Stanford

Aviad Rubinstein

Professor of Computer Science and, by courtesy, of Management Science and Engineering

Bio

ACADEMIC APPOINTMENTS

- Associate Professor, Computer Science
- Associate Professor (By courtesy), Management Science and Engineering

LINKS

- https://cs.stanford.edu/~aviad/: https://cs.stanford.edu/~aviad/

Teaching

COURSES

2026-27

- Design and Analysis of Algorithms: CS 161 (Win)
- Incentives in Computer Science: CS 269I, MS&E 206 (Spr)

2025-26

- Design and Analysis of Algorithms: CS 161 (Spr)
- Incentives in Computer Science: CS 269I, MS&E 206 (Win)

2024-25

- Design and Analysis of Algorithms: CS 161 (Aut)
- Incentives in Computer Science: CS 269I, MS&E 206 (Spr)

2023-24

- Design and Analysis of Algorithms: CS 161 (Aut)
- Incentives in Computer Science: CS 269I, MS&E 206 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Jiale Chen, Dorsa Fathollahi

Doctoral Dissertation Advisor (AC)

Ruiquan Gao, Mingwei Yang

Master's Program Advisor

Omar Abul-Hassan, Laszlo Bollyky, Ganesh Venu

Doctoral Dissertation Co-Advisor (AC)

Jabari Hastings, Chenghan Zhou

Doctoral (Program)

Ruiquan Gao

Publications

PUBLICATIONS

- **An Optimal Approximation for Submodular Maximization Under a Matroid Constraint in the Adaptive Complexity Model** *OPERATIONS RESEARCH*
  Balkanski, E., Rubinstein, A., Singer, Y.
  2021

- **Does Preprocessing Help in Fast Sequence Comparisons?**
  Goldenberg, E., Rubinstein, A., Saha, B.
  edited by Makarychev, K., Makarychev, Y., Tulsiani, M., Kamath, G., Chuzhoy, J.
  ASSOC COMPUTING MACHINERY.2020: 657–70

- **Smoothed Complexity of 2-player Nash Equilibria**
  Boodaghians, S., Brakensiek, J., Hopkins, S. B., Rubinstein, A., IEEE
  IEEE.2020: 271-282

- **The Randomized Communication Complexity of Revenue Maximization** *ACM SIGECOM EXCHANGES*
  Rubinstein, A., Zhao, J.
  2021; 19 (2): 75-83

- **Constant-Factor Approximation of Near-Linear Edit Distance in Near-Linear Time For**
  Brakensiek, J., Rubinstein, A.
  edited by Makarychev, K., Makarychev, Y., Tulsiani, M., Kamath, G., Chuzhoy, J.
  ASSOC COMPUTING MACHINERY.2020: 685–98

- **Communication complexity of Nash equilibrium in potential games (extended abstract)**
  Babichenko, Y., Rubinstein, A., IEEE
  IEEE.2020: 1439-1445

- **Reducing approximate Longest Common Subsequence to approximate Edit Distance**
  Rubinstein, A., Song, Z., ACM
  ASSOC COMPUTING MACHINERY.2020: 1591–1600

- **Reductions in PPP** *INFORMATION PROCESSING LETTERS*
  Ban, F., Jain, K., Papadimitriou, C. H., Psomas, C., Rubinstein, A.
  2019; 145: 48–52

- **Approximation Algorithms for LCS and LIS with Truly Improved Running Times**
  Rubinstein, A., Seddighin, S., Song, Z., Sun, X., IEEE
  IEEE COMPUTER SOC.2019: 1121–45

- **An Optimal Approximation for Submodular Maximization under a Matroid Constraint in the Adaptive Complexity Model**
  Balkanski, E., Rubinstein, A., Singer, Y.
  edited by Charikar, M., Cohen, E.
  ASSOC COMPUTING MACHINERY.2019: 66–77

- **Near-Linear Time Insertion-Deletion Codes and (1+epsilon)-Approximating Edit Distance via Indexing**
  Haeupler, B., Rubinstein, A., Shahrasbi, A.
  edited by Charikar, M., Cohen, E.
  ASSOC COMPUTING MACHINERY.2019: 697–708

- **Satisfiability and Evolution**

Livnat, A., Papadimitriou, C., Rubinstein, A., Valiant, G., Wan, A., IEEE
IEEE.2014: 524–30