

# 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

( $\alpha$ ): alphabetical author order

- J2. Dynamic Fair Division with Partial Information.  
( $\alpha$ ) G. Benadè, D. Halpern, and A. Psomas.  
In *Operations Research (OR)*. Forthcoming.
- J1. Tracking Truth with Liquid Democracy.  
( $\alpha$ ) A. Berinsky, D. Halpern, J. Y. Halpern, A. Jadbabaie, E. Mossel, A. D. Procaccia, and M. Revel.  
In *Management Science (MS)*. Forthcoming.

## CONFERENCE PUBLICATIONS

( $\alpha$ ): alphabetical author order, ( $r$ ): random author order

- C23. Pairwise Calibrated Rewards for Pluralistic Alignment.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) D. Halpern, A. D. Procaccia, and W. Suksompong.  
In *Proceedings of the 34th International Joint Conference on Artificial Intelligence (IJCAI)*, 2025.
- C20. Federated Assemblies.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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?.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) 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.  
( $\alpha$ ) D. Halpern and N. Shah.  
In *Proceedings of the 12th International Symposium on Algorithmic Game Theory (SAGT)*, 2019.

## SELECTED HONORS AND AWARDS

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• 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

- Mathematics for Economics

Harvard University

Online

Summer 2024

Cambridge, MA

Teaching Fellow

- Optimized Democracy (CS238)

**University of Toronto**

Undergraduate Teaching Assistant

- Data Structures and Analysis (CSC263)
- Algorithm Design, Analysis & Complexity (CSC373)

Spring 2022

**Toronto, ON**

Spring 2020

## SERVICE

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**PC Member:** AAAI ('23, '24, '25), IJCAI ('23, '24), SAGT ('23), NeurIPS ('24)

**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

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**Social Choice and Welfare Seminar**

September, 2025

*A Social Choice Perspective on AI Alignment*

**National University of Singapore Workshop on Algorithmics of Fair Division and Social Choice**

December, 2024

*Aggregating Preferences with Limited Queries*

**Cornell Theory Seminar**

November, 2024

*Aggregating Preferences with Limited Queries*

**FOCS Workshop on Distortion in Social Choice**

October, 2024

*Optimal Randomized Utilitarian Distortion*

**INFORMS Annual Meeting**

October, 2024

*Tracking Truth with Liquid Democracy*

**University of Chicago Computer Science Colloquium**

October, 2024

*Aggregating Preferences with Limited Queries*

**Carnegie Mellon Formal Epistemology Lecture Series**

September, 2024

*Aggregating Preferences with Limited Queries*

**Oxford Algorithmic Game Theory Seminar**

June, 2024

*Computing Voting Rules with Elicited Incomplete Votes*

**MSRI/SLMath Social Choice Seminar**

November, 2023

*Resolving the Optimal Metric Distortion Conjecture*

**INFORMS Annual Meeting**

October, 2023

*Representation with Incomplete Votes*

**HalpernFest at Cornell University**

June, 2023

*In Defense of Liquid Democracy*

**McGill Bellairs Workshop on Multi-Agent Systems**

March, 2023

*Representation with Incomplete Votes*

**COMSOC Video Seminar**

February, 2023

*Representation with Incomplete Votes*

**LAMSADE Mini-Workshop on Cooperative Games, Social Choice, and Fair Division**

September, 2022

*In Defense of Liquid Democracy*

**Highlights Beyond EC**

July, 2021

*Resolving the Optimal Metric Distortion Conjecture*

**Drexel Theory Seminar**

May, 2021

*Fair and Efficient Resource Allocation with Partial Information*

**Cornell Theory Seminar**

November, 2020

*Resolving the Optimal Metric Distortion Conjecture*

**Harvard EconCS Seminar**

September, 2020

*Resolving the Optimal Metric Distortion Conjecture*