

DANIEL HALPERN

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PROFESSIONAL APPOINTMENTS

Google Research
Research Scientist

Mountain View, CA
Jul. 2025–

EDUCATION

Harvard University
Ph.D. in Computer Science
• Advisor: Ariel D. Procaccia

Cambridge, MA
Aug. 2020–Jun. 2025

University of Toronto
B.Sc. in Computer Science with High Distinction

Toronto, ON
Sep. 2016–Jun. 2020

JOURNAL ARTICLES

Note on author order for all publications: (α) denotes alphabetical, (r) denotes random.

- J4. AI Alignment from Social Choice Perspectives.
(α) D. Halpern, E. Micha, A. D. Procaccia, B. Schiffer, I. Shapira, and S. Zhang.
In *SIGecom Exchanges*, 2026.
- J3. Representation with Incomplete Votes.
(α) D. Halpern, G. Kehne, A. D. Procaccia, J. Tucker-Foltz, and M. Wüthrich.
In *Theory and Decision*, 2026.
- J2. Dynamic Fair Division with Partial Information.
(α) G. Benadè, D. Halpern, and A. Psomas.
In *Operations Research*, 2025.
- J1. Tracking Truth with Liquid Democracy.
(α) A. Berinsky, D. Halpern, J. Y. Halpern, A. Jadbabaie, E. Mossel, A. D. Procaccia, and M. Revel.
In *Management Science*, 2025.

CONFERENCE PUBLICATIONS

- C26. Proportionality in Ranking Compression.
(α) D. Halpern, X. Liu, E. Micha, Y. P. Ng, and W. Suksompong.
In *Proceedings of the 40th Conference on Neural Information Processing Systems (NeurIPS)*, 2026.
- C25. Truthful Fair Division under Stochastic Valuations.
(α) D. Halpern, A. Psomas, and S. Zhang.
In *Proceedings of the 27th ACM Conference on Economics and Computation (EC)*, 2026.
- C24. Robust AI Evaluation through Maximal Lotteries.
H. Khalaf, S. Wang, D. Halpern, I. Shapira, F. P. Calmon, and A. D. Procaccia.
In *Proceedings of the 43rd International Conference on Machine Learning (ICML)*, 2026.
- C23. Pairwise Calibrated Rewards for Pluralistic Alignment.
(α) D. Halpern, E. Micha, I. Shapira, and A. D. Procaccia.
In *Proceedings of the 39th Conference on Neural Information Processing Systems (NeurIPS)*, 2025.
- C22. Online Envy Minimization and Multicolor Discrepancy: Equivalences and Separations.
(α) D. Halpern, A. Psomas, P. Verma, and D. Xie.
In *Proceedings of the 26th ACM Conference on Economics and Computation (EC)*, 2025.
- C21. The Proportional Veto Principle for Approval Ballots.
(α) D. Halpern, A. D. Procaccia, and W. Suksompong.
In *Proceedings of the 34th International Joint Conference on Artificial Intelligence (IJCAI)*, 2025.
- C20. Federated Assemblies.
(α) D. Halpern, A. D. Procaccia, E. Shapiro, and N. Talmon.
In *Proceedings of the 39th AAAI Conference on Artificial Intelligence (AAAI)*, 2025.
★ Oral presentation (4.6% of submissions)
- C19. Axioms for AI Alignment from Human Feedback.
(α) L. Ge, D. Halpern, E. Micha, A. D. Procaccia, I. Shapira, Y. Vorobeychik, and J. Wu.
In *Proceedings of the 38th Conference on Neural Information Processing Systems (NeurIPS)*, 2024.
★ Spotlight presentation (2.1% of submissions)
- C18. Computing Voting Rules with Elicited Incomplete Votes.

- (α) D. Halpern, S. Hossain, and J. Tucker-Foltz.
In *Proceedings of the 25th ACM Conference on Economics and Computation (EC)*, 2024.
- C17. On the Existence of Envy-Free Allocations Beyond Additive Valuations.
(α) G. Benadè, D. Halpern, A. Psomas, and P. Verma.
In *Proceedings of the 25th ACM Conference on Economics and Computation (EC)*, 2024.
- C16. Metric Distortion with Elicited Pairwise Comparisons.
(α) S. Ebadian, D. Halpern, and E. Micha.
In *Proceedings of the 33rd International Joint Conference on Artificial Intelligence (IJCAI)*, 2024.
- C15. Optimal Engagement-Diversity Tradeoffs in Social Media.
(α) F. Baumann, D. Halpern, I. Rahwan, I. Shapira, A. D. Procaccia, and M. Wüthrich.
In *Proceedings of the 33rd ACM Web Conference (WWW)*, 2024.
- C14. Strategyproof Voting under Correlated Beliefs.
(α) D. Halpern, R. Li, and A. D. Procaccia.
In *Proceedings of the 37th Conference on Neural Information Processing Systems (NeurIPS)*, 2023.
- C13. Smoothed Analysis of Social Choice Revisited.
(α) B. Flanigan, D. Halpern, and A. Psomas.
In *Proceedings of the 19th Conference on Web and Internet Economics (WINE)*, 2023.
- C12. In Defense of Liquid Democracy.
(α) D. Halpern, J. Y. Halpern, A. Jadbabaie, E. Mossel, A. D. Procaccia, and M. Revel.
In *Proceedings of the 24th ACM Conference on Economics and Computation (EC)*, 2023.
- C11. Representation with Incomplete Votes.
(α) D. Halpern, G. Kehne, A. D. Procaccia, J. Tucker-Foltz, and M. Wüthrich.
In *Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI)*, 2023.
- C10. Dynamic Fair Division with Partial Information.
(α) G. Benadè, D. Halpern, and A. Psomas.
In *Proceedings of the 36th Conference on Neural Information Processing Systems (NeurIPS)*, 2022.
- C9. Liquid Democracy in Practice: An Empirical Analysis of its Epistemic Performance.
M. Revel, D. Halpern, A. Berinsky, and A. Jadbabaie.
In *Proceedings of the 2nd ACM conference on Equity and Access in Algorithms, Mechanisms, Optimization (EAAMO)*, 2022.
- C8. Distortion in Voting with Top-t Preferences.
(α) A. Borodin, D. Halpern, M. Latifian, and N. Shah.
In *Proceedings of the 31st International Joint Conference on Artificial Intelligence (IJCAI)*, 2022.
- C7. Can Buyers Reveal for a Better Deal?.
(α) D. Halpern, G. Kehne, and J. Tucker-Foltz.
In *Proceedings of the 31st International Joint Conference on Artificial Intelligence (IJCAI)*, 2022.
- C6. How Many Representatives Do We Need? The Optimal Size of an Epistemic Congress.
(r) M. Revel, T. Lin, and D. Halpern.
In *Proceedings of the 36th AAAI Conference on Artificial Intelligence (AAAI)*, 2022.
- C5. Fair and Efficient Resource Allocation with Partial Information.
(α) D. Halpern and N. Shah.
In *Proceedings of the 30th International Joint Conference on Artificial Intelligence (IJCAI)*, 2021.
- C4. Aggregating Binary Judgments Ranked By Accuracy.
(α) D. Halpern, G. Kehne, D. Peters, A. D. Procaccia, N. Shah, and P. Skowron.
In *Proceedings of the 35th AAAI Conference on Artificial Intelligence (AAAI)*, 2021.
- C3. Fair Division with Binary Valuations: One Rule to Rule Them All.
(α) D. Halpern, A. D. Procaccia, A. Psomas, and N. Shah.
In *Proceedings of the 16th Conference on Web and Internet Economics (WINE)*, 2020.
- C2. Resolving the Optimal Metric Distortion Conjecture.
(α) V. Gkatzelis, D. Halpern, and N. Shah.
In *Proceedings of the 61st Annual IEEE Symposium on Foundations of Computer Science (FOCS)*, 2020.
★ Invited to the EC 2021 plenary session: Highlights Beyond EC
- C1. Fair Division with Subsidy.
(α) D. Halpern and N. Shah.
In *Proceedings of the 12th International Symposium on Algorithmic Game Theory (SAGT)*, 2019.

WORKING PAPERS

- W3. Prophet Inequalities Beyond Utilitarian Social Welfare.
(α) D. Halpern, A. Manohara, and A. Psomas.
- W2. Linear Social Choice with Few Queries: A Moment-Based Approach.

(α) L. Ge, D. Halpern, G. Kehne, and Y. Vorobeychik.

W1. Fair Division Under Inaccurate Preferences.

(α) T. Dang, D. Halpern, A. Makur, A. Psomas, J. Singh, and P. Verma.

SELECTED HONORS AND AWARDS

• Siebel Scholarship	2024
• NSF Graduate Research Fellowship	2021
• University of Toronto Computer Science Undergraduate Research Award	2020
• Harold Willet Stewart Memorial Scholarship	2020
• Anna And Alex Beverly Memorial Fellowship	2020
• Samuel Beatty In Course Scholarship	2019
• C. L. Burton Scholarship For Mathematics and Physical Sciences	2019
• Dr. James A. & Connie P. Dickson Scholarship in Science & Mathematics	2018
• Alan Milne McCombie Scholarship	2017
• University of Toronto President's Scholars of Excellence Program	2016

TEACHING EXPERIENCE

GEC Academy Teaching Fellow	Online Summer 2024
• Mathematics for Economics	
Harvard University Teaching Fellow	Cambridge, MA Spring 2022
• Optimized Democracy (CS238)	
University of Toronto Undergraduate Teaching Assistant	Toronto, ON Spring 2020
• Data Structures and Analysis (CSC263)	
• Algorithm Design, Analysis & Complexity (CSC373)	

SERVICE

PC Member: AAAI ('23, '24, '25), EC ('26), IJCAI ('23, '24), SAGT ('23), NeurIPS ('24, '26), WINE ('26)

Journal Reviewer: ARTINT ('21, '22, '24, '25), JAAMAS ('21, '21, '21, '22), MOR ('22, '23), MSS ('21, '22, '23), TEAC ('25)

Subreviewer: AAMAS ('25), EAAMO ('22), SAGT ('21), SODA ('24), STOC ('25)

INVITED TALKS

Social Choice and Welfare Seminar A Social Choice Perspective on AI Alignment	September, 2025
National University of Singapore Workshop on Algorithmics of Fair Division and Social Choice Aggregating Preferences with Limited Queries	December, 2024
Cornell Theory Seminar Aggregating Preferences with Limited Queries	November, 2024
FOCS Workshop on Distortion in Social Choice Optimal Randomized Utilitarian Distortion	October, 2024
INFORMS Annual Meeting Tracking Truth with Liquid Democracy	October, 2024
University of Chicago Computer Science Colloquium Aggregating Preferences with Limited Queries	October, 2024
Carnegie Mellon Formal Epistemology Lecture Series Aggregating Preferences with Limited Queries	September, 2024
Oxford Algorithmic Game Theory Seminar Computing Voting Rules with Elicited Incomplete Votes	June, 2024
MSRI/SLMath Social Choice Seminar Resolving the Optimal Metric Distortion Conjecture	November, 2023
INFORMS Annual Meeting Representation with Incomplete Votes	October, 2023
HalpernFest at Cornell University In Defense of Liquid Democracy	June, 2023

McGill Bellairs Workshop on Multi-Agent Systems <i>Representation with Incomplete Votes</i>	March, 2023
COMSOC Video Seminar <i>Representation with Incomplete Votes</i>	February, 2023
LAMSADE Mini-Workshop on Cooperative Games, Social Choice, and Fair Division <i>In Defense of Liquid Democracy</i>	September, 2022
Highlights Beyond EC <i>Resolving the Optimal Metric Distortion Conjecture</i>	July, 2021
Drexel Theory Seminar <i>Fair and Efficient Resource Allocation with Partial Information</i>	May, 2021
Cornell Theory Seminar <i>Resolving the Optimal Metric Distortion Conjecture</i>	November, 2020
Harvard EconCS Seminar <i>Resolving the Optimal Metric Distortion Conjecture</i>	September, 2020