

Curriculum Vitae

Itai Ashlagi

Contact Information

Management Science and Engineering
Huang Engineering Center, 262
Stanford University
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Positions

2019-current Associate Professor of Management Science and Engineering, Stanford University.

2015-2019 Assistant Professor of Management Science and Engineering, Stanford University.

2010-2015 Assistant Professor of Operations Management at Sloan School of Management, MIT.

2008-2010 Postdoctoral fellow at Harvard Business School; advised by Alvin Roth.

2009-2010 Visiting researcher at Microsoft Research, New England.

Education

2005-2008 PhD in Operations Research, Technion - Israel Institute of Technology; advised by Dov Mondraker and Moshe Tennenholtz.

2003-2005 M.Sc. in Operations Research, Technion - Israel Institute of Technology (summa cum laude).

1996-1999 B.A. in Mathematics and Computer Science 1999, Haifa University (magna cum laude).

Industrial Experience

2000-2002: Software engineer, Wanway Technologies, Herzliya.

1999-2000: Software engineer, Comverse, Atidim, Tel-Aviv.

Research Interests

Marketplace operations, Mechanism and market design, Matching, Game theory, Organ allocation.

Grants and Awards

- MSOM Service Management SIG Best Paper Award for *Optimal Allocation Without Money; An Engineering Approach*, 2017 (best publication on service management in the last 3 years).

- Graduate Teaching Award, MS&E, Stanford, 2016.

-INFORMS Junior Faculty Interest Group best paper competition, Second place, 2014.

-Franz Edelman Laureate for *Kidneys and the Alliance for Paired Donation: Operations Research Changes the Way Kidneys are Transplanted*, 2014.

-Best Paper Award, Public Programs, Services & Needs (INFORMS), 2013.

- National Science Foundation CAREER Award *Novel Designs for Kidney Exchange and Other Markets, in the Intersection of OR, Econ and CS*, 2013.
- Terasaki Medical Innovation Award, 2012.
- National Science Foundation Grant for proposal *Collaborative Research on Kidney Exchange*, 2011-2016.
- Ferry Fund grant, 2011.
- Outstanding Paper Award in the ACM Conference on Economics and Computation (EC), 2009.
- Special Aaron and Miriam Gutwirth Memorial Scholarship for research excellence, 2007.

Theses

- PhD Thesis: Pre-Bayesian Games, Technion, Israel, 2008.
- M.Sc. Thesis: On the Value of Correlation, Technion, Israel, 2005.

Students and postdoctorate supervision

- Faidra Monachou, MS&E, expected graduation 2021.
- Suleyman Kerimov, MS&E, expected graduation 2021.
- Ali Shamel, MS&E, expected graduation 2020.
- Qingyun Wu, MS&E, expected graduation 2019.
- Rahul Makhijani, MS&E, expected graduation 2019.
- Maximilien Burq, OR center, MIT, PhD, expected graduation 2019.
- Afshin Nikzad, MS&E and Economics, Stanford, 2018. Accepted an offer at Economics in USC.
- Peng Shi, OR center, MIT, PhD, 2016 (won the best ORC student paper award, and the best SIGECOM dissertation award). At Marshall business school, USC.
- Nima Haghpanah, Postdoctorate, Economics department at Penn-State University.
- Ross Anderson, OR center, MIT, PhD, graduated in 2014 (won the best ORC student paper award), At Google.

Papers in Refereed Journals

- Agarwal N., I. Ashlagi, E. Azevedo, C. Featherstone, O. Karduman, Market failure in kidney exchange, *American Economic Review*, forthcoming.
- Ashlagi I., A. Shamel, A. Saberi, Assignment mechanisms under distributional constraints, *Operations Research*, forthcoming.
- Ashlagi I., M. Burq, P. Jaillet, V. Manshadi, On matching and thickness in heterogeneous dynamic markets, *Operations Research*, forthcoming.
- Ashlagi I., A. Nikzad, A. Romm, Assigning more students to their top choices: A tiebreaking rule comparison, *Games and Economic Behavior*, forthcoming.
- Melcher M.L., I. Ashlagi, I. Wapnir, Matching for fellowship interviews, *JAMA*, 2018 (doi:10.1001/jama.2018.13080).
- Ashlagi I., M. Braverman, Y. Kanoria, P. Shi, Clearing matching markets efficiently: informative signals and match recommendations, *Management Science*, forthcoming.
- Ashlagi I., Y. Gonczarowski, No stable matching is obviously strategy-proof, 2017, *Journal of Economic Theory*, forthcoming.
- Agarwal N., I. Ashlagi, E. Azevedo, C. Featherstone, O. Karduman, What matters for the productivity of kidney exchange?, *American Economic Association, Papers and Proceedings*, 108:334-340, 2018.

- Agarwal N., I. Ashlagi, P. Somaini, D. Waldinger, Dynamic incentives in wait list mechanisms, *American Economic Association, Papers and Proceedings*, 108:341-347, 2018.
- Ashlagi I., A. Bingaman, M. Burq, D. Gamarnik, V. Manshadi, C. Murphey, A.E. Roth, M.L. Melcher, M.A. Rees, The effect of match run frequencies on the number of transplants and waiting times in kidney exchange, *American Journal of Transplantation*, 18(5):1177-1186, 2018.
- Anderson R., Ashlagi I., D. Gamarnik, Y. Kanoria, Efficient dynamic barter exchange, *Operations Research*, 65.6, 1446-1459, 2017.
- Ashlagi I., J. Leshno, Y. Kanoria, Unbalanced matching markets: the stark effect of competition, *Journal of Political Economy*, 125(1), 69-98, 2017.
Second place in the INFORMS Junior Faculty Interest Group (JFIG) best paper competition, 2014.
- Ashlagi I., P. Shi, Optimal allocated design without money: an engineering approach, *Management Science*, 62(4), 1078-1097, 2015.
MSOM Service Management SIG Best Paper Award, 2017.
- Anderson R., I. Ashlagi, D. Gamarnik, A.E. Roth, Finding long chains in kidney exchange using the traveling salesman problem, *Proceedings of the National Academy of Sciences*, 112(3), 663-668, 2015.
First place in 2013 INFORMS Section on Public Programs, Services and Needs (SPPSN) best paper competition.
- Ashlagi I., P. Shi, Improving community cohesion in school choice via correlated-lottery implementation, *Operations Research*, 62(6), 1247-1264, 2014.
- Anderson R., I. Ashlagi, D. Gamarnik, M. Rees, A.E. Roth, T. Sonmez, M.U. Unver, Kidney exchange and the alliance for paired donation: operations research changes the way kidneys are transplanted, *Interfaces*, 45(1), 26-42, 2015 [Franz Edelman Finalist, 2014].
- Ashlagi I., M. Braverman, A. Hassidim, Stability in large matching markets with complementarities, *Operations Research*, 62(4), 713-732, 2014.
- Ashlagi I., A.E. Roth, Free riding and participation in large scale, multi-hospital kidney exchange, *Theoretical Economics*, 9, 817-863, 2014.
- Ashlagi I., F. Fischer, I. A. Kash, A. D. Procaccia, Mix and match, *Games and Economic Behavior*, available online May 31st, 2013.
- Ashlagi I., S. Dobzinski, R. Lavi, An optimal lower bound for anonymous scheduling mechanisms, *Mathematics of Operations Research*, 37(2), 244-258, 2012.
Outstanding Paper Award in the ACM conference of Electronic Commerce (EC), 2009.
- Ashlagi I., A.E. Roth, New challenges in multi-hospital kidney exchange, *American Economic Review, Papers and Proceedings*, May, 102(3), 354-359, 2012.
- Ashlagi I., F. Klijn, Manipulability in matching markets: conflict and coincidence of interests, *Social Choice and Welfare*, 39(1), 23-33, 2012.

- Ashlagi I., D.S. Gilchrist, A.E. Roth, M.A. Rees, NEAD chains in transplantation, *American Journal of Transplantation*, December, 11, 2780-2781, 2011.
- Ashlagi I., D.S. Gilchrist, A.E. Roth, M.A. Rees, Nonsimultaneous chains and dominos in kidney paired donation - revisited, *American Journal of Transplantation*, 11(5), 984–994, 2011.
- Ashlagi, I., B. Klaus, E. Karagozoglu, A noncooperative support for equal division in estate division, *Mathematical Social Sciences*, 63, 228-233,2012.
- Ashlagi I., D. Monderer, M. Tennenholtz, Simultaneous ad auctions, *Mathematics of Operations Research*, 36(1), 1-13, 2011.
- Ashlagi I., Shigehiro Serizawa, Characterizing Vickrey allocation rule by anonymity, *Social Choice and Welfare*, 28(3), 531-542,2012.
- Ashlagi I., M. Braverman, A. Hassidim, Dov Monderer, Monotonicity and implementability, *Econometrica*, 78(5), 1749-1772, 2010.
- Ashlagi I., M. Braverman, A. Hassidim, R. Lavi, M.Tennenholtz, Position auctions with budgets: existence and uniqueness, *B.E. Journal of Theoretical Economics - Advances*, 10(1), 2010.
- Ashlagi I., D. Monderer, M. Tennenholtz, Mediators in position auctions, *Games and Economic Behavior*, 67(1), 2-21, 2009.
- Ashlagi I., D. Monderer, M. Tennenholtz, Two-terminal routing games with unknown active player, *Artificial Intelligence Journal*, 173(15), 1441-1455, 2009.
- Ashlagi I., D. Monderer, M. Tennenholtz, On the value of correlation, *Journal of Artificial Intelligence Research*, Vol 33, p. 575-613, 2008.

Papers in Fully Refereed Conference Proceedings

- Ashlagi I., M. Burq, C. Dutta, P. Jaillet, A. Saberi, C. Sholley, Maximum weight online matching with deadlines, EC 2019.
- Ashlagi I., A. Shameli, A. Saberi, Assignment mechanisms under distributional constraints, SODA, 2019.
- Ashlagi I., Y. Azar, M. Charikar, A. Chplunkar, O. Geri, H. Kaplan, R. Makhijani, Y. Wang, R. Wattenhofer, Min-cost bipartite perfect matching with delays, APPROX 2017.
- Ashlagi I. M. Braverman, Y. Kanoria, P. Shi, Communication requirements and informative signaling in matching markets, EC 2017.
- Ashlagi I.,C. Dasklakis, N. Haghpanah, Sequential mechanisms with ex-post participation guarantees, EC 2016.
- Ashlagi I., M. Burq, P. Jaillet, V. Manshadi, On matching and thickness in heterogeneous dynamic markets, EC 2016.
- Ashlagi I., A. Nikzad, What matters in tie-breaking rules? How competition guides design, EC 2016.

- Ashlagi I., A. Nikzad, A. Romm, Assigning more students to their top choices: A tie-breaking rule comparison, EC 2015.
- Anderson R., Ashlagi I., D. Gamarnik, Y. Kanoria, A dynamic model for barter exchange, SODA 2015.
- Ashlagi I., P. Shi, Optimal allocated design without money: an engineering approach, EC 2014.
- Ashlagi I., J. Leshno, Y. Kanoria, Unbalanced matching markets: the stark effect of competition, EC 2013.
- Ashlagi I., P. Jaillet, V. Manshadi, Kidney exchange in dynamic sparse heterogeneous pools, EC 2013.
- Ashlagi I., B. Lucier, M. Tennenholtz, Equilibria of online scheduling algorithms, AAAI 2013.
- Ashlagi I., M. Braverman, A. Hassidim, Stability in large matching markets with complementarities, EC 2011.
- Ashlagi I., A.E. Roth, Free riding and participation in large scale, multi-hospital kidney exchange, EC 2011.
- Ashlagi I., F. Fischer, I. A. Kash, A. D. Procaccia, Mix and match, EC 2010.
- Ashlagi I., S. Dobzinski, R. Lavi, An optimal lower bound for anonymous scheduling mechanisms, EC 2009.
- Ashlagi I., P. Krysta, M. Tennenholtz, Social context games, WINE 2008.
- Ashlagi I., A. Klinger, M. Tennenholtz, K-NCC: Stability against group deviations in non-cooperative computation, WINE 2007.
- Ashlagi I., D. Monderer, M. Tennenholtz, Learning equilibrium in congestion games, AAAI 2007.
- Ashlagi I., D. Monderer, M. Tennenholtz, Routing games with an unknown set of active players, AAMAS 2007.
- Ashlagi I., D. Monderer, M. Tennenholtz, Robust learning equilibrium, UAI 2006.
- Ashlagi I., D. Monderer, M. Tennenholtz, Resource selection games with unknown number of players, AAMAS 2006.
- Ashlagi I., D. Monderer, M. Tennenholtz, On the value of correlation, UAI 2005.

Book Chapters

- Ashlagi, I., Market Design: Examples, forthcoming in *Handbook of Healthcare Analytics: Theoretical Minimum for Conducting 21st Century Research on Healthcare Operations*, T. Dai and S. Tayur (Eds). Hoboken, NJ: John Wiley & Sons, 31-50, 2018.

Working Papers

- Agarwal N., I. Ashlagi, M.A. Rees, P. Somaini, D. Waldinger, An empirical framework for sequential assignment: The allocation of deceased donor kidneys, *Revise and Resubmit, Econometrica*.
- Ashlagi I., A. Nikzad, P. Strack, Matching in dynamic imbalanced markets, 2018.

- Ashlagi I., M. Burq, P. Jaillet, A. Saberi, Maximizing Efficiency in Dynamic Matching Markets, 2018.
- Ashlagi I., A. Nikzad, What matters in tie-breaking rules? How competition guides design, 2016.
- Ashlagi I., C. Daskalakis, N. Haghpanah, Sequential mechanisms with ex-post participation guarantees, 2016.
- Ashlagi I., P. Jaillet, V. Manshadi, Kidney exchange in dynamic sparse heterogeneous pools, 2013. *Revise and Resubmit, Management Science* (appears in EC 2013).
- Ashlagi I., D. Gamarnik, M.A. Rees, A.E. Roth, The need for (long) chains in kidney exchange, 2012. *Revise and Resubmit, Operations Research*.

Professional service

- Associate Editor, Revenue and Market Analytics Area, for *Management Science*, 2018-present.
- Associate Editor, Stochastic Models Area, *Operations Research*, 2017-present.
- Associate Editor, Game Theory Area, *Mathematics of Operations Research*, 2016-present.
- Co-organizer and lecturer, Summer Institute Methods Lectures on Matching, NBER, 2016.
- Member, Kidney Paired Donation working group, UNOS, 2014-2018.
- Member, Implementation group for Kidney Paired Donation, Consensus Conference on Kidney Paired Donation 2012-2014.
- Organizer, Mini course on market design in summer school, University of Zurich, 2016.
- Judge, INFORMS Pierskalla Award, 2016.
- Organizer, Online Market Design program, Simons Institute, Berkeley, 2019.
- Organizer, 10th Ad Auctions workshop, Palo Alto, CA, 2014.
- Committee member, ACM EC best paper award, 2014.
- Chair, SPSSN INFORMS best paper award, 2014.
- Committee member, INFORMS Doing good with good OR best paper award, 2014.
- Chair, Design, Optimization and Algorithms Committee for the kidney paired donation in the United Organ Sharing Network (UNOS), 2012-2014.
- Helped in policy design for the Alliance Paired Donation (APD) and the National Kidney Registry (NKR), 2012-2016.
- Co-Organizer, “Frontiers in Market Design” conference, Switzerland, Switzerland, 2012.
- Organizer, Mini course, Matching and Market Design, Summer school on Algorithmic Economics, CMU, 2012
- Organizer of a workshop about “Matching and Market Design” in Electronic Commerce (EC), 2011.

- Lecturer, 25th Summer School in Economic Theory (Matching and Market Design), Institute for advanced studies, Hebrew University, Israel, 2014.
- Organizer, 10th Ad Auctions workshop, 2014.
- Senior program committee for EC 2013,2014,2016.
- Program Committee for: EC 2009,2010,2012,2013,2017, 2018, Sigmetrics 2018, SAGT 2010,2014, MSOM 2014,2013,2012, WINE 2013, AAMAS 2008, 2009, 2010,2012, AAI, 2010,2011 AMMA 2009,2011, Ad Auctions Workshop 10, IJCAI 09, UAI 09, Match-UP 2017.
- Referee for: *Management Science, American Economic Review, Operations Research, Econometrica, Theoretical Economics, Journal of Economic Theory, Games and Economic Behavior, Production and Operations Management, Manufacturing Services and Operations Management, Mathematics of Operations Research, Theoretical Computer Science, B.E. Journal of Theoretical Economics, Artificial Intelligence Journal, Journal of Artificial Intelligence Research, Transactions on Algorithms, Transactions on Economics and Computation, Social Choice and Welfare, SODA*

Invited Seminars

- Social and Information Sciences, Caltech, 2018.
- Business and Public Policy, Berkeley Haas, 2018.
- Cornell-Tech, 2018
- ORIE, Cornell, 2017.
- Operations and Logistics Division, Sauder, UBC, 2017.
- Economics, Columbia, 2017.
- Humboldt University of Berlin and WZB Berlin Social Science Center, Germany, 2017.
- Department of Industrial Engineering, Tel Aviv University, 2017.
- Economics, UCLA, 2016.
- Operations Management, Rotman, University of Toronto, 2016.
- Electrical Engineering, Information theory workshop, Stanford, 2016.
- Economics, Theory seminar, Johns Hopkins, 2016.
- Operations Management, Insead, 2016.
- Industrial Engineering, University of Chile, 2016.
- CS, Theory seminar, Stanford, 2015.
- Operations Management, Yale SOM, 2015.
- Columbia, IEOR, 2015.
- Technology and Operations, Ross School of Business, Michigan University, 2015.
- Algorithmic Economics Seminar, CMU, 2015.
- CRCS seminar, School of Engineering and Applied Sciences, Harvard, 2014.
- Decision Sciences, Fuqua, Duke, 2014.
- Market Design summer school, Institute for advanced studies, Hebrew University, 2014.
- Operations, Information and Technology, Stanford GSB, Stanford, 2014.
- Information, Operations and Management Science, Stern, NYU, 2014.
- Management Science and Operations Management, Chicago Booth, Chicago, 2014.
- Microsoft research, New England, USA, 2013.
- Medical school, Michigan University, 2013.
- Technology and Operations, Ross School of Business, Michigan University, 2013.

- Economics, Theory seminar, Harvard/MIT, 2013.
- Game theory seminar, Faculty of Industrial Engineering, Technion, 2013.
- Industrial Engineering, University of Pittsburgh, 2013.
- Operations and Logistics Division, Sauder, The University of British Columbia, Canada, 2013.
- Management Science and Engineering, Stanford, USA, 2013.
- Industrial Engineering, UC Berkeley, USA, 2012.
- Economics, Theory seminar, Harvard/MIT, 2012.
- Economics, Indiana University Bloomington, USA, 2012.
- CS, Northwestern, USA, 2012.
- Engineering, University at Buffalo, USA, 2012.
- Operations seminar, MEDS, Northwestern, USA, 2011.
- CS, Northwestern, USA, 2011.
- Economics, Boston College, USA, 2011.
- Department of Management, London School of Economics, UK, 2011.
- Economics, University of Minnesota, USA, 2011.
- Decisions, Risk and Operations, Columbia University, USA, 2011.
- Information, Operations and Management Science, Stern, NYU, 2011.
- Operations Research Center, MIT, USA, 2011.
- Economics, University of Montreal, Canada, 2011.
- CS, Wayne state/Michigan , 2010.
- Department of Economics and Business, Pompeu Fabra, Spain, 2010.
- Humanities and Social Sciences, Caltech, USA, 2010.
- Data Science and Operations, Marshall (Business School), USC, USA, 2010.
- Microsoft research, Colloquium talk, New England, USA, 2010.
- Operations Management, Sloan, MIT, USA, 2010.
- Business School, Hebrew University, Israel, 2010.
- Economics, Hebrew University, Israel, 2009.
- Economics, Tel Aviv University, Israel, 2009.
- Economics, Haifa University, Israel, 2009.
- Economics, Ben-Gurion University, Israel, 2009.
- Economics, Bar-Ilan University, Israel, 2009.
- Economics, Maastricht University, Netherlands, 2009.
- Econ-CS Seminar, Harvard, USA, 2008.
- Google NY, 2008.
- Industrial Engineering, Technion, 2008.
- CS theory seminar, Cornell, USA, 2007.
- Microsoft research, Mountain View, USA, 2007.
- AI seminar, UIUC, USA, 2007.
- CS Theory seminar, Georgia-Tech, USA, 2007.
- AI seminar, Stanford, USA, 2007.
- Game Theory seminar. Tel Aviv, Israel, 2005.

Invited conference/workshop presentations

- Societal Networks, Simons Institute for Social Computing, Berkeley, 2018.
- Manchester International Living Donor Meeting, Manchester, UK, 2018.

- European Network for Collaboration on Kidney Exchange Programs, ENCKEP meeting, Matera, Italy, 2018.
- Frontier in Market Design, Cornell, Ithaca, 2018.
- Microeconomic conference, CIREQ Montreal, 2016
- Johns Hopkins Symposium on Healthcare Operations, Johns Hopkins, 2016.
- Network Science and Economics, USA, 2016.
- Matching in Practice, Paris, France, 2016.
- Economics and Computation Day at Stanford, 2015.
- Advances in market design, Paris, France, 2014.
- NSF/CEME/NBER Mathematical Economics Conference, Columbia, 2013
- Tel Aviv International Workshop on Game Theory, Israel, 2013 (plenary talk).
- Future Directions in Paired Exchange, Symposium, NYC, 2013 (plenary talk).
- American Economic Association, USA, 2012
- Greece Economic and Algorithmic Theory Week, Greece, 2011.
- Market Design Workshop, Harvard, USA, 2008.
- Dagstuhl workshop on Computational Social Systems and the Internet, Germany, 2007.
- Dagstuhl workshop on Markets and Computation, Germany, 2005.

Other conference presentations

- INFORMS Revenue Management and Pricing Conference, 2018. -Match-UP, Microsoft Research, 2017.
- Market design workshop, NBER, 2011,2012,2013. Decentralization conference, Stanford, 2014. World transplant congress, San Francisco, 2014. American Transplant Congress, Seattle, 2013.
- EC 2007,2009,2010,2011,2013,2014,2016,2017. MSOM, 2010,2011,2014,2016 and Sig Services, MSOM 2014. INFORMS, 2011, 2012,2013, 2014, 2016. American Economic Meetings, AEA 2011. ISMP, 2009. Tel Aviv International Workshop on Game Theory, 2011. Workshop on Sponsored-Search, Chicago, USA, 2008. Israeli Seminar on Computational Game Theory, Google, Israel, 2008. AAAI 07. aamas 06,07. UAI 05,06. Israeli Operations Research Society conference, (ORSIS-06) Nahariya, Israel 2006. Israeli Game Theory Conference, The Open University of Israel, Raanana 2006. Biennial Israeli Symposium on the Foundations of AI, (BISFAI-05), Haifa, Israel, 2005.

Teaching

- MS&E 267, Service Operations, Stanford, 2017, 2018.
- MS&E 365, Advanced topics in Operations Management, Stanford, 2016, 2017, 2018.
- MS&E 260, Introduction to Operations Management, Stanford, 2015, 2016, 2017.
- 15.066, Systems Optimization, MIT, 2012,2013,2014.
- 15.060, Data Models and Decisions, MIT, 2013.
- 15.764, Theory of Operations Management (focus on revenue management), MIT, 2011.
- 15.761 Operations Management , MIT, USA.
- Teaching Assistant, Technion, 2002-2008. Courses: Non-Cooperative Game Theory (graduate, undergraduate, and MBA), Probability, Linear Dynamic Systems, Scheduling, and Simulation.

-Teaching Assistant, Haifa University, 1998-1999. Courses: Introduction to Algorithms, and Computer Structure and Language.