

## Matthew Shou-Chung Shum

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### PERSONAL

Birthdate: February 21, 1970 (Houston, Texas, USA)  
Married, four children

### EDUCATION AND EMPLOYMENT

Stanford University, Economics, Ph.D 1998 (Supervisor: Frank A. Wolak)  
Union Bank of Switzerland (Zürich, Switzerland), Research analyst, 1992–1993  
Columbia University, Economics, B.A. 1992

### ACADEMIC APPOINTMENTS

*Current position:* California Institute of Technology, Division of Humanities and Social Sciences, J. Stanley Johnson Professor of Economics, 2016–; Professor of Economics, 2008–2016.

*Previous positions:* Johns Hopkins University, Department of Economics, Professor, 2008; Associate professor (with tenure), 2004–2008; Assistant professor 2000–2004.

University of Toronto, Department of Economics, Assistant professor, 1998–2000.

### RESEARCH

#### **Publications:**

1. “Can Words Get in the Way? The Effect of Deliberation in Collective Decision-Making” (with Matias Iaryczower and Xiaoxia Shi). Forthcoming, *Journal of Political Economy*.
2. “A Parimutuel-like Mechanism for Information Aggregation: A Field Test Inside Intel” (with Ben Gillen and Charles Plott). Forthcoming, *Journal of Political Economy*.
3. “Bounding Causal Effects in an Ecological Inference Problem: the Chilean Electoral Reform” (with Alejandro Corvalan, Emerson Melo and Robert Sherman). Forthcoming, *Political Science Research and Methods*.
4. “Loss Aversion in Post-Sale Purchases of Consumer Products and their Substitutes” (with Colin Camerer and Debajyoti Ray). *American Economic Review: Papers and Proceedings*, 105: 376–380 (May 2015).

5. “Research Opportunities in Emerging Markets: an Inter-disciplinary Perspective from Marketing, Economics, and Psychology” (with K. Sudhir, J. Priester, D. Atkin, A. Foster, G. Iyer, G. Jin, D. Keniston, S. Kitayama, M. Mobarak, Y. Qian, I. Tewari, W. Wood). *Customer Needs and Solutions*, 2: 264-276 (Dec. 2015).
6. “Horizontal Mergers of Online Firms: Structural Estimation and Competitive Effects” (with Yonghong An, Mike Baye, Yingyao Hu, and John Morgan). Forthcoming, *Journal of Applied Econometrics*.
7. “Duality in Dynamic Discrete Choice Models” (with Khai Chiong and Alfred Galichon). *Quantitative Economics*, 7: 83-115 (March 2016).
8. “A Simple Estimator for Dynamic Models with Serially-Correlated Unobservables” (with Yingyao Hu, Wei Tan, and Ruli Xiao). Forthcoming, *Journal of Econometric Methods*.
9. “Estimation and Inference in an Ecological Inference Model” (with Yanqin Fan and Robert Sherman). *Journal of Econometric Methods*, 5: 17-48 (January 2016).
10. “Efficiency and Bargaining Power in the Interbank Loan Market” (with Jason Allen, James Chapman, and Federico Echenique). *International Economic Review*, 57: 691-716 (May 2016).
11. “‘Cyber-shilling’ in Online Automobile Auctions: Evidence from a Field Experiment” (with David Grether and David Porter). *American Economic Journal: Microeconomics*, 7: 85-103 (August 2015).
12. “Demand Estimation with High-dimensional Product Characteristics” (with Ben Gillen and Roger Moon). *Advances in Econometrics (Vol. 34): Bayesian Model Comparison*, Emerald Publishing, 2015.
13. “Identifying Treatment Effects under Data Combination” (with Yanqin Fan and Bob Sherman). *Econometrica*, 82:811-822 (March 2014).
14. “Simple Two-Stage Inference for a Class of Partially Identified Models” (with Xiaoxia Shi). *Econometric Theory*, 31: 493-520 (June 2015).
15. “Superstition and ‘Lucky’ Apartments: Evidence from Transaction-Level Data” (with Wei Sun and Guangliang Ye). *Journal of Comparative Economics*, 42: 109-117 (February 2014).
16. “Nonparametric Learning Rules from Bandit Experiments: the Eyes have It!” (with Yingyao Hu and Yutaka Kayaba). *Games and Economic Behavior*, 81:215-231 (September 2013).
17. “Partial Identification in Matching Models” (with Federico Echenique and SangMok Lee). *Advances in Econometrics (Vol. 31): Structural Econometric Models*, Emerald Publishing, 2013.
18. “Identifying Dynamic Games with Serially-Correlated Unobservables” (with Yingyao Hu). *Advances in Econometrics (Vol. 31): Structural Econometric Models*, Emerald Publishing, 2013.
19. “When do Secondary Markets Harm Firms?” (with Jiawei Chen and Susanna Esteban). *American Economic Review*, 103: 2911-2934 (December 2013).
20. “Nonparametric Identification of Auction Models with Non-Separable Unobserved Hetero-

geneity” (with Yingyao Hu and David McAdams). *Journal of Econometrics*, 174: 186-193 (June 2013).

21. “To Elect or to Appoint? Bias, Information, and Responsiveness of Bureaucrats and Politicians” (with Matias Iaryczower and Garrett Lewis, Caltech). *Journal of Public Economics*, Vol. 97, pp. 230-244 (2013).

22. “The Revealed Preference Theory of Stable and Extremal Stable Matchings” (with Federico Echenique, SangMok Lee, and Bumin Yenmez). *Econometrica*, Vol. 81, pp. 153-171 (2013).

23. “Nonparametric Identification of Dynamic Models with Unobserved State Variables” (with Yingyao Hu). *Journal of Econometrics*, Vol. 171, pp. 32-44 (2012).

24. “The Value of Information in the Court: Get it Right, Keep it Tight” (with Matias Iaryczower, Princeton). *American Economic Review*, Vol. 102, pp. 202-237 (2012).

25. “The Money Pump as a Measure of Revealed Preference Violations” (with Federico Echenique and SangMok Lee). *Journal of Political Economy*, Vol. 119, pp. 1201-1223 (2011).

26. “Estimating first-price auctions with an unknown number of bidders: A misclassification approach” (with Yonghong An and Yingyao Hu). *Journal of Econometrics*, Vol. 157, pp. 328-341 (2010).

27. “Do Sales Tax Credits Stimulate the Automobile Market?” (with J. Chen and S. Esteban). *International Journal of Industrial Organization*, Vol. 28, pp. 397-402 (2010).

28. “Estimating a Tournament Model of Intra-firm Wage Differentials” (with Jiawei Chen, UC-Irvine). *Journal of Econometrics*, Vol. 155, pp. 39-55 (2010).

29. “Pairwise-Difference Estimation of a Dynamic Optimization Model” (with H. Hong). *Review of Economic Studies*, Vol. 77, pp. 273-304 (2010).

30. “Do Mergers Improve Information? Evidence from the Loan Market” (with F. Panetta and F. Schivardi). *Journal of Money, Credit, and Banking*, Vol. 41, pp. 673-709 (2009).

31. “Estimation Biases of Omitting Durability” (with Jiawei Chen and Susanna Esteban). *Journal of Econometrics*, Vol. 147, pp. 247-257 (2008).

32. “Durable Goods Oligopoly with Secondary Markets: the Case of Automobiles,” with S. Esteban. *RAND Journal of Economics*, Vol. 38, pp. 332-354 (2007).

33. “Likelihood Ratio Tests between Parametric and Moment Condition Models” (with X. Chen and H. Hong). *Journal of Econometrics*, 141: 109-140 (2007).

34. “Detecting Information Pooling: Analysts’ Forecasts After Brokerage Firm Mergers” (with Serena Ng). *The B.E. Journal of Economic Analysis & Policy*, Volume 7, Issue 1, Article 60 (2007).

35. “Nonlinear Pricing with Self-Control Preferences” (with S. Esteban and E. Miyagawa). *Journal of Economic Theory*, 135: 206-338 (July 2007).

36. “Monopoly Quality Degradation in Cable Television” (with G. Crawford). *Journal of Law and Economics*, 50: 181-219 (February 2007).

37. "Using Price Distributions to Estimate Search Costs" (with H. Hong). *RAND Journal of Economics*, 37: 257–275 (Summer 2006).
38. "Learning and Experimentation in Pharmaceutical Demand," with G. Crawford. *Econometrica*, 73: 1137–1174 (July 2005).
39. "An Empirical Model of Learning and Spillovers in New Drug Entry," with A. Coscelli. *Journal of Econometrics*, 122: 213–246 (October 2004).
40. "The Effects of Advertising in Brand Loyal Markets: the Case of Breakfast Cereals." *Journal of Economics and Management Strategy*, 13: 241–272 (Summer 2004).
41. "Rates of Information Aggregation in Common Value Auctions," with H. Hong. *Journal of Economic Theory*, 116: 1–40 (May 2004).
42. "Empirical Likelihood-Based Model Selection Criteria for Moment Condition Models," with H. Hong and B. Preston. *Econometric Theory*, 19:923-943 (December 2003).
43. "Econometric Models of Asymmetric Ascending Auctions," with H. Hong, *Journal of Econometrics*, 112: 327–358 (February 2003).
44. "Increasing Competition and the Winner's Curse: Evidence from Procurement," with H. Hong, *Review of Economic Studies*, 69: 871–898 (October 2002).
45. "Structural Estimation of Auction Models," with H. Hong, 1999. In *Game Practice: Contributions from Applied Game Theory*, ed. Jurado, Tijs, Patrone. Kluwer Publishing Co.

#### **Working Papers:**

1. "Strategic Manipulation in Peer Performance Evaluation: Evidence from the Field" (with Yifei Huang and Xi Wu)
2. "Random Projection Estimation of Discrete-Choice Models with Large Choice Sets" (with Khai Chiong)
3. "Semiparametric Estimation of Dynamic Discrete Choice Models" (with Nick Buchholz and Haiqing Xu)
4. "Yoghurts choose Consumers? Identification of Discrete-Choice Models via Two-Sided Matching" (with Odran Bonnet and Alfred Galichon)
5. "Public vs. Secret Reserve Prices in Auctions: Evidence from Combining Field and Lab Experiments" (with D. Grether and D. Porter)
6. "The Welfare Effects of Endogenous Quality Choice in Cable Television Markets" (with G. Crawford and A. Scherbakov).
7. "Testing the Quantal Response Hypothesis" (with Emerson Melo and Kirill Pogorelskiy).
8. "Money in Judicial Politics: Individual Contributions versus Collective Decisions" (with Matias Iaryczower).

9. “Estimating Semiparametric Panel Multinomial Choice Models using Cyclic Monotonicity” (with Xiaoxia Shi and Wei Song).
10. “To Score or Not to Score? Estimates from a Sponsored Search Auction” (with Yu-wei Hsieh and Sha Yang).
12. “BLP-LASSO for Aggregate Discrete-Choice Demand with Rich Demographic Covariates” (with Ben Gillen, Sergio Montero, and Roger Moon).
13. “Auctioneers as Market Makers: Managing Momentum in Chittagong Tea Auctions” (with Tanjim Hossain and Fahad Khalil)
14. “Interactive Fixed Effects in the BLP Random Coefficients Demand Model” (with Roger Moon and Martin Weidner, USC).
15. “Nonparametric Tests for Common Values in First-Price Auctions” (with Phil Haile and Han Hong). NBER working paper #10105.

**Work in progress:**

1. “Media Bias and News Sharing on Social Networks: a Laboratory Study” (with Kirill Pogorelskiy)
2. “Preference Amplification in Durable Goods Industries: Superstition in Housing Markets” (with Pengfei Sui)
3. “Estimation of Oligopolistic Models without Assumptions on Demand” (with Rahul Deb, John Quah, and Xiaoxia Shi)

**EDITORIAL ACTIVITIES**

Department editor, *Management Science* (marketing desk), 2014-  
Associate editor, *International Economic Review*, 2012-  
Associate editor, *Journal of Applied Econometrics*, 2013-15  
Associate editor, *International Journal of Industrial Organization*, 2005-2008

**GRANTS AND AWARDS**

1. *Empirical Analyses of Committee Voting*, grant from the National Science Foundation (SES-1061266, joint with Matias Iaryczower), 2011-2013
2. *Empirical Analyses of Competitive Bidding*, grant from the National Science Foundation (SES-0003352, joint with Han Hong), 2000-2003
3. *Empirical Analyses of Competitive Bidding*, grant from SSHRC (Social Sciences and Humanities Research Council of Canada), 2000
4. Alfred P. Sloan Dissertation Fellowship (1997–98)

## **STUDENT SUPERVISION**

### **Recent students (placement):**

Yifei Huang (Microsoft), Sergio Montero (Rochester), Euncheol Shin (KDI), Kyle Carlson (Twitter), Matt Chao (Williams), Khai Chiong (USC, postdoc), SangMok Lee (University of Pennsylvania), Emerson Melo (Indiana University), Thomas Ruchti (Carnegie-Mellon)

### **Current supervision:**

Jun Zhang (fourth year); Alejandro Robinson, Mali Zhang (second-years)

## **SERVICE**

Director of graduate studies

Computing committee

## **MISC**

Languages: English, Chinese (Cantonese & Mandarin), German; Interests: classical music, piano

*Updated: September 2016.*