

**Jeremy T. Fox**

November 2017

Department of Economics MS-22

Rice University

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**Education**

PhD, MA Stanford University, Economics, 2003

BA, Rice University, Economics, Political Science and Statistics, 1998

**Employment**

Rice University, Department of Economics

Associate Professor with tenure, 2015–present

University of Michigan, Department of Economics

Associate Professor with tenure, 2013–2015

Assistant Professor, 2010–2013

University of Chicago, Department of Economics

Assistant Professor, 2003–2010

**Fields (in descending order)**

Industrial Organization

Econometrics

Labor Economics

**Affiliations and Editorial Positions**

National Bureau of Economic Research (NBER), Research Associate, 2008–present

*Journal of Applied Econometrics*, Associate Editor, 2018–present

*Journal of Econometrics*, Associate Editor, 2012–present

*International Journal of Industrial Organization*, Associate Editor, 2006–2013

*Journal of Industrial Economics*, Associate Editor, 2013–2015

*Quantitative Marketing and Economics*, Associate Editor, 2010–2015

## **Major Administrative Positions**

Associate Chair for Junior Recruiting at Michigan, 2014–2015

Executive Committee at Michigan, 2011–2012, 2014–2015

College Computer Committee at Michigan, 2013–2015

University-wide Computer Committee at Michigan, 2014–2015

## **Published Papers**

Estimating Matching Games with Transfers, forthcoming at *Quantitative Economics*

Unobserved Heterogeneity in Matching Games, forthcoming at *Journal of Political Economy*. (with Chenyu Yang and David Hsu)

Specifying a Structural Matching Game of Trading Networks with Transferable Utility, *American Economic Review: Papers & Proceedings*, 2017, 107(5), 256–260.

A Note on Identification of Discrete Choice Models for Bundles and Binary Games, *Quantitative Economics*, 2017, 8, 1021–1036.

A Simple Nonparametric Approach to Estimating the Distribution of Random Coefficients in Structural Models, *Journal of Econometrics*, 2016, 195, 236–254. (with Kyoo il Kim and Chenyu Yang)

Nonparametric Identification and Estimation of Random Coefficients in Multinomial Choice Models, *RAND Journal of Economics*, 2016, 47(1), 118–139. (with Amit Gandhi)

Reconfigurable Radios: A Possible Solution to Reduce Entry Costs in Wireless Phones, *Proceedings of the IEEE*, 2015, 103(3), 438–451. (with Mina Rais-Zadeh, Yogesh Gianchandani and David Wentzloff)

Measuring the Efficiency of an FCC Spectrum Auction, *American Economic Journal: Microeconomics*, 2013, 5(1), 100–146. (with Patrick Bajari)

Improving the Numerical Performance of Static and Dynamic Aggregate Discrete Choice Random Coefficients Demand Estimation, *Econometrica*, 2012, 80(5), 2231–2267. (with Jean-Pierre Dubé and Che-Lin Su)

The Random Coefficients Logit Model Is Identified, *Journal of Econometrics*, 2012, February, 166(2), 204–212. (with Kyoo il Kim, Stephen Ryan and Patrick Bajari)

A Simple Estimator for the Distribution of Random Coefficients, *Quantitative Economics*, 2011, November, 2(3), 381–418. (with Kyoo il Kim, Stephen Ryan and Patrick Bajari)

Does Input Quality Drive Measured Differences in Firm Productivity? *International Economic Review*, 2011, November, 52(4), 961–989. (lead article) (with Valérie Smeets)

Identification in Matching Games, *Quantitative Economics*, 2010, November, 1(2), 203–254 (lead article).

Estimating the Employer Switching Costs and Wage Responses of Forward-Looking Engineers, *Journal of Labor Economics*, 2010, April, 28(2), 357–411.

Firm Size Wage Gaps, Job Responsibility and Hierarchical Matching, *Journal of Labor Economics*, 2009, January, 27(1), 83–126.

Matching models: empirics, *New Palgrave Dictionary of Economics*, 2009.

Evaluating Wireless Consolidation Using Semiparametric Demand Estimation. *Quantitative Marketing and Economics*, 2008, 6(4), 299–338. (lead article) (with Patrick Bajari and Stephen Ryan)

Linear Regression Estimation of Discrete Choice Models with Nonparametric Distributions of Random Coefficients, *American Economic Review P&P*, 2007, 97(2), 459–463. (with Patrick Bajari and Stephen Ryan)

Semiparametric Estimation of Multinomial Discrete Choice Models Using a Subset of Choices, *RAND Journal of Economics*, 2007, 38(4), 1002–1019.

Recent Advances in Structural Econometric Modeling: Dynamics, Product Positioning and Entry, *Marketing Letters*, 2005, 16(3), 209–224. (with Jean-Pierre Dubé, K. Sudhir, and others)

### **Working Papers**

Identifying Demand with Multidimensional Unobservables: A Random Functions Approach (with Amit Gandhi)

An Empirical, Repeated Matching Game Applied to Market Thickness and Switching Consolidation in the Wireless Phone Industry (NET Institute Working Paper 05-13)

Full Identification in the Generalized Selection Model (with Amit Gandhi)

Mobile Phone Mergers and Market Shares Short Term Losses and Long Term Gains (with Hector Perez-Saiz, NET Institute Working Paper 06-16)

Three Empirical Checks for the Empirical Validity of Olley and Pakes Productivity Estimators (with Valérie Smeets)

Unobserved Heterogeneity in Matching Games with an Application to Venture Capital (with David Hsu and Chenyu Yang)

Using Wireless Consolidation to Distinguish Heterogeneous Technologies and Scale Economies (with Hector Perez-Saiz)

### **Computer Software (available on my website)**

A Toolkit for Matching Maximum Score Estimation and Point and Set Identified Subsampling Inference (with David Santiago)

Code for the Fox, Kim, Ryan & Bajari random coefficients estimator

Code for the Dubé, Fox & Su MPEC estimator for the BLP model

## **Policy Comments**

Comment on FCC Public Notice DA 06-238 (proposed rules for Advanced Wireless Services auction) (with Patrick Bajari)

## **Honors & Grants**

Center for Econometrics and Microdata Practice, Jinan University (Guangzhou, China), Fellow

National Science Foundation grant SES-1730636, "Operationalizing Pseudo-Market Mechanisms" (with Hulya Eraslan and Yinghua He), 2017-2020.

W. Glenn Campbell and Rita Ricardo-Campbell National Fellow and the John Stauffer National Fellow at the Hoover Institution, 2013-2014

Michigan Institute for Teaching and Research in Economics (MITRE) faculty research grant

National Science Foundation grant SES-1247565, "MEMS Reconfigurable Radios: System Development and Entry Costs in Wireless Phones" (with Mina Rais-Zadeh, David Wentzloff, Yogesh B. Gianchandani), 2012-2015.

Economics of Information and Communications Technologies workshop, keynote speaker (Portugal, 2013)

Excellence in Refereeing Award 2012, *American Economic Review*

National Science Foundation grant SES-09022046, "Nonparametric Identification and Estimation of Distributions of Unobserved Heterogeneity in Economic Choice Models using Mixtures" (with Amit Gandhi), 2009-2011.

National Science Foundation grant SES-0721036 "Estimating Network and Matching Games of Interfirm Relationships", 2007-2010.

Stigler Center for the Study of the Economy and the State, research support, 2007-2008 and 2008-2009

Social Science Divisional Research Grant, University of Chicago, 2004, 2005, 2006, 2007.

Olin Junior Faculty Fellowship, University of Chicago, 2004-2005 and 2005-2007

NET Institute Summer Grant, 2004, 2005 & 2006

Landau Prize for the Best Working Paper, Stanford Institute for Economic Policy Research, 2003

Kapnick Foundation Dissertation Fellow, Stanford Institute for Economic Policy Research, 2002-2003

## **Teaching**

PhD Industrial Organization (Chicago, Michigan, Rice)

Undergraduate Industrial Organization (Rice)

Undergraduate Econometrics (Chicago, Michigan, Rice)

Undergraduate Regulation & Market Design (Michigan)

PhD Computational Economics (Michigan)

Graduate Theory and Empirics of Matching Games (mini-course at Tel Aviv University)

Graduate Estimation, Identification and Computation of Unobserved Agent Heterogeneity Distributions in Economic Choice Models (mini-course at INSEE-CREST and ENSAE in Paris)

### **Conference Organizing / Scientific Committees**

Summer Institute in Competitive Strategy conference on Big Data and Marketing, Berkeley Hass, Summer 2015

Economics of Information and Communications Technologies, Portugal, 2012, 2013, 2014, 2015

Stanford Institute for Theoretical Economics, Theory Based Empirical Work, Summer 2013

Econometric Society, North American Meeting, Summer 2013

MITRE Auctions and Matching, Michigan, Fall 2012

Milton Friedman Institute, Chicago, Matching and Price Theory Conference, 2011

Industrial Organization Society, ASSA Meetings, 2011, Two Sessions

Quantitative Marketing and Economics, UCLA, 2010

Institute for Computational Economics, Chicago, Micro Conference Organizer, 2008, 2009

### **Dissertation Advising (PhD chair or committee membership)**

Peter Volkmar

Dept. of Economics, Rice University, 2019

Benjamin Glass

Dept. of Economics, University of Michigan, 2018

Michael Shashoua

Dept. of Economics, Rice University, 2018

Adam Dearing

Dept. of Economics, University of Michigan, 2017

*Pricing Policy and Welfare in Retail Chains: A Case for Vertical Incentives*

Initial placement: Ohio State University, Department of Economics

Chenyu Yang (Co-Chair)

Dept. of Economics, University of Michigan, 2016

*Vertical Integration and Innovation in the Chipset and Smartphone Industry*

Initial placement: University of Rochester, Simon School of Business (economics)

Reid Dorsey-Palmateer

Dept. of Economics, University of Michigan, 2015

*The Effects of Wind Power Intermittency on Wind Power and Emissions*  
Initial placement: Western Washington University, Department of Economics

Evan Herrnstadt

Dept. of Economics, University of Michigan, 2015  
*Conservation Versus Competition? Environmental Objectives in Government Contracting*

Initial placement: Harvard University, post-doc

Current placement: Compass Lexecon

Kuncheng Zheng

Ross School of Business, University of Michigan, 2015  
*Bank Equity Capital and Risk-taking Behavior: The Effect of Competition*

Initial placement: Northeastern University, Finance

Ryan Monarch

Dept. of Economics, University of Michigan, 2014  
*"It's Not You, It's Me": Breakups in U.S.-China Trade Relationships*

Initial placement: Federal Reserve Board

Marek Zapletal

Ross School of Business, University of Michigan, 2014  
*Three Essays on Entrepreneurship and Regulation*

Initial placement: Brattle Group

Yu Zhou

Dept. of Economics, University of Michigan, 2014  
*Identification and Estimation of Entry Games Under Symmetry of Unobservables*

Initial placement: Fudan University, Department of Economics

Andrew McCallum

Dept. of Economics, University of Michigan, 2013  
*The Structure and Evolution of Entry Costs in Trade*

Initial placement: Federal Reserve Board

Matthew Backus

Dept. of Economics, University of Michigan, 2012  
*Why Is Competition Correlated with Productivity?*

Initial placement: Cornell, Department of Economics (eBay postdoc)

Current institution: Columbia Business School

Di Li

Ross School of Business, University of Michigan, 2012  
*Managerial Incentive and Takeovers: A Structural Investigation*

Initial placement: Georgia State University, finance

Adam Clemens (Co-Chair)

Dept. of Economics, University of Chicago, 2010  
*Essays on worker compensation*

Initial placement: CNA

Hector Perez-Saiz (Co-Chair)

Dept. of Economics, University of Chicago, 2010  
*Building new plants or entering by acquisition? Estimation of an entry model for the U.S. cement industry*  
Initial placement: Bank of Canada

Oktay Akkus  
Dept. of Economics, University of Chicago, 2009  
*Essays on endogenous matching applications*  
Initial placement: Bates White

Gustaf Bruze  
Dept. of Economics, University of Chicago, 2009  
*Essays on the causes and consequences of marital sorting on schooling*  
Initial placement: Aarhus University

Mitsukuni Nishida (Chair)  
Dept. of Economics, University of Chicago, 2009  
*Estimating a model of strategic network choice: The convenience-store industry in Okinawa*  
Initial placement: Johns Hopkins University, Dept. of Economics (Visiting Assistant Professor)  
Current institution: Johns Hopkins University, Carey Business School

Heleno Pioner  
Dept. of Economics, University of Chicago, 2008  
*Semiparametric identification of multidimensional screening models*  
Initial placement: Fundação Getúlio Vargas, Dept. of Economics, Brazil  
Current institution: AB InBev

Amit Gandhi  
Booth School of Business, University of Chicago, 2007  
*Rational expectations at the racetrack: Testing expected utility theory*  
Initial placement: Univ. of Wisconsin, Dept. of Economics

Hongju Liu  
Booth School of Business, University of Chicago, 2007  
*Essays on complementarities in technology markets*  
Initial placement: Univ. of Connecticut, Marketing

Yukichi Mano  
Dept. of Economics, University of Chicago, 2007  
*Essays on cluster-based industrial development*  
Initial placement: National Graduate Institute for Policy Studies, Japan  
Current institution: Hitotsubashi University, Japan

Alexander Popov  
Dept. of Economics, University of Chicago, 2007  
*Financial markets development, allocation of capital to ideas, and firm-sponsored training*  
Initial placement: European Central Bank

Rachel Soloveichik (Chair)

Booth School of Business, University of Chicago, 2007  
*Family transfers in rural Mexico: An application to risk sharing and labor supply elasticity*

Initial placement: Bureau of Economic Analysis

Avraham Stoler

Dept. of Economics, University of Chicago, 2005

*Mortality risk and economic behavior*

Initial placement: Brattle Group

Current placement: DePaul University, Dept. of Economics

### **Visits (1 week or more)**

Aarhus University, two weeks, 2003

Booth Graduate School of Business, University of Chicago, marketing group, 2 weeks, 2016

Bank of Canada, Financial Stability Department, 1 week, 2010

Fudan University, Shanghai, 1 week, 2016

INSEE-CREST (Paris), Industrial Organization Section, 1 month, 2008

Microsoft Research New England, 1 week, 2017

Northwestern University, Department of Economics, Center for the Study of Industrial Organization, 2 quarters, 2009

Princeton University, Department of Economics, 1 week, 2016

Sciences Po, Department of Economics, 1 week, 2014

Stanford University, Hoover Institution, 1 year, 2013–2014

Tel Aviv University, Department of Economics, 1 month, 2005

UCL, Department of Economics, 1 week, 2011

Washington University in St Louis, Olin, 1 week, 2013

Yale University, Cowles Foundation, 1 week, 2011

### **Research Presentations**

2001–2002: Aarhus School of Business, Incentives & Beyond / Stockholm School, DILEED / Wellington

2002–2003: Boston University, Chicago, Irvine, Northwestern, U. Pennsylvania, SED, Texas

2003–2004: Chicago, Choice Symposium, Dale Mortensen conference, IIOC, SITE

2004–2005: Chicago (Econ, Marketing), Northwestern (Econometrics, IO), SED, Stanford, Washington Univ. in SL

2005–2006: Bar-Ilan, Carlos III, Chicago (GSB applied micro), Cornell, ES World Congress, Haifa, IIOC, Illinois, Minnesota, MIT, Montreal / CIRANO, New York FRB,



North Carolina, Pittsburgh, Tel Aviv, Toronto, Toulouse, UCLA, Vanderbilt, Virginia, Washington Univ. in SL

2006–2007: ASSA, Chicago, Duke, Harvard, Maryland, Michigan, NBER IO, NYU, Ohio State, Penn State, SITE / Stanford, Wisconsin

2007–2008: Caltech, Clemson, Columbia, Cowles / Yale, FTC, Iowa, Illinois at Chicago, IIOC, Johns Hopkins, Labor Market Dynamics, Northwestern, NYU, Paris I, Penn State, UCL

2008–2009: Aarhus School of Business, Bath University / Network of Industrial Economists, Boston University, Brown, Brown demand conference, Caltech, Chicago (econometrics, micro lunch), EC2 Structural Microeconometrics, FTC, Georgetown, HKUST, Institute for Computational Economics, LSE, Maryland, Michigan, Michigan State, Princeton / BYU labor conference, NBER IO, Northwestern, Portuguese Competition Authority, Quantitative Marketing and Economics, Rochester, Santa Clara, Society of Economic Dynamics, Stanford, Stanford GSB, Toulouse, UK Competition Commission, USC, Yale

2009–2010: American Economic Association, Arizona, Boston College, Brown, Chicago Fed, Clemson, Columbia, DePaul, Harvard / MIT, HEC Montreal, Illinois, Indiana, Iowa, Johns Hopkins, Michigan, Penn State, Pittsburgh, Rochester, Texas, UCLA, UCSD, UT Dallas, WashU Olin, Wharton, Yeshiva

2010–2011: American Economic Association, Bank of Canada, Boston College, Canadian Economic Association, Center for the Economic Analysis of Risk, Chicago/MFI matching conference, EC2 Identification, Frontiers of Productivity Estimation (Copenhagen), Industrial Organization Society, Irvine, Networks Workshop (Michigan), Princeton, Workshop on Buyer-Seller Networks (Warwick), Yale

2011–2012 Carlo Alberto (Turin), Central European University, Chicago, Chicago/MFI matching conference, Ecole Polytechnique (Paris), Einaudi (Rome), New Directions in Applied Microeconomics (Florence), Toronto, UCL

2012–2013 Economics of Information and Communications Technologies (Portugal), Northwestern, NYU, Penn, Penn State, Purdue, Texas, UCL conference on games, Wisconsin

2013–2014 Berkeley (economics), Berkeley (marketing), Berkeley (Haas economics), Boston College, Boston College demand conference, British Columbia (UBC), Caltech, Davis, Irvine, McMaster, San Diego (UCSD), Sciences Po, Simon Fraser, Stanford (econometrics), Stanford (GSB faculty lunch), Stanford (IO), UCLA, USC

2014–2015 Berkeley (marketing, SICS), Calgary conference, Duke Fuqua Strategy, Hong University of Science and Technology, ITAM, Johns Hopkins, Maryland, National University of Singapore, Rice, Texas, Yale conference on marketing/IO

2015–2016 Chinese University of Hong Kong, Chicago, Fudan, Illinois, Macau, Mannheim, New York University, Peking, Ohio State, Shanghai University of Finance

and Economics, Toulouse, University of Southern California INET, Vanderbilt, Zhejiang, Zurich

2016–2017 American Economic Association, Boston College demand conference, Chicago Booth, Cleveland Federal Reserve, Cornell, Econometric Society Winter Meetings, Emory, Indiana, Michigan State, Missouri, Pittsburgh, Princeton, Syracuse, Texas A&M, USC

2017–2018 Bilkent, Columbia, CREST (Paris), University of Cyprus, Hitotsubashi, International Association for Applied Econometrics, University College London, University of Michigan, Microsoft Research New England, University of Nagoya, National Graduate Institute for Policy Studies (Tokyo), University of Osaka, University of Tokyo

**Refereeing (most multiple times)**

*American Economic Journal: Applied Economics*

*American Economic Journal: Macroeconomics*

*American Economic Journal: Microeconomics*

*American Economic Review*

*Canadian Journal of Economics*

*Econometric Theory*

*Econometrica*

*Economic Inquiry*

*Economic Journal*

*Economica*

*European Economic Review*

*Industrial Relations*

*Information Economics and Policy*

*International Economic Review*

*International Journal of Industrial Organization*

*IZA World of Labor*

*Journal of the American Statistical Association*

*Journal of Applied Econometrics*

*Journal of Business and Economic Statistics*

*Journal of Econometrics*

*Journal of Economic Behavior and Organization*

*Journal of Economic Literature*

*Journal of Economics & Management Strategy*

*Journal of Human Resources*

*Journal of Industrial Economics*

*Journal of Industry Competition and Trade*

*Journal of Institutional and Theoretical Economics*

*Journal of Labor Economics*

*Journal of Law and Economics*

*Journal of Marketing Research*

*Journal of Mathematical Economics*

*Journal of Political Economy*

*Labour Economics*

*Management Science*

*Marketing Science*

*Mathematics of Operations Research*

*National Research Council*

*National Science Foundation*  
*Oxford Bulletin of Economics and Statistics*  
*Production and Operations Management*  
*Quantitative Economics*  
*Quantitative Marketing and Economics*  
*Quarterly Journal of Economics*  
*RAND Journal of Economics*  
*Review of Economic Dynamics*  
*Review of Economics and Statistics*  
*Review of Economic Studies*  
*Strategic Management Journal*  
*Theoretical Economics*