 2026*
Jack Ringel (URCS '26) *Fall 2025 - Fall 2026*
Euan Seow (URCS '26) *Spring 2024 - Summer 2026*
Taggart Vales (URCS '26) *Summer 2024 - Summer 2026*
Alexander Chatterjee (URCS '27) *Spring 2026 - Present*
Brian Scully (URCS '27) *Spring 2026 - Present*
Hailey Wong-Budiman (URCS '27) *Spring 2024 - Present*
Allison Kim (URCS '29) *Spring 2026 - Present*

†: Honors undergraduate thesis