

# 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, Misha Ivkov, Prasanna Ramakrishnan

##### Orals Evaluator

Keller Blackwell, Misha Ivkov, Xiao Mao, Prasanna Ramakrishnan, Jack Zhou

##### Doctoral Dissertation Advisor (AC)

Ruiquan Gao, Xiao Mao

##### Master's Program Advisor

Omar Abul-Hassan, Laszlo Bolyky, Joshua Bowden, CJ Indart, Grace Jin, Hongyue Li, Raj Pabari, Jasdeep Sidhu, Ganesh Venu

**Doctoral Dissertation Co-Advisor (AC)**

Jabari Hastings, Chenghan Zhou, Jack Zhou

**Doctoral (Program)**

Ruiquan Gao, Xiao Mao

**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
- **Reducing approximate Longest Common Subsequence to approximate Edit Distance**  
Rubinstein, A., Song, Z., ACM  
ASSOC COMPUTING MACHINERY.2020: 1591–1600
- **Communication complexity of Nash equilibrium in potential games (extended abstract)**  
Babichenko, Y., Rubinstein, A., IEEE  
IEEE.2020: 1439-1445
- **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
- **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