

Scott Duke Kominers

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Education

Ph.D., Business Economics, Harvard University (2011).

Dissertation: “Matching Models of Markets.”

Advisors: A. E. Roth, S. Athey, D. Fudenberg, J. W. Hatfield, A. Shleifer, and E. G. Weyl.

A.M., Business Economics, Harvard University (2010).

A.B., Mathematics, Harvard University, *summa cum laude* (2009).

Minor: Ethnomusicology.

Thesis: “Weighted Generating Functions and Configuration Results for Type II Lattices and Codes.”

Advisor: N. D. Elkies.

Principal Academic Appointments

MBA Class of 1960 Associate Professor, Entrepreneurial Management Unit, Harvard Business School (2017–present).

Visiting Scholar (2014–2017); *Lecturer* (2016).

Faculty Affiliate, Department of Economics, Harvard University (2017–present).

Associated Scholar (2013–2017); *Visiting Lecturer* (2015).

Junior Fellow, Society of Fellows, Harvard University (2013–2017).

Saieh Family Fellow in Economics, Becker Friedman Institute, University of Chicago (2011–2013).

Secondary Appointments

Affiliate, Center of Mathematical Sciences and Applications, Harvard University (2015–present).

Associate, Center for Research on Computation and Society, Harvard University (2013–present).

Research Economist, National Bureau of Economic Research (2015–present).

Research Scientist, Program for Evolutionary Dynamics, Harvard University (2013–2016).

Guest Researcher (2012–2013).

Visiting Positions

Eminent Research Scholar, University of Melbourne (2018–2020).

Visiting Fellow, Oxford Martin School (Spring 2016).

Visiting Researcher, Microsoft Research New England (2014–2015).

Other Employment

Social Science Analyst, Economic Analysis Group, US Department of Justice (Summer 2010).

Operations Research Engineering Intern, Google (Summer 2007).

Research Assistant to Susan Athey, Edward L. Glaeser, William R. Kerr, and Andrei Shleifer, Harvard University (2007–2009).

Academic Activities

Leadership

- *Vice-Chair*, Association for Computing Machinery [ACM] Special Interest Group on Economics and Computation [SIGecom] (2019–present).
- *Advisory Board Member*, Centre for Market Design, University of Melbourne (2019–present).
- *National Leadership Council Member*, Society for Science & the Public (2018–present).
- *Co-Leader*, Human Capital and Economic Opportunity “Inequality: Measurement, Interpretation, and Policy” Working Group [MIP] (2012–present).
 - *Co-Organizer*, Meeting on Development Economics and Market Design (2018).
 - *Co-Organizer*, Meeting on Market Design Perspectives on Inequality (2016).
 - *Co-Organizer*, Summer School on Socioeconomic Inequality (2015–2017; 2013).
- *Co-Leader*, Human Capital and Economic Opportunity “Measuring and Interpreting Inequality” Working Group [MIE] (2011–2012).
 - *Co-Organizer*, Meeting on Intergenerational Mobility (2012).
 - *Lead Organizer*, Inaugural Meeting (2012).

Organizational

- *Senior Program Committee Member*, “ACM Conference on Economics and Computation [EC]” (2019–2020; 2017; 2014–2015).
 - *Workshops Co-Chair* (2018–2019); *Program Committee Member* (2012–2013).
- *Program Committee Member*, “Conference on Mechanism and Institution Design [CMID]” (2020).
- *Co-Organizer*, American Economic Association Meetings sessions:
 - “Matching under Inequality: Implications for Policy” (2020); “Dysfunction in the Real Estate Market” (2019); “New Advances in Matching with Contracts” (2019); “Technological Progress and Inequality: Perspectives from Optimal Tax Theory” (2019); “New Insights on Classic Questions in Matching Theory” (2018); “Matching without Substitutes: Theory and Applications” (*Papers & Proceedings*, 2017); “Market Design and Development Economics” (2017); “Market Design: Theory and Practice” (2017); “Predictive Cities” (*Papers & Proceedings*, 2016); “Patent Economics” (2015); “Frontiers of Market Design” (*Papers & Proceedings*, 2014); “Whither Affirmative Action?” (2013); “New Challenges for Market Design” (*Papers & Proceedings*, 2012); “Price Theory and Market Design” (2012); “Frontiers of Matching Theory” (2011).
- *Co-Organizer*, “Conference on Big Data,” Harvard Center of Mathematical Sciences and Applications (2015–present).
- *Co-Organizer*, “Social Science Applications Forum,” Harvard Center of Mathematical Sciences and Applications (2016–present).
- *Steering Committee Member*, “Conference on Auctions, Market Mechanisms and Their Applications [AMMA]” (2016–present).
 - *Co-Chair* (2015); *Program Committee Member* (2011).
- *Co-Chair*, “Japanese-American-German Frontiers of Science [JAGFoS] Symposium,” Alexander von Humboldt Foundation, Japan Society for the Promotion of Science, and National Academy of Sciences (2018–2019).
 - *Planning Group Member* (2017).

- *Co-Chair*, “International Workshop on Matching Under Preferences [MATCH-UP]” (2017).
 - *Program Committee Member* (2019).
- *Program Committee Member*, “Workshop on the Economics of Networks, Systems and Computation [NetEcon]” (2017–2018).
- *Co-Organizer*, “Predictive Cities” exploratory seminar, Radcliffe Institute for Advanced Study (2016).
- *Program Committee Member*, “Workshop on Social and Information Networks” (2015).
- *Program Committee Member*, “International World Wide Web Conference [WWW]” (2015).
- *Co-Organizer*, “CRCS Seminar,” Center for Research on Computation and Society [CRCS], Harvard University (2014–2015).
- *Co-Organizer*, “Midway Market Design Workshop [MDW MDW],” Becker Friedman Institute for Research in Economics, University of Chicago (2014).
- *Co-Organizer*, “25th Jerusalem School in Economic Theory: Matching and Market Design” (2014).
- *Program Committee Member*, “12th Meeting of Society for Social Choice and Welfare” (2014).
- *Program Committee Member*, “Symposium on Algorithmic Game Theory [SAGT]” (2014).
- *Co-Organizer*, “Taxation and Matching” workshop, Department of Economics, Sciences Po (2014).
- *Program Committee Member*, “Conference on Web and Internet Economics [WINE]” (2013).
- *Organizer*, “Workshop in Economic Theory,” Department of Economics, University of Chicago (Fall 2012; Fall 2011).
- *Co-Organizer*, “Matching Theory: Economics meets Mathematics” conference, Becker Friedman Institute for Research in Economics and Stevanovich Center for Financial Mathematics, University of Chicago (2012).
- *Organizational Chair*, “Matching and Price Theory” conference, Milton Friedman Institute for Research in Economics, University of Chicago (2011).

University Committee Service

- *Executive Committee Member*, University Committee on Registration and Course Allocation, Harvard University (2019–present).
 - *Member* (2018–2019).
- *Member*, FAS–SEAS Committee on Applied Mathematics (2019–present).
- *Member*, University Subcommittee on the Degree of Doctor of Philosophy in Business Economics, Harvard University (2017–present).
- *Member*, Departmental Committee on the Undergraduate Concentration in Applied Mathematics – Economics Track, Department of Economics, Harvard University (2017–present).

Editorial Service

- *Associate Editor*, *Management Science* (2018–present).
- *Associate Editor*, *Journal of Mechanism and Institution Design* (2018–present).
- *Guest Co-Editor*, Special Issue on EC’17, *ACM Transactions on Economics and Computation* (2019).
- *Guest Co-Editor*, Special Issue on Market Design, *Oxford Review of Economic Policy* (2017).

Other Professional Service

- *Senior Common Room Member*, Lowell House, Harvard University (2019–present).
- *Selection Committee Member*, Joseph Lieberman Award for Significant Contribution to Science and Technology, Center for Excellence in Education (2017; 2015; 2013).
- *Head Tutor*, Harvard Program for Research in Markets and Organizations [PRIMO] (2011).
- *Non-Resident Tutor*, Kirkland House, Harvard University (2009–2011).

- *Paper Reviewer*, Research Science Institute, MIT (2005–2011).
- *Program Assistant*, Harvard College Program for Research in Science and Engineering [PRISE] (2008).

Teaching

Graduate

- *Market Design* (Graduate Seminar)
 - Department of Economics, Harvard University (Fall 2019; Fall 2018; Fall 2017; Fall 2015).
- *Topics in Matching and Market Design* (Graduate Seminar)
 - Department of Economics, University of Chicago (Spring 2013; Winter 2012).
- *Market Design Perspectives on Inequality* (Graduate Mini-Course)
 - Chicago Summer School on Socioeconomic Inequality (Summer 2016–2017).
- *Market Design Approaches to Inequality* (Graduate Mini-Course)
 - Chicago Summer School on Socioeconomic Inequality (Summer 2015; Summer 2012–2013).
 - Beijing Summer School on Socioeconomic Inequality (Summer 2013).
- *Matching Theory, Substitutability, and Generalized Matching* (Graduate Mini-Course)
 - Hebrew University Summer School in Economic Theory (Summer 2014).
- *Recent Advances in Generalized Matching Theory* (Tutorial, with John William Hatfield)
 - “Matching Problems: Economics meets Mathematics” conference (June 4, 2012).

MBA

- *Making Markets* (MBA Course)
 - Harvard Business School (Spring 2020; Spring 2019; Spring 2018, with Thomas R. Eisenmann).
- *The Entrepreneurial Manager* (MBA Course)
 - Harvard Business School (Spring 2016).
- *Online Marketing at Big Skinny* (Case Session)
 - The Online Economy – Strategy and Entrepreneurship, Harvard Business School (September 20, 2011; September 28, 2010).

Grants and Fellowships

Washington Center for Equitable Growth Grant: “Market Design Responses to Inequality” (with Mohammad Akbarpour, Piotr Dworzczak, and Ravi Jagadeesan, 2019–present).

NSF Social and Economic Sciences [SES] Grant: “Preferences in Matching Market Design” (2015–present).

NSF Science of Science and Innovation Policy [SciSIP] Grant: “Assessing the Impact of Non-Practicing Entities on U.S. Innovation” (with Lauren Cohen and Umit G. Gurun, 2015–present).

University of Melbourne Eminent Research Scholar Grant (2020; 2019; 2018).

Sloan Foundation Conference Grant: “Conference on Big Data” (with Shing-Tung Yau, Richard Freeman, Jun Liu, and Horng-Tzer Yau, 2019; with Shing-Tung Yau, Richard Freeman, Jun Liu, Nikhil Naik, and Horng-Tzer Yau, 2017; with Shing-Tung Yau, Richard Freeman, Jun Liu, Christopher Rogan, and Horng-Tzer Yau, 2016).

Star Family Challenge for Promising Scientific Research Grant: “Computer Vision-Automated Surveys for Urban Science and Economic Development” (with Edward L. Glaeser, Rema Hanna, Benjamin Olken, and Nikhil Naik, 2016–2017).

Radcliffe Exploratory Seminar Grant: “Predictive Cities: Leveraging New Data and Methods to Improve Urban Quality of Life” (with Edward L. Glaeser, Michael Luca, and Mitchell B. Weiss, 2016–2017).

Oxford Martin School Visiting Fellowship (2016).

International Growth Centre [IGC] Small Projects Grant (with Edward L. Glaeser, Rema Hanna, Benjamin Olken, and Nikhil Naik, 2015–2016).

NSF Interface between Computer Science and Economics & Social Sciences [ICES] Grant: “Understanding the Roles of Intermediaries in Matching Markets” (with Eric Budish, Ali Hortaçsu, and Nicole Immorlica, 2012–2016).

William F. Milton Fund Grant (2014–2015).

Econometric Society Travel Grant (2015).

AMS–Simons Travel Grant (2011–2014).

Human Capital and Economic Opportunity/Institute for New Economic Thinking Research Grant (with Jay Garlapati, 2012–2013).

NSF Graduate Research Fellowship (2009–2011).

Terence M. Considine Fellowship in Law and Economics (2010–2011).

Yahoo! Key Scientific Challenges Program Fellowship (2010–2011).

Harvard Real Estate Academic Initiative Faculty Grant (with E. Glen Weyl, 2009–2011).

Harvard Institute for Quantitative Social Science Travel Grant (2010).

Danielan Fund Research and Travel Grant (2010).

National Defense Science and Engineering Graduate Fellowship (declined, 2009).

Harvard Institute for Quantitative Social Science Summer Scholars Program Fellowship (2008).

Harvard College Program for Research in Science and Engineering Fellowship (2008).

Harvard Mathematics Department Highbridge Fellowship (2008).

Harvard College Program for Research in Science and Engineering Fellowship (2006).

Center for Excellence in Education Research Science Institute Summer Scholarship (2004).

Awards and Honors

Best *Economic Inquiry* Article Award (with Edward L. Glaeser, Michael Luca, and Nikhil Naik, 2018).

Webby Award (with Nikhil Naik, Ramesh Raskar, Edward L. Glaeser, and César A. Hidalgo, “Best Use of Machine Learning” Category, 2018).

Star Family Prize for Excellence in Advising (Winner, 2016; Nominee, 2014).

Derek Bok Center Certificate of Distinction in Teaching (2016).

Kavli Frontiers of Science Fellow (2015).

Case Centre Award (with Benjamin Edelman, “Knowledge, Information and Communication Systems Management” Category, 2015).

Nominee, John R. Marquand Award for Exceptional Advising and Counseling (2014).

Center for Excellence in Education Alumni Award for Outstanding Achievement in STEM and Business (2013).

Third Place, Romanian Institute of Science and Technology “Best PhD Thesis in Computational Game Theory” Competition (2011).

Yahoo! Key Scientific Challenges Program Selectee (2010).

St. Mark’s Institute of Mathematics Great Math Challenge Award (with Paul M. Kominers, 2010).

AMS-MAA-SIAM Frank and Brennie Morgan Prize for Outstanding Research in Mathematics by an Undergraduate Student (2010).

George Caspar Homans Prize (2009).

Thomas Temple Hoopes Prize (2009).

Phi Beta Kappa (2009).

First Place, Robert Fletcher Rogers Prize (2008).

John Harvard Scholarship (2007–2008).

First Place, American Mathematical Society Karl Menger Prize (2005).

Second Place, Mathematics Category, Intel International Science and Engineering Fair (2005).

California Institute of Technology Signature Award in Mathematics (2004).

Publications

Economics Research Papers

- “Redistribution through Markets” (with Piotr Dworzak & Mohammad Akbarpour), accepted subject to revision, *Econometrica*. (Extended abstract, *Proceedings of the 2018 ACM Conference on Economics and Computation [EC’18]*, (2018): 611.)
- “Collusion in Markets with Syndication” (with John William Hatfield, Richard Lowery, and Jordan M. Barry), forthcoming, *Journal of Political Economy*.
- “Stability, Strategy-Proofness, and Cumulative Offer Mechanisms” (with John William Hatfield and Alexander Westkamp), forthcoming, *Review of Economic Studies*. (Extended abstract, *Proceedings of the 2017 ACM Conference on Economics and Computation [EC’17]*, (2017): 673–674.)
- “Chain Stability in Trading Networks” (with John William Hatfield, Alexandru Nichifor, Michael Ostrovsky, and Alexander Westkamp), forthcoming, *Theoretical Economics*. (Extended abstract, *Proceedings of the 2018 ACM Conference on Economics and Computation [EC’18]*, (2018): 617–618.)
- “Costly Concessions: An Empirical Framework for Matching with Imperfectly Transferable Utility” (with Alfred Galichon and Simon Weber), *Journal of Political Economy*, 127(6), (2019): 2875–2925.
- “Patent Trolls: Evidence from Targeted Firms” (with Lauren Cohen and Umit G. Gurun), *Management Science*, 65(12), (2019): 5461–5486
- “Full Substitutability” (with John William Hatfield, Alexandru Nichifor, Michael Ostrovsky, and Alexander Westkamp), *Theoretical Economics*, 14(4), (2019): 1535–1590. (Extended abstract, *Proceedings of the 16th ACM Conference on Electronic Commerce [EC’15]*, (2015): 39–40.)
- “Reserve Design: Unintended Consequences and The Demise of Boston’s Walk Zones” (with Umut Dur, Parag A. Pathak, and Tayfun Sönmez), *Journal of Political Economy*, 126(6), (2018): 2457–2479.
- “A Theory of Intergenerational Mobility” (with Gary S. Becker, Kevin M. Murphy, and Jörg L. Spenkuch), *Journal of Political Economy [Gary S. Becker Memorial Issue]*, 126(S1), (2018): S7–S25.
- “Strategy-Proofness of Worker-Optimal Matching with Continuously Transferable Utility” (with Ravi Jagadeesan and Ross Rheingans-Yoo), *Games and Economic Behavior [Lloyd Shapley Memorial Issue]*, 108, (2018): 287–294.
- “‘Troll’ Check: A Proposal for Administrative Review of Patent Litigation” (with Lauren Cohen, John M. Golden, and Umit G. Gurun), *Boston University Law Review*, 97(5), (2017): 1775–1841.
- “Computer Vision Uncovers Predictors of Physical Urban Change” (with Nikhil Naik, Ramesh Raskar, Edward L. Glaeser, and César A. Hidalgo), *Proceedings of the National Academy of Sciences*, 114(29), (2017): 7571–7576.

- “Stable and Strategy-Proof Matching with Flexible Allotments” (with John William Hatfield and Alexander Westkamp), *American Economic Review Papers & Proceedings* 107(5), (2017): 214–219.
- “Contract Design and Stability in Many-to-Many Matching” (with John William Hatfield), *Games and Economic Behavior [Special Issue in Honor of John O. Ledyard]*, 101, (2017): 78–97.
- “Matching with Slot-Specific Priorities: Theory” (with Tayfun Sönmez), *Theoretical Economics*, 11(2), (2016): 683–710. (Extended abstract, *Proceedings of the 14th ACM Conference on Electronic Commerce [EC’13]*, (2013): 603–604.)
- “Crowdsourcing City Government: Using Tournaments to Improve Inspection Accuracy” (with Edward L. Glaeser, Andrew Hillis, and Michael Luca), *American Economic Review Papers & Proceedings*, 106(5), (2016): 114–118.
- “The Growing Problem of Patent Trolling” (with Lauren Cohen and Umit G. Gurun), *Science*, 352(6285), (2016): 522–523.
- “Agglomerative Forces and Cluster Shapes” (with William R. Kerr), *Review of Economics and Statistics*, 97(4), (2015): 877–899.
- “Design and Implementation of a Privacy Preserving Electronic Health Record Linkage Tool in Chicago” (with Abel N. Kho, John P. Cashy, Kathryn L. Jackson, Adam R. Pah, Satyender Goel, Jörn Boehnke, John Eric Humphries, Bala N. Hota, Shannon A. Sims, Brad A. Malin, Dustin D. French, Theresa L. Walunas, David O. Meltzer, Erin O. Kaleba, Roderick C. Jones, and William L. Galanter), *Journal of the American Medical Informatics Association*, 22(5), (2015): 1072–1080.
- “Multilateral Matching” (with John William Hatfield), *Journal of Economic Theory [Special Issue on the Interface between Computer Science and Economic Theory]*, 156, (2015): 175–206. (Extended abstract, *Proceedings of the 12th ACM Conference on Electronic Commerce [EC’11]*, (2011): 337–338.) (Corrigendum, with Keisuke Bando, Toshiyuki Hirai, and John William Hatfield, *Journal of Economic Theory*, 184, (2019).)
- “Investment Incentives in Labor Market Matching” (with John William Hatfield and Fuhito Kojima), *American Economic Review Papers & Proceedings*, 104(5), (2014): 436–441.
- “Delayed-Response Strategies in Repeated Games with Observation Lags” (with Drew Fudenberg and Yuhta Ishii), *Journal of Economic Theory*, 150, (2014): 487–514.
- “Stability and Competitive Equilibrium in Trading Networks” (with John William Hatfield, Alexandru Nichifor, Michael Ostrovsky, and Alexander Westkamp), *Journal of Political Economy*, 121(5), (2013): 966–1005.
- “On Derivatives Markets and Social Welfare: A Theory of Empty Voting and Hidden Ownership” (with Jordan M. Barry and John William Hatfield), *Virginia Law Review*, 99(6), (2013): 1103–1168.
- “On the Correspondence of Contracts to Salaries in (Many-to-Many) Matching,” *Games and Economic Behavior*, 75(2), (2012): 984–989.
- “Testing Substitutability” (with John William Hatfield and Nicole Immorlica), *Games and Economic Behavior*, 75(2), (2012): 639–645.
- “Matching in Networks with Bilateral Contracts” (with John William Hatfield), *American Economic Journal: Microeconomics*, 4(1), (2012): 176–208. (Extended abstract, *Proceedings of the 11th ACM Conference on Electronic Commerce [EC’10]*, (2010): 119–120.) (Corrigendum, with John William Hatfield and Ravi Jagadeesan, forthcoming, *American Economic Journal: Microeconomics*.)
- “Matching with Preferences over Colleagues Solves Classical Matching,” *Games and Economic Behavior*, 68(2), (2010): 773–780.

Economics Short Articles and Conference Papers

- “Lone Wolves in Competitive Equilibria” (with Ravi Jagadeesan and Ross Rheingans-Yoo), forthcoming, *Social Choice and Welfare*.
- “To thine own self be true? Incentive Problems in Personalized Law” (with Jordan M. Barry and John William Hatfield), forthcoming, *William & Mary Law Review*.

- “Optimizing Reserves in School Choice Matching: A Dynamic Programming Approach” (with Franklyn Wang and Ravi Jagadeesan), *Operations Research Letters*, 47(5), (2019): 438–446.
- “Ridesharing with Driver Location Preferences” (with Duncan Rheingans-Yoo, Hongyao Ma, and David C. Parkes), *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence [IJCAI’19]*, (2019): 557–564.
- “Allocation for Social Good: Auditing Mechanisms for Utility Maximization” (with Taylor Lundy, Alexander Wei, Hu Fu, and Kevin Leyton-Brown), *Proceedings of the 2019 ACM Conference on Economics and Computation [EC’19]*, (2019): 785–803.
- “Orienteering for Electioneering” (with Jonah Kallenbach and Robert Kleinberg), *Operations Research Letters*, 46(2), (2018): 205–210.
- “Patent Trolling Isn’t Dead — It’s Just Moving to Delaware” (with Lauren Cohen and Umit G. Gurun), *Harvard Business Review [Online]*, (June 28, 2017).
- “Who Will Vote Quadratically? Voter Turnout and Votes Cast Under Quadratic Voting” (with Louis Kaplow), *Public Choice [Special Issue on Quadratic Voting and the Public Good]*, 172(1–2), (2017): 125–149.
- “To Groupon or Not to Groupon: The Profitability of Deep Discounts” (with Benjamin Edelman and Sonia Jaffe), *Marketing Letters*, 27(1), (2016): 39–53.
- “Convergence of Position Auctions under Myopic Best-Response Dynamics” (with Matthew Cary, Aparna Das, Benjamin Edelman, Ioannis Giotis, Kurtis Heimerl, Anna Karlin, Claire Mathieu, and Michael Schwarz), *ACM Transactions on Economics and Computation*, 2(3), (2014): #9.
- “Vacancies in Supply Chain Networks” (with John William Hatfield), *Economics Letters*, 119(3), (2013): 354–357.
- “Holdout in the Assembly of Complements: A Problem for Market Design” (with E. Glen Weyl), *American Economic Review Papers & Proceedings*, 102(3), (2012): 360–365.
- “Discrete Choice Cannot Generate Demand that is Additively Separable in Own Price” (with Sonia Jaffe), *Economics Letters*, 116(1), (2012): 129–132.
- “Course Allocation by Proxy Auction” (with Mike Ruberry and Jonathan Ullman), *Proceedings of the 6th Workshop on Internet & Network Economics (WINE)*, (2010): 551–558.
- “Information Can Wreck Cooperation: A Counterpoint to Kandori (1992)” (with Yuichiro Kamada), *Economics Letters*, 107(2), (2010): 112–114.

Mathematics Research Papers

- “Configurations of Extremal Type II Codes via Harmonic Weight Enumerators” (with Noam D. Elkies), *Journal de Théorie des Nombres de Bordeaux*, 31(3), (2019): 679–688.
- “Asymptotic Improvements of Lower Bounds for the Least Common Multiples of Arithmetic Progressions” (with Daniel M. Kane), *Canadian Mathematical Bulletin*, 57(3), (2014): 551–561.
- “Minimal S -Universality Criteria May Vary in Size” (with Noam D. Elkies and Daniel M. Kane), *Journal de Théorie des Nombres de Bordeaux*, 23(3), (2013): 557–563.
- “Weighted Generating Functions for Type II Lattices and Codes” (with Noam D. Elkies), *Quadratic and Higher Degree Forms* (ed. Krishnaswami Alladi, Manjul Bhargava, David Savitt, and Pham Huu Tiep), *Developments in Mathematics*, 31, Springer, (2013): 63–108.
- “Hinged Dissections Exist” (with Timothy G. Abbott, Zachary Abel, David Charlton, Erik D. Demaine, and Martin L. Demaine), *Discrete & Computational Geometry*, 47(1), (2012): 150–186. (Conference paper, *Proceedings of the Twenty-Fourth Annual Symposium on Computational Geometry [SoCG’08]*, (2008): 110–119.)
- “Every Large Point Set contains Many Collinear Points or an Empty Pentagon” (with Zachary Abel, Brad Ballinger, Prosenjit Bose, Sébastien Collette, Vida Dujmović, Ferran Hurtado, Stefan Langerman, Attila Pór, and David R. Wood), *Graphs and Combinatorics*, 27(1), (2011): 47–60. (Extended abstract, *Proceedings of the 21st Canadian Conference on Computational Geometry [CCCG’09]*, (2009).)

- “A Categorical Construction of Ultrafilters” (with Daniel Litt and Zachary Abel), *Rocky Mountain Journal of Mathematics*, 40(5), (2010): 1611–1617.
- “A Constant Bound for the Periods of Parallel Chip-firing Games with Many Chips” (with Paul M. Kominers), *Archiv der Mathematik*, 95(1), (2010): 9–13. [Recognized in the St. Mark’s Institute of Mathematics Great Math Challenge.]
- “On Congruence Conditions for Primality” (with Sherry Gong), *INTEGERS: The Electronic Journal of Combinatorial Number Theory*, 10(3), (2010): 313–317.
- “Irrational Roots Revisited,” *The Mathematical Gazette*, 94(530), (2010): 28.
- “On the Classification of Type II Codes of Length 24” (with Noam D. Elkies), *SIAM Journal on Discrete Mathematics*, 23(4), (2010): 2173–2177.
- “Further Improvements of Lower Bounds for the Least Common Multiples of Arithmetic Progressions” (with Shaofang Hong), *Proceedings of the American Mathematical Society*, 138(3), (2010): 809–813.
- “Improved Bounds on the Sizes of S-P Numbers” (with Paul M. Kominers), *The Mathematical Gazette*, 94(529), (2010): 127–129.
- “Shape Replication Through Self-Assembly and RNase Enzymes” (with Zachary Abel, Nadia Benbernou, Mirela Damian, Erik D. Demaine, Robin Flatland, Robert Schweller, and Martin L. Demaine), *Proceedings of the 2010 ACM-SIAM Symposium on Discrete Algorithms [SODA’10]*, (2010): 1045–1064.
- “Refined Configuration Results for Extremal Type II Lattices of Ranks 40 and 80” (with Noam D. Elkies), *Proceedings of the American Mathematical Society*, 138(1), (2010): 105–108.
- “Configurations of Extremal Even Unimodular Lattices,” *International Journal of Number Theory*, 5(3), (2009): 457–464.
- “On Universal Binary Hermitian Forms,” *INTEGERS: The Electronic Journal of Combinatorial Number Theory*, 9, (2009): 9–15.
- “Configurations of Rank- $40r$ Extremal Even Unimodular Lattices ($r = 1, 2, 3$)” (with Zachary Abel), *Journal de Théorie des Nombres de Bordeaux*, 20(2), (2008): 365–371.
- “Uniqueness of the 2-universality Criterion,” *Note di Matematica*, 28(2), (2008): 203–206.

Musicology Research Papers

- “Leonard Bernstein’s Doodles: Reading Outside the Lines at the Library of Congress,” *Journal of the Society for American Music*, 3(1), (2009): 26–33. (As an appendix to “Leonard Bernstein’s Jewish Boston: Cross-Disciplinary Research in the Classroom” by Carol J. Oja and Kay Kaufman Shelemay.)
- “Leonard Bernstein doodled regularly,” In: *Bernstein and Boston: A Documentary Scrapbook* (ed. Emily Abrams Ansari), (2006).

Medicine Research Papers

- “Patterns of failure after involved field radiation therapy for pediatric and young adult Hodgkin lymphoma” (with Minh-Phuong Huynh-Le, Amanda J. Walker, Ido Paz-Priel, Moody D. Wharam, and Stephanie A. Terezakis), *Pediatric Blood & Cancer*, 61(7), (2014): 1210–1214.

Books and Edited Collections

- *Fair by Design: Economic Design Approaches to Inequality* (ed. with Alexander Teytelboym), in preparation, Oxford University Press.
- *Success with Science: The Winners’ Guide to High School Research* (with Shiv Gaglani, Maria Elena De Obaldia, Dayan Li, and Carol Y. Suh), Research Corporation for Science Advancement, (2011).

Expository Articles, Notes, and Reviews (selected)

- “The Parable of the Auctioneer: Complexity in Paul R. Milgrom’s *Discovering Prices*” (with Alexander Teytelboym), forthcoming, *Journal of Economic Literature*.

- “Good Markets (Really Do) Make Good Neighbors,” *ACM SIGecom Exchanges*, 16(2), (2018): 12–26.
- “Big Data and Big Cities: The Promises and Limitations of Improved Measures of Urban Life” (with Edward L. Glaeser, Michael Luca, and Nikhil Naik), *Economic Inquiry [Kavli HUMAN Project Symposium Issue]*, 56(1), (2018): 114–137.
- “An Invitation to Market Design” (with Alexander Teytelboym and Vincent P. Crawford), *Oxford Review of Economic Policy*, 33(4), (2017): 541–571.
- “Empirical Evidence on the Behavior and Impact of Patent Trolls: A Survey” (with Lauren Cohen and Umit G. Gurun), *Patent Assertion Entities and Competition Policy* (ed. D. Daniel Sokol), Cambridge University Press, (2017): 27–49.
- “Stability and Competitive Equilibrium in Matching Markets with Transfers” (with John William Hatfield), *ACM SIGecom Exchanges*, 10(3), (2011): 29–34.
- “Sharing the fun of research,” *Harvard University Gazette*, (October 27, 2011).
- “Finding Matrices Which Satisfy Functional Equations,” *College Mathematics Journal*, 40(4), (2009): 289–292.
- “Endpaper: Math Has This Funny Property” (with Zachary Abel), *The Harvard College Mathematics Review*, 2(1), (2008): 101.
- “Mathematical Minutiae: i Has This Funny Property” (with Zachary Abel), *The Harvard College Mathematics Review*, 2(1), (2008): 75–77.
- “The Harvard College Mathematics Review: A New Undergraduate Expository Journal” (with Daniel Litt), *Math Horizons*, 15(4), (2008): 30–31.

Business and Opinion Writing (selected)

- “Markets Can Improve Rationing of Medical Supplies,” *Bloomberg Opinion*, (April 10, 2020).
- “Keep Sanitizer Out of the Market’s Invisible Hand,” **Bloomberg Opinion**, (March 16, 2020).
- “Amazon Needs to Tame Its Wild West Marketplace,” *Bloomberg Opinion*, (July 26, 2019).
- “Busting the Refugee-Crime Connection,” *Bloomberg Opinion*, (January 7, 2019).
- “Amazon’s \$15 Minimum Wage Might Cost Some Workers,” *Bloomberg Opinion*, (October 10, 2018).
- “Leonard Bernstein and the Promise of America,” *Bloomberg Opinion*, (August 24, 2018).
- “Why Work Requirements Hurt the Poor,” *Bloomberg Opinion*, (August 20, 2018).
- “Math Geeks Must Wait 100 Years for a Day Like This,” *Bloomberg Opinion*, (June 1, 2018).
- “Facebook Knows It Can’t Offer More Privacy,” *Bloomberg View*, (April 26, 2018).
- “L.L. Bean Will Regret Ending Lifetime Product Guarantee,” *Bloomberg View*, (February 20, 2018).
- “Uber Really Wants You to Use Its Credit Card,” *Bloomberg View*, (December 6, 2017).
- “Fans Watch Taylor Swift. Economists Watch the Fans,” *Bloomberg View*, (August 29, 2017).
- “To Improve Wireless Networks, Auction the Airwaves,” *Bloomberg View*, (July 24, 2017).
- “Uber’s New Pricing Idea Is Good Theory, Risky Business,” *Bloomberg View*, (June 13, 2017).
- “Kenneth Arrow Made Great Models, and Was One,” *Bloomberg View*, (February 23, 2017).
- “Why Obama Just Wrote Articles in 3 Academic Journals,” *Bloomberg View*, (January 22, 2017).
- “Prediction Markets Didn’t Call Trump’s Win, Either,” *Bloomberg View*, (November 15, 2016).
- “Apple Has Designs on Stifling Innovation,” *Bloomberg View*, (October 24, 2016).
- “How U.S. laws protecting America’s best ideas are killing innovation” (with Lauren Cohen and Umit G. Gurun), *Fortune [Blog]*, (January 22, 2015).
- “The High School Senior’s Dilemma: Where Should I Go to College?” (with Michael Luca and Jonathan Smith), *Forbes [Blog]*, (April 22, 2014).

- “Lessons from the GoDaddy Customer Revolt” (with Paul Kominers), *Harvard Business Review [Blog]*, (December 29, 2011).
- “Digital Pioneers on Paper,” *Harvard Business Review [Blog]*, (July 11, 2011).
- “To Groupon or Not To Groupon: New Research on Voucher Profitability” (with Benjamin Edelman and Sonia Jaffe), *Harvard Business Review [Blog]*, (January 12, 2011).

Teaching Materials (selected)

- “Opportunity Insights: Research and Policy for Social Mobility” (with Jeffrey Huizinga, and Allison Ciechanover), Harvard Business School Case 820-714, (2020).
- “Klößner & Co: Steeling for a Digital World” (with Carin-Isabel Knoop), Harvard Business School Case 820-035, (2020).
- “Lunchclub: Algorithmic Networking” (with George Gonzalez), Harvard Business School Case 820-051, (2020).
- “Quantopian: A New Model for Active Management (B)” (with Sara Fleiss and Charles B. Ughetta), Harvard Business School Supplement 219-115, (2019).
- “Raksul” (with Masahiro Kotosaka, Nobuo Sato, and Akiko Kanno), Harvard Business School Case 819-115, (2019).
- “Halliday’s OASIS” (with Nicole Tempest Keller), Harvard Business School Case 819-106, (2019).
- “Maccabitech: Harnessing Israel’s Healthcare Data” (with Carin-Isabel Knoop), Harvard Business School Case 819-032, (2019).
- “Feeding America (A) and (B)” (with Alan Lam), Harvard Business School Cases 818-130, Supplement 818-131, and Teaching Note 918-082, (2018).
- “GoFundMe: The Giving Layer of the Internet” (with Allison M. Ciechanover), Harvard Business School Case 818-108 and Teaching Note 819-090, (2018).
- “When Trolls Attack: Carbonite vs. Oasis Research” (with Lauren Cohen, Umit G. Gurun, and Sarah Mehta), Harvard Business School Case 219-001, (2019).
- “Cadre” (with Thomas R. Eisenmann and David Lane), Harvard Business School Case 818-058, (2018).
- “Yo-Yo Ma and Silkroad” (with Rohit Deshpande and Paul A. Gompers), Harvard Business School Case 818-110, (2018).
- “Patent Trolling” (with Lauren Cohen, Umit G. Gurun, and George Hou), Harvard Business School Background Note 218-085, (2018).
- “Making Markets” (with Thomas R. Eisenmann), Harvard Business School Technical Note 818-096, (2018).
- “Updating Dating” (with Thomas R. Eisenmann and Alan Lam), Harvard Business School Case 818-052, (2017).
- “Online Marketing at Big Skinny” (with Benjamin Edelman), Harvard Business School Case 911-033 and Teaching Note 911-034, (2011). [Awarded a Case Centre Award.]

Comments and Letters (selected)

- “Why I Volunteer at the Intel International Science and Engineering Fair,” *Science News*, (February 28, 2018).
- “Enhancing Patent Quality: Screening out Low-Quality Patents and Trolling Litigation,” public comment, (2015).
- “Collective decisions on land” (with E. Glen Weyl), *The Economist*, (May 30, 2015).
- “Paying for Tissue: Net Benefits” (with Gary S. Becker), *Science*, 337(6100), (2012): 1292–1293.
- “Professional-School Training Is Invaluable, Even for Scholars,” *The Chronicle of Higher Education*, (February 14, 2012).

- “Re: Advance Notice of Proposed Rulemaking: Human Subjects Research Protections: Enhancing Protections for Research Subjects and Reducing Burden, Delay, and Ambiguity for Investigators, Docket ID number HHS-OPHS-2011-0005” (with Salil Vadhan, David Abrams, Micah Altman, Cynthia Dwork, Paul Kominers, Harry R. Lewis, Tal Moran, Guy Rothblum, and Jonathan Ullman), public comment, (2011).
- “Comment on the NRMP’s ‘Supplemental Offer and Acceptance Program’ Proposed to Replace the Post-Match Scramble” (with Peter A. Coles, Clayton R. Featherstone, John William Hatfield, Fuhito Kojima, Muriel Niederle, Parag A. Pathak, and Alvin E. Roth), public comment, (2010).
- “A correspondence note on Myerson’s ‘Irrationality via Well-ordering’,” *Gazette of the Australian Mathematical Society*, 36(1), (2009): 53.

Workshop Papers

- “Fractal Flipbooks” (with Andrea Hawksley), *Proceedings of Bridges 2016: Mathematics, Music, Art, Architecture, Education, Culture*, (2016): 615–620.
- “Flipbook Polyhedra” (with Andrea Hawksley), *Proceedings of Bridges 2013: Mathematics, Music, Art, Architecture, Culture*, (2013): 619–624.

Refereed Problems and Solutions

- *Mathematics Magazine*: Problem 2049 (2018); Problem Q987 (2009).
- *Pi Mu Epsilon Journal*: Centennial Problem 1993 (2013); Problem 1213 (with Paul M. Kominers, 2009); Problem 1192 (2008); Solutions to problems 1175 (with Paul M. Kominers, 2008) and 1176 (with Paul M. Kominers, 2008).
- *American Invitational Mathematics Exam (AIME)*: Problem II-10 (2010); Problem II-7 (2009).
- *College Mathematics Journal*: Problem 908 (2009).
- *The Harvard College Mathematics Review*: Problems S08-2 (with Paul M. Kominers and Justin Chen, 2008), F07-5 (with Paul M. Kominers and Zachary Abel, 2007), F07-2 (with John Hawksley, 2007) and S07-2 (2007).
- *Alfred R. Schmidt Freshman Mathematics Competition*: Exams 22 (with John Rickert, 2010), 20 (with John Rickert and Paul M. Kominers, 2008), 19 (with John Rickert and Paul M. Kominers, 2007) and 17 (with John Rickert, 2005).
- *USA Mathematical Talent Search*: Problem 3/2/18 (2006).

Working Papers (selected)

Economics

- “Strategy-Proofness, Investment Efficiency, and Marginal Returns: An Equivalence” (with John William Hatfield and Fuhito Kojima).
- “Hidden Substitutes” (with John William Hatfield).
- “Paying It Backward and Forward: Expanding Access to Convalescent Plasma Therapy Through Market Design” (with Parag A. Pathak, Tayfun Sönmez, and M. Utku Ünver).
- “Investment Incentives in Near-Optimal Mechanisms” (with Mohammad Akbarpour, Shengwu Li, and Paul R. Milgrom).
- “To Infinity and Beyond: Scaling Economic Theories via Logical Compactness” (with Yannai A. Gonczarowski and Ran I. Shorrer).
- “Collusion in Brokered Markets” (with John William Hatfield and Richard Lowery).
- “Taxation in Matching Markets” (with Arnaud Dupuy, Alfred Galichon, and Sonia Jaffe).
- “Respect for Improvements and Comparative Statics in Matching Markets.”
- “On The Representativeness of Voter Turnout” (with Louis Kaplow).

- “Comparative Statics for Size-Dependent Discounts in Matching Markets” (with David Delacrétaz and Alexandru Nichifor).
- “Bundling Incentives in (Many-to-Many) Matching with Contracts” (with Jonathan Ma).
- “Respect for Improvements under Substitutable Completion” (with Jonathan Ma).
- “Shielded Innovation” (with Lauren Cohen and Umit G. Gurun).
- “How Does Compliance Affect the Returns to Algorithms? Evidence from Boston’s Restaurant Inspectors” (with Edward L. Glaeser, Andrew Hillis, Hyunjin Kim, and Michael Luca).
- “Comparative Statics for Size-Dependent Discounts in Matching Markets” (with David Delacrétaz and Alexandru Nichifor).
- “Matching Mechanisms for Refugee Resettlement” (with David Delacrétaz and Alexander Teytelboym).
- “Auctions with Entry versus Entry in Auctions” (with Jiafeng Chen).
- “Matching with Slot-Specific Priorities: Applications” (with Tayfun Sönmez).
- “Paying (for) Attention: The Impact of Information Processing Costs on Bayesian Inference” (with Xiaosheng Mu and Alexander Peysakhovich).
- “Shareholder Decisionmaking in the Presence of Empty Voting and Hidden Ownership” (with Jordan M. Barry and John William Hatfield).

Mathematics

- “Universal Reconfiguration of (Hyper-)cubic Robots” (with Zachary Abel).

Presentations

Research Lectures

- “Redistribution through Markets”
 - Marist College School of Management Research Seminar (May 6, 2020); Virtual Market Design Seminar (April 20, 2020); California Institute of Technology Economic Theory Seminar (April 15, 2020); “Matching under Inequality: Implications for Policy” session, AEA Meetings (January 4, 2020); Invited Talk, 30th Stony Brook International Conference on Game Theory (July 15, 2019); Third Workshop on Mechanism Design for Social Good [MD4SG] (June 28, 2019); KU Leuven Economics Seminar (April 23, 2019); Harvard School of Engineering and Applied Sciences Widely Applied Mathematics Seminar (April 11, 2019); MIT Media Lab (April 10, 2019); University of San Diego Law and Finance Seminar (March 15, 2019); Microeconomics Workshop, Center for Research and Education in Program Evaluation [CREPE], University of Tokyo (December 18, 2018); Invited Talk, Asia-Pacific Industrial Organization Conference (December 15, 2018); Harvard University Public Finance Seminar (November 12, 2018); Carnegie Mellon University/University of Pittsburgh Microeconomic Theory Seminar (November 8, 2018); NBER Market Design Working Group Meeting (October 20, 2018); Keynote Talk, Arne Ryde Conference on “Frontiers of Market Design,” Lund University (September 23, 2018); University of Melbourne Economic Theory and Experiments Seminar (August 17, 2018); Boston College Microeconomics Seminar (May 9, 2018); Berkeley University Economic Theory Seminar (April 23, 2018).
- “Computer Vision Uncovers Predictors of Physical Urban Change”
 - Wolfe Research QES NLP Conference (April 21, 2020); Harvard Center of Mathematical Sciences and Applications Workshop on Foundations of Computational Science (August 30, 2019); Keystone Strategy Seminar (May 10, 2019).

- “Collusion in Markets with Syndication”
 - Asia-Pacific Industrial Organization Conference (December 13, 2019); University of Melbourne Economic Theory and Experiments Seminar (July 26, 2019); Stanford Graduate School of Business Economics Seminar (May 30, 2018); Harvard Law, Economics, and Organizations Workshop (November 20, 2017); Michigan State University Economic Theory Seminar (November 17, 2017); Becker Friedman Institute Fellows’ Seminar, University of Chicago (October 12, 2017); Harvard/MIT Economic Theory Workshop (April 27, 2017).
- “A Compact, Logical Approach to Large-Market Analysis”
 - Stony Brook Workshop on Simplicity and Robustness in Complex Markets (July 11, 2019).
- “Respect for Improvements and Comparative Statics in Matching Markets”
 - AMS Session on “Operations Research, Mathematical Programming, Optimization, Game Theory, Economics, and Mathematics in the Social and Behavioral Sciences,” Joint Mathematics Meetings (January 18, 2019).
- “Chain Stability in Trading Networks”
 - 19th ACM Conference on Economics and Computation [EC’18] (June 21, 2018).
- “Hidden Substitutes”
 - INFORMS Workshop on Mathematical Optimization in Market Design (June 18, 2018); CIREQ Montreal Microeconomic Theory Conference (November 19, 2016); NBER Market Design Working Group Meeting (October 28, 2016); 16th ACM Conference on Electronic Commerce [EC’15] (June 16, 2015); Yale University Microeconomic Theory Lunch (April 28, 2015).
- “Patent Trolls: Evidence from Targeted Firms”
 - Simon Fraser University Economic Theory Seminar (October 4, 2017); Facebook, Inc. Research Seminar (October 27, 2016); Robert F. Lanzillotti Public Policy Research Center and University of Florida Conference on The Economics of Innovation (May 20, 2016); Harvard Center of Mathematical Sciences and Applications Social Science Applications Forum (February 29, 2015); United States Patent and Trademark Office Research Seminar (March 17, 2015); MIT Applied Microeconomics Seminar (March 2, 2015); George Washington University Law School and the United States Patent and Trademark Office “Works in Progress Intellectual Property Colloquium [WIPIP]” (February 7, 2015); “Entrepreneurial Finance” session, AFA Meetings (January 4, 2015); Harvard Law, Economics, and Organizations Workshop (November 24, 2014); University of Chicago Booth School of Business Applied Economics Workshop (November 5, 2014); NBER Summer Institute Workshop on Innovation (July 16, 2014).
- “Strategy-Proofness, Investment Efficiency, and Marginal Returns: An Equivalence”
 - University of Melbourne Economic Theory and Experiments Seminar (April 7, 2017); Pennsylvania State University Micro Theory Seminar (March 31, 2017); University of Cologne Research Seminar of the DFG-Research Unit Design and Behavior (May 31, 2016); University of Texas at Austin Economic Theory Workshop (April 29, 2016); Nuffield College Economic Theory Lunchtime Workshop (January 19, 2016); Harvard/MIT Economic Theory Workshop (December 10, 2015); Brown University Economic Theory Seminar (November 16, 2015); Helsinki Center of Economic Research [HECER] Department Seminar (October 9, 2015); World Congress of the Econometric Society (August 21, 2015); Invited Talk, Meeting of COST Action IC1205 on Computational Social Choice (April 14, 2015); Becker Friedman Institute Celebration of the Life and Work of Gary S. Becker (October 30, 2014); 12th Meeting of the Society for Social Choice and Welfare (June 18, 2014); 15th ACM Conference on Electronic Commerce [EC’14] (June 12, 2014); University of Chicago Special Workshop (January 24, 2014); “Frontiers of Market Design” session, AEA Meetings (January 5, 2014); Stanford University Game Theory and Computation Seminar (October 24, 2013).

- “Titling in Informal Settlements”
“Market Design and Development Economics” session, AEA Meetings (January 6, 2017).
- “‘Troll’ Check: A Proposal for Administrative Review of Patent Litigation”
“Market Design: Theory and Practice” session, AEA Meetings (January 6, 2017).
- “Crowdsourcing City Government: Using Tournaments to Improve Inspection Accuracy”
“Predictive Cities” session, AEA Meetings (January 5, 2016).
- “Full Substitutability”
“Advances in Matching Theory” session, AEA Meetings (January 4, 2016); NBER Market Design Working Group Meeting (October 23, 2015); 16th ACM Conference on Electronic Commerce [EC’15] (June 16, 2015); 3rd International Workshop on Matching Under Preferences [MATCH-UP] (April 16, 2015).
- “The Coase Theorem and Voluntary Transaction Costs”
Amsterdam Center for Law & Economics (October 20, 2014); Centre de Recherches en Economie et Droit (October 16, 2014).
- “Stability and Competitive Equilibrium in Trading Networks”
University of Pennsylvania Computer Science Theory Seminar (April 25, 2014); Stanford Graduate School of Business Economics Seminar (October 19, 2011); University of Wisconsin–Madison Economic Theory Workshop (September 30, 2011); Milton Friedman Institute “Matching and Price Theory” conference (May 6, 2011); “Frontiers of Matching Theory” session, AEA Meetings (January 7, 2011).
- “Matching Markets with Taxation of Transfers”
Sciences Po “Taxation and Matching” workshop (March 21, 2014).
- “The Demise of Walk Zones in Boston: Priorities vs. Precedence in School Choice”
Cornell University Joint Microeconomic Theory and Computer Science Seminar (April 21, 2014); University of Rochester Economic Theory Seminar (March 5, 2013); Harvard/MIT Economic Theory Workshop (February 13, 2013); Yale University Microeconomic Theory Workshop (November 6, 2013); Microsoft Research New England Game Theory & Computation Seminar (October 30, 2013).
- “Designing for Diversity in Matching”
14th ACM Conference on Electronic Commerce [EC’13] (June 20, 2013); University of Maryland IO/Theory Seminar (May 7, 2013); Second Cambridge Area Economics and Computation Day [CAEC’13] (April 26, 2013); Washington University in St. Louis Economic Theory Workshop (April 16, 2013); NYU Microeconomic Theory Workshop (March 27, 2013); University of Michigan Economic Theory Seminar (March 15, 2013); “Whither Affirmative Action?” session, AEA Meetings (January 5, 2013); Microsoft Research New England Research Seminar (December 18, 2012); University of Chicago Recruitment Seminar (November 15, 2012); University of Illinois at Urbana-Champaign Microeconomics Seminar (November 7, 2012); Boston College Microeconomics Seminar (October 31, 2012); NBER Market Design Working Group Meeting (October 20, 2012); Federal Reserve Bank of Chicago Economics Research Seminar (August 14, 2012); Fourth World Congress of the Game Theory Society [GAMES2012] (July 24, 2012); Econometric Society North American Summer Meetings (June 30, 2012); University of Haifa Economics Workshop (June 18, 2012); St. Andrews School of Economics & Finance Candlemas Seminar (April 26, 2012); University of Chicago Workshop in Economic Theory (April 10, 2012); Measuring and Interpreting Inequality Working Group Inaugural Meeting (February 18, 2012).
- “A Theory of Empty Voting and Hidden Ownership”
Harvard Law, Economics, and Organizations Workshop (November 26, 2012); University of Chicago Workshop in Applications of Economics (May 21, 2012).

- “Multilateral Matching”
 - “Price Theory and Market Design” session, AEA Meetings (January 7, 2012); Columbia Microeconomic Theory Colloquium (October 31, 2011); NBER Market Design Working Group Meeting (October 28, 2011); Maastricht Workshop on Recent Developments in Market Design (September 14, 2011); 12th ACM Conference on Electronic Commerce [EC’11] (June 9, 2011); Harvard SEAS Economics and Computer Science Research Seminar (April 14, 2011); MIT Economic Theory Research Workshop (March 1, 2011); Harvard Workshop on Research in Behavior in Games and Markets (December 1, 2010) Guest Lecture, Harvard Economics 2056a: Market Design (November 19, 2010).
- “Concordance among Holdouts”
 - “New Challenges for Market Design” session, AEA Meetings (January 6, 2012); 12th ACM Conference on Electronic Commerce [EC’11] (June 8, 2011); Harvard Law, Economics, and Organizations Workshop (November 15, 2010); Yahoo! Key Scientific Challenges Summit (September 9, 2010); Economic Analysis Group, Antitrust Division, US Department of Justice (August 12, 2010); HBS Market Design Workshop (May 14, 2010); Harvard Workshop on Research in Behavior in Games and Markets (April 21, 2010); Harvard Graduate Student Political Economy Workshop (November 6, 2009); Harvard Law & Economics Seminar (November 5, 2009).
- “Matching in Networks with Bilateral Contracts”
 - 11th ACM Conference on Electronic Commerce [EC’10] (June 9, 2010); Northwestern EECS Economics Group Theory Seminar (April 5, 2010); HBS Negotiation, Organizations, & Markets Group Research Seminar (February 22, 2010); Stanford Market Design Workshop (January 8, 2010); Harvard SEAS Economics and Computer Science Research Seminar (November 19, 2009).
- “Contract Design and Stability in Matching Markets”
 - “Pricing and Contracts” session, AEA Meetings (January 9, 2011); University of Chicago Informal Labor Economics Seminar (April 7, 2010); Guest Lecture, Harvard Economics 2056a: Market Design (November 20, 2009); Harvard Workshop on Research in Behavior in Games and Markets (November 18, 2009).
- “Sticky Content and the Structure of the Web”
 - Workshop on Economics of Networks, Systems, and Computation [NetEcon] (July 7, 2009); Harvard SEAS Economics and Computer Science Research Seminar (April 30, 2009).
- “Dynamic Position Auctions with Consumer Search”
 - 5th Conference on Algorithmic Aspects in Information and Management [AAIM] (June 16, 2009); Harvard SEAS Economics and Computer Science Research Seminar (November 4, 2008).
- “Clubs, Beliefs, and Entrapment”
 - AMS Session on “Behavioral Sciences,” Joint Mathematics Meetings (January 7, 2009).
- “Configurations of Extremal Even Unimodular Lattices”
 - MathFest Student Paper Session (August 1, 2008); Brown Symposium for Undergraduates in the Mathematical Sciences (March 8, 2008); Harvard Undergraduate Research Symposium (November 11, 2006); Harvard College Program for Research in Science and Engineering [PRISE] (August 23, 2006).
- “Leonard Bernstein’s Doodles: Grasping Genius Through Graphology”
 - Guest Lecture, Harvard Freshman Seminar 34m (February 13, 2008); “Leonard Bernstein: Boston to Broadway Symposium,” Harvard (October 14, 2006).

- “Word-painting in Gregorian Chant: A Computer-Assisted Study”
Chant Symposium, Harvard Music 191r: Sources of Gregorian Chant (December 12, 2007).
- “On Universality Properties of Positive-Definite Integral Quadratic Forms”
Harvard Math 99r: Tutorial on Binary Quadratic Forms (January 6, 2006); Intel International Science and Engineering Fair (May 12, 2005) [awarded the top Karl Menger Prize and the Second Place Grand Award in the mathematics category]; Research Science Institute (July 29, 2004).

Plenary Talks and Invited Addresses

- “Fighting Inequality with Markets,” Public Lecture, University of Melbourne (July 25, 2019); Path-breakers Session, Harvard Business School Reunions (June 7, 2019).
- “Good Markets (Really Do) Make Good Neighbors,” First Workshop on Mechanism Design for Social Good [MD4SG] (June 26, 2017).
- “Decisionmaking and Behavioral Economics: From Theory and Experiments to Policy,” Kavli Frontiers of Science U.S. Symposium (November 5, 2015).
- “Measuring PRISE’s Success,” Harvard College Program for Research in Science and Engineering [PRISE] Anniversary Celebration (June 19, 2015).
- “The Future of Economic Design,” University of Chicago Symposium on Technology and Society (May 2, 2015).
- “Generalized Matching Market Design,” Fields Institute Conference on Optimization, Transportation and Equilibrium in Economics (September 15, 2014).
- “Theory, Practice, and Engineering in (Generalized) Matching Market Design,” Harvard Center for Research on Computation and Society [CRCS] Lunch Seminar (November 20, 2013).
- “ N Things I Wish I Understood About (Differential) Privacy,” Simons Foundation Workshop on Applications of Differential Privacy to Economics and the Social Sciences (March 7, 2013).
- “Crisp Printing and Small Type,” ScienceMONTGOMERY Award Ceremony (March 20, 2011).
- “Frontiers of Matching Theory,” Vassar College Mathematics Colloquium (October 12, 2010).
- “Configurations of Extremal Type II Lattices and Codes,” Morgan Prize Lecture, AMS-MAA-SIAM Special Session on “Research in Mathematics by Undergraduates,” Joint Mathematics Meetings (January 15, 2010).

Expository Lectures (selected)

- “Theory, Practice, and Engineering in Market Design,” Distinguished Lecture, Harvard College Program for Research in Science and Engineering [PRISE] (July 10, 2018; June 27, 2017; June 28, 2016; July 22, 2014; July 11, 2013; July 5, 2012).
- “Theory, Practice, and Engineering in Market Design,” Becker Friedman Institute Summer Research Experience for Undergraduates, University of Chicago (June 29, 2012).
- “Microeconomics in 50 Minutes,” MIT Splash (November 21, 2009).
- “How Much Do You Bid?,” Guest Lecture, The Math Circle (May 3, 2009).
- “Why matchmakers?,” Guest Lecture, The Math Circle (December 7, 2008).
- “Matchmaker, Matchmaker, Clear Out My House (an introduction to the theory of matching),” Harvard Mathematics Table (November 21, 2008).
- “ $C = 15$ (new and old results of quadratic form representation theory),” Harvard Mathematics Table (October 20, 2007) [awarded the top Robert Fletcher Rogers Prize].

Discussant Service

- “Platform Design when Sellers Use Pricing Algorithms” by Justin Johnson, Andrew Rhodes, and Matthijs Wildenbeest, “Pricing Algorithms, Competition, and Collusion” session, AEA Meetings (January 6, 2020).

- “Information Cascades and Threshold Implementation” by Lin William Cong and Yizhou Xiao, “Applications of Auctions and Negotiations” session, AEA Meetings (January 6, 2019).
- “Litigating Innovation: Evidence from Securities Class Action Lawsuits” by Elisabeth Kempf and Oliver Spalt, “Corporate Governance: Creditor and Shareholder Monitoring” session, AFA Meetings (January 6, 2019).
- “Designing Advance Market Commitments for New Vaccines” by Michael Kremer, Jonathan Levin, and Christopher M. Snyder, Human Capital and Economic Opportunity Working Group “Development Economics and Market Design” meeting (October 28, 2018).
- “Need vs. Merit: The Large Core of College Admissions Markets” by Avinatan Hassidim, Assaf Romm, and Ran I. Shorrer, “Large Matching Markets” session, AEA Meetings (January 6, 2018).
- “Game Abstractions for Counterfactual Prediction in Online Markets” by J. Mark Hou, Eric Sodomka, and Nicolas E. Stier-Moses, “Frontiers of Economic Theory and Computer Science” conference, Becker Friedman Institute (August 13, 2016).
- “Chinese College Admissions and School Choice Reforms: Theory and Experiments” by Yan Chen and Onur Kesten, “Market Design Experiments” session, AEA Meetings (January 3, 2014).
- “Localization and Colocalization within an Urban Area” by Stephen B. Billings and Erik B. Johnson, NBER Summer Institute Workshop on Urban Economics (July 22, 2013).
- “Dynamic Contracting: An Irrelevance Result” by Péter Esö and Balázs Szentes, Cowles Foundation Conference in Economic Theory (June 3, 2013).
- “Optimal Auction Design and Equilibrium Selection in Sponsored Search Auctions” by Benjamin Edelman and Michael Schwarz, “Designing Online Advertising Markets” session, AEA Meetings (January 5, 2010).

Advising

Graduate Students

| Name | Degree | Year | Institution | Field(s) | Initial Placement |
|-----------------|--------|------|-------------|-------------------------------|-----------------------------------|
| Hanzhe Zhang | PhD | 2015 | Chicago | Applied Theory, Market Design | Michigan State University |
| Jörn Boehnke | PhD | 2015 | Chicago | Industrial Organization | Harvard CMSA (postdoc) |
| Kentarō Tomoeda | PhD | 2016 | Harvard | Theory, Market Design | University of Technology Sydney |
| Benjamin Roth | PhD | 2017 | MIT | Development, Market Design | Harvard Business School [EM Unit] |
| Ging Cee Ng | PhD | 2018 | Chicago | Applied Micro, Public Finance | Analysis Group |
| Neil Thakral | PhD | 2018 | Harvard | Applied Micro, Behavioral | Brown University |
| Carmen Wang | PhD | 2018 | Harvard | Market Design, Experimental | Uber |
| Abraham Holland | PhD | 2019 | Harvard | Development, Market Design | Institute for Defense Analyses |
| Yosub Jung | PhD | 2019 | Harvard | Finance, Entrepreneurship | Analysis Group |
| Hongyao Ma | PhD | 2019 | Harvard | Market Design | Columbia Business School |

Undergraduate Students

| Name | Degree | Year | Institution | Field(s) | Grad Institution | Undergrad Thesis Title |
|-----------------------------------|--|------|-------------|--------------------------|----------------------------------|---|
| Janet Lu ^{NSF, PBK} | AB, <i>summa</i> | 2014 | Harvard | Market Design | Columbia (PhD) | “Cardinal Utility and Incomplete Information in School Choice” |
| Zoë Hitzig ^H | AB, <i>magna</i> | 2016 | Harvard | Evolutionary Game Theory | Cambridge (MPhil); Harvard (PhD) | “The Evolutionary Dynamics of Distributive Justice” |
| David Freed ^{H, Ha, PBK} | AB, <i>magna</i> with highest honors; SM | 2016 | Harvard | Applied Micro | | “Labor Market Bargaining: Theory and Evidence from NBA Free Agency” |

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Undergraduate Students – continued from preceding page

| Name | Degree | Year | Institution | Field(s) | Grad Institution(s) | Undergrad Thesis Title |
|--------------------------------------|--------------------------------------|------|-------------|---|---------------------|---|
| Evan Zimmerman | BA + honors | 2016 | Chicago | Trade | Berkeley (Law) | “Estimating the Welfare Impact of The American–Cuban Embargo” |
| Nathaniel Ver Steeg ^{H,PBK} | AB, <i>summa</i> | 2017 | Harvard | Market Design | Cambridge (MPhil) | “Reducing National Park Crowding: A Market Design Approach” |
| Ravi Jagadeesan ^{W,H,PBK} | AB, <i>summa</i> ; AM | 2018 | Harvard | Theory, Math, Market Design, Public Finance, Macro, Stats | Harvard (PhD) | “Crepan Resolutions of \mathbb{Q} -Factorial Threefolds with Compound Du Val Singularities” |
| Jiafeng Chen ^{H,PBK} | AB, <i>summa</i> ; AM | 2019 | Harvard | Theory, Stats, Market Design | Harvard (PhD) | “Causal Inference in Matching Markets” |
| Shira Li ^H | AB, <i>magna</i> with highest honors | 2019 | Harvard | Market Design, Computer Science, Stats | | “Deep Learning for Two-Sided Matching Markets” |

^W = awarded the Jacob Wendell Scholarship Prize; ^H = awarded the Thomas Temple Hoopes Prize; ^{Ha} = awarded the Seymour E. and Ruth B. Harris Prize; ^{NSF} = awarded an NSF Graduate Research Fellowship; ^{PBK} = Phi Beta Kappa

Economic Design Fellows

| Name | Home Institution(s) | Year | Field(s) | Fellowship Project Title | Next Port of Call |
|---------------------------------------|---------------------|-----------|---|---|-------------------|
| Max Cytrynbaum | Chicago, Cambridge | 2015 | Market Design | “Using Lattice Geometry to Find All Stable Allocations” | MIT (PhD) |
| Nick Jaeger | Woodside Priory | 2015 | Applied Micro | “Policing Domestic Violence: The Impact of Shelter Funding on Police Response” | Harvard (AB) |
| Ravi Jagadeesan ^{W,H,PBK} | Harvard | 2016–2017 | Theory, Math, Market Design | “Equilibria and Strategic Behavior in Large Matching Markets” | Harvard (PhD) |
| Robbie Minton | Chicago | 2016 | Price Theory, Applied Micro | “Assessing Market Signals of Inefficient Patent Enforcement” | Harvard (PhD) |
| Ross Rheingans-Yoo | Harvard | 2016 | Theory, Math, Market Design | “Graph Structure and Equilibrium in Large Matching Markets” | Jane Street |
| Joseph Shayani ^{PBK} | Stanford | 2016 | Theory, Computer Science, Market Design | “Efficiency in ITQ Markets: Overcoming Obstacles of Bycatch and Market Power” | MIT (PhD) |
| Daniel Chavez | Chicago | 2017 | Theory, Applied Micro | “Assignment Problems under Incomplete Information” | |
| Jiafeng Chen ^{PRISE,H,PBK} | Harvard | 2017 | Market Design, Theory, Applied Micro | “Auctions with Entry versus Entry in Auctions” | Harvard (PhD) |
| George Hou ^{PRIMO} | Harvard | 2017 | Applied Micro | “Understanding Non-Practicing Entity Personnel Composition” | |
| Alan Lam | Harvard | 2017 | Entrepreneurship | “Updating Dating: Case analyses on the evolution of modern dating platforms” | PJT |
| Shira Li ^{PRIMO} | Harvard | 2017 | Theory, Market Design, Math, Computer Science | “Strategyproofness or Lack Thereof in Harvard Course Allocation: Theory and Practice” | Goldman |
| Duncan Rheingans-Yoo ^{PRISE} | Harvard | 2017 | Computer Science, Market Design | “Embracing Rideshare Driver Heterogeneity” | |
| Winston Shum | Lawrenceville | 2017 | Entrepreneurship, Sustainability | “Understanding Natural Capital Markets” | Stanford (BA) |

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Economic Design Fellows – continued from preceding page

| Name | Home Institution(s) | Year | Field(s) | Fellowship Project Title | Next Port of Call |
|---------------------------------|------------------------------|-----------|---|---|-------------------|
| Charlie Ughetta | Princeton | 2017 | Entrepreneurship, Finance | “Asset Management Marketplaces” | Jeffries |
| Franklyn Wang ^{RSI} | Thomas Jefferson High School | 2017–2018 | Theory, Market Design, Math, Computer Science | “Optimizing Reserves in School Choice Matching: A Dynamic Programming Approach” | Harvard (AB) |
| Claire Shi ^{PRIMO} | Harvard | 2018–2019 | Behavioral, Market Design | “Structured Mistakes in School Choice” | |
| Michael Zarian ^{PRIMO} | Harvard | 2018 | Entrepreneurship | “Evaluating Marketplace Models” | |
| Gerald Xu | Deerfield | 2018 | Theory, Math, Market Design | “Harmonious Preferences in Matching with Contracts” | |
| Matthew Shum | Lakeside School | 2018 | Theory, Math, Market Design | “How Bossy is Stable Matching?” | Harvard (AB) |
| Aditya Dhar ^{PRIMO} | Harvard | 2019 | Theory | “Enforcing Truth-telling in Combinatorial Common Value Auctions” | |
| Jimmy Lin ^{PRIMO} | Harvard | 2019 | Theory, Computer Science | “Efficient Guarantees in the Multi-Unit Assignment Problem” | |
| Mirac Suzgun | Harvard | 2019 | Computer Science, Applied Micro | “Deep Learning Models for Patent Analysis” | |
| Douglas Yang | Andover | 2019 | Math | “Pattern Predictive Gilbreath Card Trick” | |
| Siye Zhu ^{PRISE} | Harvard | 2019 | Theory, Applied Micro | “Formalizing Land Titling in Cities of Developing Countries” | |

^W = awarded the Jacob Wendell Scholarship Prize; ^H = awarded the Thomas Temple Hoopes Prize;
^{PRISE} = supported by Program for Research in Science and Engineering Fellowship;
^{PRIMO} = supported by Program for Research in Markets and Organizations Fellowship;
^{RSI} = Research Science Institute Summer Scholar; ^{PBK} = Phi Beta Kappa

Refereeing

Economics

- *American Economic Journal: Microeconomics, American Economic Review, Cambridge University Press, Econometrica, Economic Journal, Economic Theory, Economics and Business Letters, Economics Letters, European Journal of Operational Research, European Research Council [ERC], Games and Economic Behavior, International Journal of Game Theory, International Journal of Industrial Organization, Journal of Economic Behavior and Organization, Journal of Economic Geography, Journal of Economic Literature, Journal of Economic Theory, Journal of Finance, Journal of Health Economics, Journal of Law and Economics, Journal of Law, Economics and Organization, Journal of Legal Studies, Journal of Mathematical Economics, Journal of Political Economy, Journal of the European Economic Association, Journal of Urban Economics, Management Science, Mathematical Social Sciences, Mathematics of Operations Research, National Science Foundation [NSF], Operations Research, Papers in Regional Science, Proceedings of the National Academy of Sciences, Public Choice, Quarterly Journal of Economics, RAND Journal of Economics, Review of Economic Studies, Southern Economic Journal, Swiss National Science Foundation [SNSF], Theoretical Economics, U.S.-Israel Binational Science Foundation, Yale University Press.*

Computer Science

- *ACM Conference on Economics and Computation [EC], ACM Conference on Electronic Commerce [EC], Algorithms, Artificial Intelligence, Workshop on Auctions, Market Mechanisms and Their Applications [AMMA], Conference on Web and Internet Economics [WINE], International Workshop on Computational Social Choice [COMSOC], International World Wide Web Conference [WWW], Symposium on*

Discrete Algorithms [SODA], Symposium on Foundations of Computer Science [FOCS], Workshop on the Economics of Networks, Systems, and Computation [NetEcon].

Mathematics

- *American Invitational Math Exam [AIME], American Mathematics Competition [AMC], Applicable Analysis and Discrete Mathematics, Current Science, Discrete Applied Mathematics, Journal of Integer Sequences, Journal of Theoretical Biology.*

Entrepreneurial Advising (selected)

Market Design

- Calibra, Inc. (2018–present).

Miscellaneous

Science Fair Judging

- *Mathematics Grand Awards Co-Chair, International Science and Engineering Fair [ISEF] (2017–present; 2013–2015).*
 - *Mathematics Grand Awards Judge (2012).*
- *Final Round Panelist, Dongrun-Yau Science Award Competition, Tsinghua University (2017).*
- *ISEF Awards Judge, ScienceMONTGOMERY (2011).*