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

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)

2022-23

- Design and Analysis of Algorithms: CS 161 (Aut)
- Incentives in Computer Science: CS 269I (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Keller Blackwell, Jiale Chen, Dorsa Fathollahi, Prasanna Ramakrishnan

Orals Evaluator

Keller Blackwell, Prasanna Ramakrishnan

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