Stanford



Omer Reingold

Rajeev Motwani Professor of Computer Science

Bio

ACADEMIC APPOINTMENTS

- Professor, Computer Science

LINKS

- My homepage: https://omereingold.wordpress.com/

Teaching

COURSES

2026-27

- Algorithmic Fairness: CS 256 (Spr)
- Departmental Lecture Series: CS 300 (Aut)
- Introduction to the Theory of Computation: CS 154 (Aut)
- Playback Theater: CS 83N (Spr)

2025-26

- Algorithmic Fairness: CS 256 (Aut)
- Departmental Lecture Series: CS 300 (Aut)
- Playback Theater: CS 83N (Aut)

2024-25

- Departmental Lecture Series: CS 300 (Aut)
- Introduction to the Theory of Computation: CS 154 (Aut)
- Playback Theater: CS 83N (Aut)

2023-24

- Algorithmic Fairness: CS 256 (Win)
- Departmental Lecture Series: CS 300 (Aut)
- Introduction to the Theory of Computation: CS 154 (Aut)
- Playback Theater: CS 83N (Win)

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Lee Cohen

Doctoral Dissertation Advisor (AC)

Charlotte Peale

Master's Program Advisor

Nikash Chhadia, Eitan Green, Kyle Hu, Emiyare Ikwut-Ukwa, Charles Pei, Tomer Sedan, Alan Zhang

Doctoral (Program)

Sílvia Casacuberta Puig, Jabari Hastings, Charlotte Peale

Publications

PUBLICATIONS

- **Dissenting Explanations: Leveraging Disagreement to Reduce Model Overreliance**
  Reingold, O., Shen, J., Talati, A.
  edited by Wooldridge, M., Dy, J., Natarajan, S.
  ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2024: 21537-21544
- **Oracle Efficient Online Multicalibration and Omniprediction**
  Garg, S., Jung, C., Reingold, O., Roth, A.
  edited by Woodruff, D. P.
  SIAM.2024: 2725-2792
- **Swap Agnostic Learning, or Characterizing Omniprediction via Multicalibration**
  Gopalan, P., Kim, M. P., Reingold, O.
  edited by Oh, A., Neumann, T., Globerson, A., Saenko, K., Hardt, M., Levine, S.
  NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2023
- **Universal adaptability: Target-independent inference that competes with propensity scoring.** *Proceedings of the National Academy of Sciences of the United States of America*
  Kim, M. P., Kern, C., Goldwasser, S., Kreuter, F., Reingold, O.
  1800; 119 (4)
- **Deterministic Approximation of Random Walks in Small Space** *THEORY OF COMPUTING*
  Murtagh, J., Reingold, O., Sidford, A., Vadhan, S.
  2021; 17
- **Robust Mean Estimation on Highly Incomplete Data with Arbitrary Outliers**
  Hu, L., Reingold, O.
  edited by Banerjee, A., Fukumizu, K.
  MICROTOME PUBLISHING.2021
- **Outcome Indistinguishability**
  Dwork, C., Kim, M. P., Reingold, O., Rothblum, G. N., Yona, G.
  edited by Khuller, S., Williams, V. V.
  ASSOC COMPUTING MACHINERY.2021: 1095-1108
- **DERANDOMIZATION BEYOND CONNECTIVITY: UNDIRECTED LAPLACIAN SYSTEMS IN NEARLY LOGARITHMIC SPACE** *SIAM JOURNAL ON COMPUTING*
  Murtagh, J., Reingold, O., Sidford, A., Vadhan, S.
  2021; 50 (6): 1892-1922
- **CONSTANT-ROUND INTERACTIVE PROOFS FOR DELEGATING COMPUTATION** *SIAM JOURNAL ON COMPUTING*
  Reingold, O., Rothblum, G. N., Rothblum, R. D.
  2021; 50 (3)

- **Inaccessible Entropy II: IE Functions and Universal One-Way Hashing** *THEORY OF COMPUTING*
  Haitner, I., Holenstein, T., Reingold, O., Vadhan, S., Wee, H.
  2020; 16

- **Through the Lens of a Passionate Theoretician** *COMMUNICATIONS OF THE ACM*
  Reingold, O.
  2020; 63 (3): 25–27

- **Learning from Outcomes: Evidence-Based Rankings**
  Dwork, C., Kim, M. P., Reingold, O., Rothblum, G. N., Yona, G., IEEE
  IEEE COMPUTER SOC.2019: 106–25

- **Tracking and Improving Information in the Service of Fairness**
  Garg, S., Kim, M. P., Reingold, O., Assoc Comp Machinery
  ASSOC COMPUTING MACHINERY.2019: 809–24

- **Pseudorandom Generators for Width-3 Branching Programs**
  Meka, R., Reingold, O., Tal, A.
  edited by Charikar, M., Cohen, E.
  ASSOC COMPUTING MACHINERY.2019: 626–37

- **Incremental Deterministic Public-Key Encryption** *JOURNAL OF CRYPTOLOGY*
  Mironov, I., Pandey, O., Reingold, O., Segev, G.
  2018; 31 (1): 134–61

- **Efficient Batch Verification for UP**
  Reingold, O., Rothblum, G. N., Rothblum, R. D.
  edited by Servedio, R. A.
  SCHLOSS DAGSTUHL, LEIBNIZ CENTER INFORMATICS.2018

- **Improved Pseudorandomness for Unordered Branching Programs through Local Monotonicity**
  Chattopadhyay, E., Hatami, P., Reingold, O., Tal, A.
  edited by Diakonikolas, Kempe, D., Henzinger, M.
  ASSOC COMPUTING MACHINERY.2018: 363–75

- **Fairness Through Computationally-Bounded Awareness**
  Kim, M. P., Reingold, O., Rothblum, G. N.
  edited by Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.
  NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018

- **Guilt-Free Data Reuse** *COMMUNICATIONS OF THE ACM*
  Dwork, C., Feldman, V., Hardt, M., Pitassi, T., Reingold, O., Roth, A.
  2017; 60 (4): 86-93

- **Derandomization Beyond Connectivity: Undirected Laplacian Systems in Nearly Logarithmic Space**
  Murtagh, J., Reingold, O., Sidford, A., Vadhan, S., IEEE
  IEEE.2017: 801–12

- **FINDING COLLISIONS IN INTERACTIVE PROTOCOLS-TIGHT LOWER BOUNDS ON THE ROUND AND COMMUNICATION COMPLEXITIES OF STATISTICALLY HIDING COMMITMENTS** *SIAM JOURNAL ON COMPUTING*
  Haitner, I., Hoch, J. J., Reingold, O., Segev, G.
  2015; 44 (1): 193-242

- **BALLS AND BINS: SMALLER HASH FAMILIES AND FASTER EVALUATION** *SIAM JOURNAL ON COMPUTING*
  Celis, L. E., Reingold, O., Segev, G., Wieder, U.
  2013; 42 (3): 1030-1050

- **Breaking generalized Diffie-Hellman modulo a composite is no easier than factoring** *INFORMATION PROCESSING LETTERS*
  Biham, E., Boneh, D., Reingold, O.

1999; 70 (2): 83-87