

# Nikhil Agarwal

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## Education

Harvard University, Ph.D., Economics, 2013.

Brandeis University, B.A., Economics and Mathematics, 2008.

## Academic Positions

Massachusetts Institute of Technology, Department of Economics

Professor of Economics, 2022 – Present

Associate Professor of Economics (with tenure), 2019 – 2022

Castle Krob Career Development Assistant Professor of Economics, 2016 – 2019

Assistant Professor of Economics, 2014 – 2016

National Bureau of Economic Research

Research Associate, 2019 – Present

Faculty Research Fellow, 2014 – 2019

Stanford Institute for Economic Policy Research, Visiting Assistant Professor, 2016 – 2017

Yale University, Cowles Foundation, Postdoctoral Associate, 2013 – 2014

## Working Papers

1. "Identification using Revealed Preferences in Linearly Separable Models" (with Pearl Z Li and Paulo Somaini)
2. "Combining Human Expertise with Artificial Intelligence: Experimental Evidence from Radiology" (with Alex Moehring, Pranav Rajpurkar and Tobias Salz).
3. "Demand Analysis under Latent Choice Constraints: An Application to the US Dialysis Market" (with Paulo Somaini).  
Revise and Resubmit, *Review of Economic Studies*

4. “Choices and Outcomes in Assignment Mechanisms: The Allocation of Deceased Donor Kidneys” (with Charles Hodgson and Paulo Somaini).  
Revise and Resubmit, *Econometrica*

## Publications

1. “Heterogeneity and Predictors of the Effects of AI Assistance on Radiologists” (with Feiyang Yu, Alex Moehring, Oishi Banerjee, Tobias Salz, and Pranav Rajpurkar)  
*Nature Medicine*, Mar 2024.
2. “Empirical Models of Non-Transferable Utility Matching” (with Paulo Somaini)  
*Online and Matching-Based Market Design*, book chapter, May 2023.
3. “Market Design” (with Eric Budish)  
*Handbook of Industrial Organization*, volume 5, chapter 10, Dec 2021.
4. “Equilibrium Allocations Under Alternative Waitlist Designs: Evidence from Deceased Donor Kidneys” (with Itai Ashlagi, Michael Rees, Paulo Somaini and Daniel Waldinger)  
*Econometrica*, vol 89 (1), pp 37-76, Jan 2021.  
(subsumes “An Empirical Framework for Sequential Assignment: The Allocation of Deceased Donor Kidneys”)
5. “Revealed Preference Analysis of School Choice Models” (with Paulo Somaini)  
*Annual Review of Economics*, vol 12, pp 471-501, Aug 2020.
6. “Market Failure in Kidney Exchange” (with Eduardo Azevedo, Itai Ashlagi, Clayton Featherstone and Omer Karaduman)  
*American Economic Review*, vol. 109 (11), pp 4026-4070, Nov 2019.
7. “Dynamic Incentives in Waitlist Mechanisms” (with Itai Ashlagi, Paulo Somaini and Daniel Waldinger)  
*American Economic Association, P&P*, vol. 108, pp 341-347, May 2018.
8. “What Matters for the Productivity of Kidney Exchange?” (with Itai Ashlagi, Eduardo Azevedo, Clayton Featherstone and Omer Karaduman)  
*American Economic Association, P&P*, vol. 108, pp 334-340, May 2018.
9. “Demand Analysis using Strategic Reports: An application to a school choice mechanism.” (with Paulo Somaini)  
*Econometrica*, vol. 86 (2), pp 391-444, Mar 2018. (lead article)

10. “The Welfare Effects of Coordinated School Assignment: Evidence from the NYC High School Match.” (with Atila Abdulkadiroglu and Parag Pathak)  
*American Economic Review*, vol. 107 (12), pp 3635-89, Dec 2017. (lead article)
11. “Latent Indices in Assortative Matching Models” (with William Diamond)  
*Quantitative Economics*, vol. 8(3), pp 685-728, Nov 2017. (lead article, winner of QE best paper award)
12. “Policy Analysis in Matching Markets.”  
*American Economic Review, P&P*, vol. 105(5), pp 246-50, May 2017.
13. “An Empirical Model of the Medical Match.”  
*American Economic Review*, vol. 105 (7), pp 1939-78, Jul 2015. (lead article)
14. “Toxic Exposure in America: Estimating Fetal and Infant Health Outcomes from 14 Years of TRI Reporting.” (with Linda Bui and Chanont Banternghansa)  
*Journal of Health Economics*, vol. 29 (4), pp 557-574, Jul, 2010.
15. “Skewed Bidding in Pay Per Action Auctions for Online Advertising.” (with Susan Athey and David Yang)  
*American Economic Review, P&P*, vol. 99(2), pp 441-447, May 2009.

### **Other Papers**

1. “The Trade-off Between Vaccine Prioritization and Speed Depends on Mitigation Measures” (with Andrew Komo, Chetan Patel, Parag Pathak and M Utku Unver).
2. “Universal Stochastic Dominance and Equilibrium Selection in Imitation Dynamics.” (with Zhenyu Lai). *Dormant*. 2012.
3. “Superbridge and Bridge Indices for Knots.” (with Colin Adams, Rachel Allen, Tirasan Khandawit, Alex Simon, Rebecca Winarski and Mary Wootters)  
*Journal of Knot Theory and Its Ramifications*, vol. 30 (2), Apr 2021.

### **Grants and Honors**

Sloan Foundation Research Grant, 2022-17182, 2022-2025  
 J-PAL North America Health Care Delivery Initiative Grant, 2022-2025  
 Kidney Transplant Collaborative Research Grant, 2022-2024  
 National Science Foundation Research Grant, SES-1948714, 2020-2023  
 Sloan Research Fellowship, 2019  
 National Institutes of Health Development Research Grant, R21-DK113626, 2018-2020

MIT Graduate Economics Association Best Advisor Award, 2017-2018  
MIT SHASS Research Fund, 2018  
Best Paper Award, *Quantitative Economics*, 2017  
National Science Foundation Research Grant, SES-1729090, 2017-2021  
Excellence in Refereeing Award, *American Economic Review*, 2016, 2017  
National Institutes of Health, Pilot Grant, P30AG012810, 2016-2017  
MISTI Global Seed Fund – Chile, 2015-2017  
National Science Foundation Research Grant, SES-1427231, 2014-2018  
Review of Economic Studies Tour, 2013  
National Bureau of Economic Research Nonprofit Fellowship, 2011-2012  
Phi Beta Kappa, 2008  
Wien International Scholarship, 2004-2008

### **Invited Lectures**

NBER-Schmidt New Directions in Market Design, 2023  
North American Meetings of the Econometric Society, Plenary Talk, 2023  
International Industrial Organization Conference, Plenary Talk, 2021  
15th European Matching-in-Practice Workshop, Keynote, 2018  
29th Jerusalem Summer School, 2018  
AEA Continuing Education Program, 2018  
NBER Summer Institute Methods Lectures, 2016

### **Teaching and Advising**

Massachusetts Institute of Technology, 2014 – Present  
Microeconomic Theory and Public Policy, Undergraduate  
Advanced Topics in Industrial Organization, Graduate  
Advanced Research and Communication, Graduate  
Industrial Organization I, Graduate  
Market Design, Graduate  
Reading Group, Structural Empirical Methods  
Reading Group, Market Design

Ph.D. student advising with initial placement (\* indicates co-principal advisor):

1. Jie Bai '16, Microsoft Post-doc, followed by Harvard Kennedy School
2. Yusuke Narita '16, Cowles foundation post-doc, followed by Yale University
3. Vivek Bhattacharya\* '17, Northwestern University

4. Alonso Bucarey\* '18, Amazon
5. David Liu\* '18, Brattle Group
6. Daniel Waldinger\* '18, New York University
7. Alan Olivi '19, University College London
8. Anca-Patrica Anghel\* '20, Charles River Associates
9. Mert Demirer\* '20, MSR post-doc, followed by MIT Sloan
10. Sam Grondahl\* '20, Mythical Games
11. Omer Karaduman\* '20, Stanford post-doc, followed by Stanford GSB OIT
12. Alex Olssen\* '20, Wharton
13. Anton Popov\* '20, Cornerstone Research
14. Will Rafey\* '20, Berkeley post-doc, followed by UCLA
15. Allan Hsiao\* '21, BFI post-doc, followed by Princeton
16. Clemence Idoux '22, Wharton
17. Joseph Shayani\* '23, Facebook
18. Dan Aronoff\* '23, MIT Digital Currency Initiative
19. Margaret Yellen\* '23 (JD-PhD), FTC
20. Viola Corradini '24, Columbia post-doc, followed by University of Wisconsin
21. Adam Harris '24, Cornell University
22. Alex Moehring '24 (Sloan PhD), Purdue University
23. Anna Russo\* '24, Harvard Society of Fellows post-doc, followed by Harvard

Undergraduate student and pre-doc placement (with placement year):

1. David Zhang '16, Harvard Economics
2. Abigail Ostriker '18, MIT Economics
3. Spencer Pantoja '20, Stanford Economics
4. Lingjun Xia '20, Harvard Statistics, Berkeley Economics (declined)
5. Andrew Komo '22, MIT Economics
6. Manasi Kutwal '23, Michigan Business Economics
7. Yucheng Shang '23, MIT Economics

Yale University, Graduate Industrial Organizations, 2013.

### **Professional Activities**

Co-director: MIT Blueprint Labs

Affiliate: J-PAL North America

Associate Editor: AEJ: Microeconomics

Referee: American Economic Review, AEJ: Applied Economics, AEJ: Microeconomics, Econometrica, Journal of Economic Theory, Journal of Industrial Economics, International Economic Review, Journal of Political Economy, Journal of Public Economics, Quarterly Journal of Economics, Review of Economic Studies.

Program Committee: Econometric Society Meetings (2017, 2020, 2023), EC'16, MATCH-UP (2017), NBER IO Summer Institute Meetings (2019), NBER Market Design (2023)

Organizer: 2022 Dynamic Structural Econometrics Summer School in Market Design

Reviewer: National Science Foundation

**Seminars and Conferences** (includes planned)

*2024*: ASSA Meetings, CEPR, Columbia University, Northwestern University, University of Nottingham, University of Virginia

*2023*: AI & Big Data in Finance Research Forum, AI for good, Amazon, ASSA Meetings, Boston College, Econometric Society Meetings – Plenary Talk, IIOC, Johns Hopkins University, Harvard University, HEC Paris AI and Entrepreneurship, Keio University, NBER Digitization, New Directions in Market Design, Chicago Machine Learning Summer School, Utah WBEC, University of Tokyo, Virtual Quant Marketing Seminar

*2022*: ASSA Meetings, Chicago Harris, Cornell University, DSE 2022, Sciences Po, Stanford University, University of Chicago, University of Toronto, Wharton

*2021*: CREST - Ecole polytechnique, INFORMS Auctions and Market Design, National Academy of Sciences Engineering and Medicine, Michigan State University, MIT/Stanford Organ Allocation Conference, Penn State University, Queens University, University of California at Berkeley, University of Pennsylvania

*2020*: Lund University, NBER Health Care Meetings, Stockholm University, University of Gothenberg

*2019*: Chicago Booth, INFORMS, Southern Economic Association Conference, University of British Columbia, University of Maryland

*2018:* ASSA Meetings, Carnegie Mellon University, Cowles Summer Conference, Conference on Structural Dynamics (University of Copenhagen), Harvard University, NBER Health Care Meetings, Rice University, Toulouse School of Economics, University of Bologna

*2017:* ASSA Meetings, Brandeis University, CRATE Conference, EARIE Conference, Princeton University, Santa Clara University, Microsoft Research New England, New York University, Pennsylvania State University, Stanford University, University of California at Berkeley, University of California at Davis

*2016:* Arizona State University, ASSA Meetings, Stanford University, University of California at Los Angeles

*2015:* ASSA Meetings, Boston College, Dartmouth Winter Conference, Department of Justice, Harvard, Johns Hopkins University, MIT, NBER Industrial Organizations Meetings, Ohio State University, Pontificia Universidad Católica de Chile, University of Michigan, University of Maryland, University of Pennsylvania, University of Southern California, Universidad Diego Portales, CRES Microeconomics Conference

*2014:* Boston University, Cowles Summer Conference, Duke University, Harvard University, Microsoft Research, Northwestern University, University of Arizona, University of Calgary, University of Pennsylvania (Wharton), University of Texas at Austin, University of Toronto, University of Wisconsin (Madison), NBER Market Design Meetings, Yale University

*2013:* Brown University, Central European University, Chicago Booth, Columbia University, Geothe Universität, London School of Economics, Massachusetts Institute of Technology, Microsoft Research, NBER Market Design Meetings, Princeton University, Stanford Econ/GSB Applied Microeconomics, University of Chicago, University of Edinburgh, University of Illinois (Urbana-Champaign), University of Minnesota, Yale University