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.

PUBLICATIONS

Sampling Winners in Ranked Choice Voting *IJCAI 2024*
(α) Matthew Iceland, Anson Kahng, and Joseph Saber

Optimized Distortion and Proportional Fairness in Voting *TEAC 2023*
(α) Soroush Ebadian, Anson Kahng, Dominik Peters, and Nisarg Shah
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

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

Optimized Distortion and Proportional Fairness in Voting *EC 2022*
(α) Soroush Ebadian, Anson Kahng, Dominik Peters, and Nisarg Shah

Worst-Case Voting When the Stakes Are High *AAAI 2022*
(α) Anson Kahng and Gregory Kehne

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

District-Fair Participatory Budgeting *AAAI 2021*
(α) D Ellis Hershkowitz, Anson Kahng, Dominik Peters, and Ariel D. Procaccia

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

Mean Estimation from Multiple-Choice Questions *ICML 2020*
(α) Anson Kahng, Gregory Kehne, and Ariel D. Procaccia

Proportionality in Approval-Based Elections With a Variable Number of Winners *IJCAI 2020*
(α) Rupert Freeman, Anson Kahng, and David M. Pennock

HirePeer: *AAAI 2020*
Impartial Peer-Assessed Hiring at Scale in Expert Crowdsourcing Markets
Yasmine Kotturi, Anson Kahng, Ariel D. Procaccia, and Chinmay Kulkarni

Computationally-Aware Data Aggregation *ITCS 2020*
(α) Bernhard Haeupler, D Ellis Hershkowitz, Anson Kahng, and Ariel D. Procaccia

Paradoxes in Fair Machine Learning *NeurIPS 2019*
(α) Paul Gölz, Anson Kahng, and Ariel D. Procaccia
NeurIPS Spotlight Presentation (2.5% of submissions)

WeBuildAI: *CSCW 2019*
Participatory Framework for Fair and Efficient Algorithmic Governance
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

Statistical Foundations of Virtual Democracy *ICML 2019*
(α) Anson Kahng, Min Kyung Lee, Ritesh Noothigattu, Ariel D. Procaccia, and Alex Psomas

The Fluid Dynamics of Liquid Democracy *WINE 2018*
(α) Paul Gölz, Anson Kahng, Simon Mackenzie, and Ariel D. Procaccia

Liquid Democracy: An Algorithmic Perspective *AAAI 2018*
(α) Anson Kahng, Simon Mackenzie, and Ariel D. Procaccia

Ranking Wily People Who Rank Each Other *AAAI 2018*
(α) Anson Kahng, Yasmine Kotturi, Chinmay Kulkarni, David Kurokawa, and Ariel D. Procaccia

Making Right Decisions Based on Wrong Opinions *EC 2017*
(α) Gerdus Benadè, Anson Kahng, and Ariel D. Procaccia

Timing Objectives in Dynamic Kidney Exchange *Undergraduate Honors Thesis*
Advised by David Parkes

(α): alphabetical author ordering

TEACHING

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

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

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

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

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

PC Member
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 (SPC), AAAI-21, NeurIPS-20, ICML-20, AAAI-20, SAGT-19

Journal Reviews
ACM Transactions on Economics and Computation (TEAC), Games and Economic Behavior (GEB), Artificial Intelligence Journal (AIJ), Social Choice and Welfare (SCW)

UR Computer Science Seminar Chair *Fall 2023 - Spring 2024*
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 2024*
Member of the masters admissions committee for the Goergen Institute of Data Science.

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) *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 the 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

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*