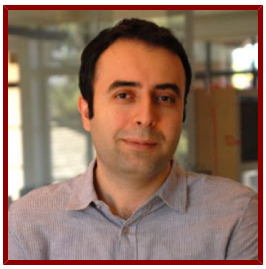
Stanford



Amin Saberi

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

CONTACT INFORMATION

- **Administrator**

  Jackie Nguyen - Administrative Associate

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Bio

BIO

Amin Saberi is Professor of Management Science and Engineering at Stanford University. He received his B.Sc. from Sharif University of Technology and his Ph.D. from Georgia Institute of Technology in Computer Science. His research interests include algorithms, design and analysis of social networks, and applications. He is a recipient of the Terman Fellowship, Alfred Sloan Fellowship and several best paper awards.

Amin was the founding CEO and chairman of NovoEd Inc., a social learning environment designed in his research lab and used by universities such as Stanford as well as non-profit and for-profit institutions for offering courses to hundreds of thousands of learners around the world.

ACADEMIC APPOINTMENTS

- Professor, Management Science and Engineering
- Professor (By courtesy), Computer Science
- Member, Bio-X
- Member, Institute for Computational and Mathematical Engineering (ICME)

PROFESSIONAL EDUCATION

- BS, Sharif Institute of Technology, Tehran, Iran , Computer Science (2000)
- PhD, Georgia Institute of Technology , Computer Science (2004)

Teaching

COURSES

2026-27

- AI Applications Lab: MS&E 219 (Spr)
- Efficient Generative Models: MS&E 319 (Aut)
- Introduction to Optimization: Data Science: MS&E 111DS, MS&E 211DS (Win)

2025-26

- Introduction to Optimization: Data Science: MS&E 111DS, MS&E 211DS (Win)
- Matching Theory: MS&E 319 (Aut)

2024-25

- AI Application Lab: MS&E 333 (Spr)
- Introduction to Optimization: Data Science: MS&E 111DS, MS&E 211DS (Win)
- Senior Project: MS&E 108 (Win)

2023-24

- Graph and Combinatorial Optimization: MS&E 112, MS&E 212 (Win)
- Introduction to Optimization: Data Science: MS&E 111DS, MS&E 211DS (Win)
- Large Networks and Graph Limits: MS&E 337 (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Ruiquan Gao, Joyee Wang, Anders Wikum

Postdoctoral Faculty Sponsor

Anay Mehrotra, Suho Shin

Doctoral Dissertation Advisor (AC)

Shayan Talaei

Master's Program Advisor

Will Berriman, Yana Kim, Ben Kinder, Nikki Lin, Yexin Tian, Jialu Yi, Qasim Zafar

Doctoral (Program)

Kiana Asgari, Nirjhar Das, Senem Isik, Arshia Soltani Moakhar, Joyee Wang, Mingwei Yang, Annika Younge

Publications

PUBLICATIONS

- **Assignment Mechanisms Under Distributional Constraints** *OPERATIONS RESEARCH*
  Ashlagi, I., Saberi, A., Shameli, A.
  2020; 68 (2): 467–79
- **Edge Weighted Online Windowed Matching**
  Ashlagi, I., Burq, M., Dutta, C., Jaillet, P., Saberi, A., Sholley, C., Assoc Comp Machinery
  ASSOC COMPUTING MACHINERY.2019: 729–42
- **Competition in Ride-Hailing Markets**
  Ahmadinejad, A., Nazerzadeh, H., Saberi, A., Skochdopole, N., Sweeney, K.
  edited by Caragiannis, Mirrokni, Nikolova, E.
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- **Nearly Optimal Pricing Algorithms for Production Constrained and Laminar Bayesian Selection**
  Anari, N., Niazadeh, R., Saberi, A., Shameli, A., Assoc Comp Machinery
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- **Generating Random Networks Without Short Cycles** *OPERATIONS RESEARCH*
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- **Smoothed Analysis of Discrete Tensor Decomposition and Assemblies of Neurons**
  Anari, N., Daskalakis, C., Maass, W., Papadimitriou, C. H., Saberi, A., Vempala, S.
  edited by Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.
  NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018

- **Approximating the Largest Root and Applications to Interlacing Families**
  Anari, N., Gharan, S., Saberi, A., Srivastava, N., Assoc Comp Machinery
  ASSOC COMPUTING MACHINERY.2018: 1015–28

- **Diffusion, Seeding, and the Value of Network Information**
  Akbarpour, M., Malladi, S., Saberi, A., Assoc Comp Machinery
  ASSOC COMPUTING MACHINERY.2018: 641

- **Creating Crowdsourced Research Talks at Scale**
  Vaish, R., Goyal, S., Saberi, A., Goel, S., Assoc Comp Machinery
  ASSOC COMPUTING MACHINERY.2018: 1–11

- **Approximation Algorithms for Computing Maximin Share Allocations** *ACM TRANSACTIONS ON ALGORITHMS*
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- **An O(log n/log log n)-Approximation Algorithm for the Asymmetric Traveling Salesman Problem** *OPERATIONS RESEARCH*
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- **How Gamification Affects Physical Activity: Large-scale Analysis of Walking Challenges in a Mobile Application.** *Proceedings of the ... International World-Wide Web Conference. International WWW Conference*
  Shameli, A., Althoff, T., Saberi, A., Leskovec, J.
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- **Simply Exponential Approximation of the Permanent of Positive Semidefinite Matrices**
  Anari, N., Gurvits, L., Gharan, S., Saberi, A., IEEE
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- **Mobilizing the Crowd to Create an Open Repository of Research Talks**
  Vaish, R., Goel, S., Saberi, A., ACM
  ASSOC COMPUTING MACHINERY.2017: 311-314

- **A Simple and Efficient Algorithm for Computing Market Equilibria** *ACM TRANSACTIONS ON ALGORITHMS*
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- **Approximation Algorithms for Computing Maximin Share Allocations**
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- **ASYMPTOTIC BEHAVIOR AND DISTRIBUTIONAL LIMITS OF PREFERENTIAL ATTACHMENT GRAPHS** *ANNALS OF PROBABILITY*
  Berger, N., Borgs, C., Chayes, J. T., Saberi, A.
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  Bayati, M., Gleich, D. F., Saberi, A., Wang, Y.
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  Nazerzadeh, H., Saberi, A., Vohra, R.
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- **Santa Claus Meets Hypergraph Matchings** *ACM TRANSACTIONS ON ALGORITHMS*
  Asadpour, A., Feige, U., Saberi, A.
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- **Online Optimization with Uncertain Information** *ACM TRANSACTIONS ON ALGORITHMS*
  Mahdian, M., Nazerzadeh, H., Saberi, A.
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- **Price of Correlations in Stochastic Optimization** *OPERATIONS RESEARCH*
  Agrawal, S., Ding, Y., Saberi, A., Ye, Y.
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- **Distributed Node Placement Algorithms for Constructing Well-Connected Sensor Networks** *IEEE INFOCOM Conference*
  Friend, A. J., Manshadi, V. H., Saberi, A.
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- **Discrete Fixed Points: Models, Complexities, and Applications** *MATHEMATICS OF OPERATIONS RESEARCH*
  Deng, X., Qi, Q., Saberi, A., Zhang, J.
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- **Some computational tools for digital archive and metadata maintenance** *BIT NUMERICAL MATHEMATICS*
  Gleich, D. F., Wang, Y., Meng, X., Ronaghi, F., Gerritsen, M., Saberi, A.
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- **Social Influence and Evolution of Market Share** *INTERNET MATHEMATICS*
  Ceyhan, S., Mousavi, M., Saberi, A.
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  Bachrach, Y., Markakis, E., Resnick, E., Procaccia, A. D., Rosenschein, J. S., Saberi, A.
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- **Correlation Robust Stochastic Optimization** *21st Annual ACM/SIAM Symposium on Discrete Algorithms*
  Agrawal, S., Ding, Y., Saberi, A., Ye, Y.
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- **AN APPROXIMATION ALGORITHM FOR MAX-MIN FAIR ALLOCATION OF INDIVISIBLE GOODS** *SIAM JOURNAL ON COMPUTING*
  Asadpour, A., Saberi, A.
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- **Subgraph Sparsification and Nearly Optimal Ultrasparsifiers** *42nd ACM Symposium on Theory of Computing*
  Kolla, A., Makarychev, Y., Saberi, A., Teng, S.
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- **Convergence to Equilibrium in Local Interaction Games** *SI GECOM EXCHANGES*
  Montanari, A., Saberi, A.
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- **Cutting a Cake for Five People** *5th International Conference on Algorithmic Aspects in Information and Management*
  Saberi, A., Wang, Y.
  SPRINGER-VERLAG BERLIN.2009: 292–300
- **Convergence to Equilibrium in Local Interaction Games** *50th Annual IEEE Symposium on Foundations of Computer Science*
  Montanari, A., Saberi, A.
  IEEE COMPUTER SOC.2009: 303–312
- **Generating random Tanner-graphs with large girth** *IEEE Information Theory Workshop (ITW)*
  Bayati, M., Keshavan, R., Montanari, A., Oh, S., Saberi, A.
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- **Generating Random Graphs with Large Girth** *20th Annual ACM-SIAM Symposium on Discrete Algorithms*
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- **On the Inefficiency Ratio of Stable Equilibria in Congestion Games** *5th International Workshop on Internet and Network Economics*
  Asadpour, A., Saberi, A.
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- **Algorithms for Large, Sparse Network Alignment Problems** *9th IEEE International Conference on Data Mining*
  Bayati, M., Gerritsen, M., Gleich, D. F., Saberi, A., Wang, Y.
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- **The complexity of equilibria: Hardness results for economies via a correspondence with games** *Workshop on Excursions in Algoritmics*
  Codenotti, B., Saberi, A., Varadarajan, K., Ye, Y.

ELSEVIER SCIENCE BV.2008: 188–98

- **Market Equilibrium via a Primal-Dual Algorithm for a Convex Program** *JOURNAL OF THE ACM*
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- **On the disturbance response and external stability of a saturating static-feedback-controlled double integrator** *AUTOMATICA*
  Wen, Z., Roy, S., Saberi, A.
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- **A Monte Carlo method for solving unsteady adjoint equations** *JOURNAL OF COMPUTATIONAL PHYSICS*
  Wang, Q., Gleich, D., Saberi, A., Etemadi, N., Moin, P.
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- **Minimizing effective resistance of a graph** *SIAM REVIEW*
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- **Stochastic Submodular Maximization** *4th International Workshop on Internet and Network Economics*
  Asadpour, A., Nazerzadeh, H., Saberi, A.
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- **A Fast and Simple Algorithm for Computing Market Equilibria** *4th International Workshop on Internet and Network Economics*
  Fleischer, L., Garg, R., Kapoor, S., Khandekar, R., Saberi, A.
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- **Santa Claus Meets Hypergraph Matchings** *11th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems/12th International Workshop on Randomization and Computation*
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  Bahl, P. (., Hajiaghayi, M. T., Jain, K., Mirrokni, S. V., Qiu, L., Saberi, A.
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  Mehta, A., Saberi, A., Vazirani, U., Vazirani, V.
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- **An Approximation Alaorithm for Max-Min Fair Allocation of Indivisible Goods** *39th Annual ACM Symposium on Theory of Computing*
  Asadpour, A., Saberi, A.
  ASSOC COMPUTING MACHINERY.2007: 114–121
- **A sequential algorithm for generating random graphs** *10th Int Workshop on Approximation Algorithms for Combinatorial Optimization Problems/11th Int Workshop on Randomization and Computation*
  Bayati, M., Kim, J. H., Saberi, A.
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- **Allocating Online Advertisement Space with Unreliable Estimates** *8th Annual Conference on Electronic Commerce (EC 2007)*
  Mahdian, M., Nazerzadeh, H., Saberi, A.
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- **Towards topology aware networks** *26th IEEE Conference on Computer Communications (INFOCOM 2007)*
  Gkantsidis, C., Goel, G., Mihail, M., Saberi, A.
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- **Approximating Nash Equilibria using Small-Support Strategies** *8th Annual Conference on Electronic Commerce (EC 2007)*
  Feder, T., Nazerzadeh, H., Saberi, A.
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- **On certain connectivity properties of the Internet topology** *44th Annual IEEE Symposium on Foundations of Computer Science*
  Mihail, M., Papadimitriou, C., Saberi, A.
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- **Random walks in peer-to-peer networks: Algorithms and evaluation** *PERFORMANCE EVALUATION*
  Gkantsidis, C., Mihail, M., Saberi, A.
  2006; 63 (3): 241-263
- **A local switch Markov chain on given degree graphs with application in connectivity of peer-to-peer networks** *47th Annual IEEE Symposium on Foundations of Computer Science*
  Feder, T., Guetz, A., Mihail, M., Saberi, A.
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- **Random Walks with Lookahead on Power Law Random Graphs** *INTERNET MATHEMATICS*
  Mihail, M., Saberi, A., Tetali, P.
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- **Leontief Economies Encode Nonzero Sum Two-Player Games** *17th ACM-SIAM Symposium on Discrete Algorithms*
  Codenotti, B., Saberi, A., Varadarajan, K., Ye, Y.
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- **On the Spread of Viruses on the Internet** *16th Annual ACM-SIAM Symposium on Discrete Algorithms*
  Berger, N., Borgs, C., Chayes, J. T., Saberi, A.
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- **Price of anarchy, locality gap, and a network service provider game** *1st International Workshop on Internet and Network Economics*
  Devanur, N., Garg, N., Khandekar, R., Pandit, V., Saberi, A., Vazirani, V.
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- **Random walks in peer-to-peer networks** *23rd Annual Joint Conference of the IEEE Computer and Communications Societies*
  Gkantsidis, C., Mihail, M., Saberi, A.
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- **Greedy facility location algorithms analyzed using,dual fitting with factor-revealing LP** *JOURNAL OF THE ACM*
  Jain, K., Mahdian, M., Markakis, E., Saberi, A., Vazirani, V. V.
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- **On certain connectivity properties of the Internet topology** *44th Annual IEEE Symposium on Foundations of Computer Science*
  Mihail, M., Papadimitriou, C., Saberi, A.
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- **Approximating market equilibria** *6th Int Workshop on Approximation Algorithms for Combinatorial Optimization Problems/7th Int Workshop on Randomization and Approximation Techniques in Computer Science*
  Jain, K., Mahdian, M., Saberi, A.
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- **Market equilibrium via a primal-dual-type algorithm** *43rd Annual IEEE Symposium on Foundations of Computer Science*
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  Mahdian, M., Markakis, E., Saberi, A., Vazirani, V.
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- **On a conjecture of Keedwell and the cycle double cover conjecture** *DISCRETE MATHEMATICS*
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