SERENA NG

Correspondence Address:

Department of Economics, Columbia University

420 W. 118 St. New York, NY 10025 Phone: 212-854-5488, Fax: 917-791-9722

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Nationality: Canada and United States

Education

• Princeton University: M.A. (1992), Ph.D 1993

- Thesis: Essays in Time Series and Econometrics

- Principal Advisors: Angus Deaton and Pierre Perron

• University of Western Ontario: B.A. (Honors), M.A.

Areas of Interest Econometrics, Empirical Macro, Time Series, Big Data

Experience

- Columbia University: Professor, 2007-present
- University of Michigan: Professor, 2003-2007
- Johns Hopkins University: Associate Professor, 2001-2003
- Boston College: Associate Professor, 1996-2001
- University of Montreal: Assistant Professor, June 1993-June 1996
- Bank of Canada, Research Department, Special Studies Division, Head.

Other Affiliations

- Data Science Institute, Columbia University, 2013-
- Research Associate, National Bureau of Economic Research, 2016-

Honors

- Fellow of Econometric Society, 2015-
- Fellow of Society of Financial Econometrics, 2016-

- Fellow, Journal of Econometrics, 2018-
- Fellow, International Association of Applied Econometrics, 2018-
- Highly Ranked Female Economist:
 - https://www.weforum.org/agenda/2015/07/10-top-women-in-economics/
- Econometric Theory, Multa Scripsit Award 2014

Research Grants

- NSF Grant SES 1558623: Topics in Analysis of Big Data and Complex Methods. (2016-2019)
- NSF Grant SES 0962431: Identification, Estimation, and Inference of DSGE Models. (2010-2015)
- NSF Grant SES 0549978: Econometric Analysis of Large Dimensional Data. (2006-2009)
- NSF Grant SES 0136923: Topics in Factor Analysis of Large Dimensional Panels. (2002-2005)
- Social Science Humanities and Research Council of Canada Cdn 55,000.0 Grant 410-94-0620 (1994-1997)
- Fonds pour la Formation de Chercheurs et l'Aide a la Recherche Cdn 50,303.0. Grant NC 1388 (1994-1997).

Professional Responsibilities

- Managing Editor, Journal of Econometrics, 2019
- Co-Editor, Journal of Econometrics, July-Dec, 2018
- Associate Editor, Econometrica, 2015-
- Associate Editor, Journal of Econometrics, 2012-
- Associate Editor, Econometrics Journal, 2012-2017
- Associate Editor, Journal of Econometric Methods, 2010-2017
- Co-Editor, Journal of Business and Economic Statistics, 2007-2009
- Associate Editor, Statistica Sinica, 2014-2015
- Associate Editor, Econometric Theory, 2011-2015
- Associate Editor, Journal of Business and Economic Statistics, 1998-2006
- Associate Editor, Journal of Economic Literature, 2010-2014
- Associate Editor, Journal of Financial Econometrics, 2001-2013
- Associate Editor, Macroeconomic Dynamics, 2003-2007
- External Ad-Hoc Committee: various universities
- External ARC Reviewer: Queens University (2009)
- External ARC Reviewer: UCSD (2012)
- Coordinator: NBER-NSF Time series conference, 2012-
- National Science Foundation SES Advisory Panel (Economics), 2002, 2003
- National Science Foundation MME Advisory Panel (Statistics), 2014
- AEA Committee on Status of Women: Executive Board Member (at large), 2012-2015
- President/President-Elect, Chinese Economic Society of North America, 2008-2011

Publications

Google Scholar h-index: 49 (over 18,800 citations)

- 1. Rank Regularized Estimation of Approximate Factor Models (with Jushan Bai), arXiv 1708.08137, forthcoming, *Journal of Econometrics*.
- 2. The ABC of Simulation Estimation with Auxiliary Statistics (with Jean-Jacques Forneron 2018) *Journal of Econometrics*, 205, 112-139
- 3. Level and Volatility Shocks in Macroeconomic data, (with Yuriy Gorodnichenko, 2017), *Journal of Monetary Economics*, 91, p.52-68.
- 4. Simulated Minimum Distance Estimation of Dynamic Models with Errors in Variables, (with N. Gospodinov and I. Komunjer, 2017), *Journal of Econometrics*, 200:2, p.181-193.
- 5. Opportunities and Challenges: Lessons from Analyzing Terabytes of Scanner Data. Advances in Economics and Econometrics: Eleventh World Congress of the Econometric Society Monographs, p.1-34. In B. Honoré, A. Pakes, and L. Samuelson (eds). Cambridge University Press, Cambridge.
- 6. A Likelihood-Free Reverse Sampler of the Posterior Distribution (with Jean-Jacques Forneron, 2016). Advances in Econometrics Vol 36, p. 389-415. Emerald Group Publishing.
- 7. FRED-MD: A Monthly Database for Macroeconomic Research (with Michael McCracken). 2016, Journal of Business and Economic Statistics, 36:4, p.574-589.
- 8. "Minimum Distance of Possibly Non-invertible Moving Average Models", with N. Gospodinov, 2015 Journal of Business and Economic Statistics, 33:3, 403-417,
- 9. "Measuring Uncertainty" (2015, with K. Jurado and S. Ludvigson), *American Economic Review*, 105:3, p.1177-1216.
- 10. "Facts and Challenges from the Great Recession for Forecasting and Macroeconomic Modeling", (2013, with Jonathan Wright), *Journal of Economic Literature*, 51:4, p.1120-1154.
- 11. "Boosting Recessions" (2014), Canadian Journal of Economics, Viewpoint article, 47:1, p.1-34.
- 12. "Dynamic Hierarchical Factor Models", (2013, with E. Moench and S. Potter), Review of Economics and Statistics, 95:5, p.1811-1817.
 - 56. "Principal Components Estimation and Identification of Static Factors", (2013, with J. Bai), *Journal of Econometrics*, 176:1, p.18-29.
- 13. "Variable Selection in Predictive Regressions" (2013) Handbook of Economic Forecasting, G. Elliott and A. Timmermann (ed), Volume 2B. Ch 14, p.753-786
- 14. "Constructing Common Factors from Continuous and Categorical Data", (2015), *Econometric Reviews*, 34(6-10): 1141-1171.

- 15. "Dynamic Identification of Dynamic Stochastic General Equilibrium Models", (2011, with I. Komunjer), *Econometrica*, 79:6, p.1995-2032.
- 16. "Estimation of Panel Data Model when Group Membership is Unknown", (2012, with C.C. Lin), *Journal of Econometrics Methods*, 1:1, p.42-55.
- 17. "Estimators for Persistent and Possibly Non-Stationary Data with Classical Properties", (2012, with Y. Gorodnichenko and M. Mikusheva), *Econometric Theory*, 26, 1003-1036.
- 18. "Measurement Errors in Dynamic Models", (2014, with I. Komunjer), *Econometric Theory*, 30, p.150-175.
- 19. "Commodity Prices, Convenience Yields, and Inflation", (2013), with N. Gospodinov), Review of Economics and Statistics, 95:1, 206-219.
- 20. "A Hierarchical Factor Analysis of US Housing Market Dynamics", (2011), with E. Moench, *Econometrics Journal*, Vol 14, C1-C24.
- 21. "Estimating DSGE Models when the Data are Persistent", (2010, with Y. Gorodnichenko), Journal of Monetary Economics, 57, 325-340.
- 22. "Instrumental Variable Estimation in a Data Rich Environment", (2010, with J. Bai), Econometric Theory, 26:6, p. 1607-1637.
- 23. "Panel Unit Root Tests with Cross-Section Dependence: A Further Investigation", (2010, with J. Bai), *Econometric Theory*, 26:4, p.1088-1114.
- 24. "Boosting Diffusion Indices (2009), J. Bai, Journal of Applied Econometrics, 24:4, 607-629.
- 25. "Panel Cointegration with Global Stochastic Trends", (2009, with J. Bai and C. Kao), *Journal of Econometrics*. 149, 82:99.
- 26. "Selecting Instrumental Variables in a Data Rich Environment", (2008, with J. Bai), Journal of Time Series Econometrics, 1:1, Article 4.
- 27. "Extremum Estimation when the Predictors are Estimated from Large Panels", Annals of Economics and Finance, (2008), with J. Bai, 9:2, 201-222.
- 28. "Forecasting Economic Time Series Using Targeted Predictors", (2008, with J. Bai, *Journal of Econometrics*, 146, p. 304-317.
- 29. "Macro Factors in Bond Risk Premia", (2009, with S. Ludvigson), Macro Factors in Bond Risk Premia, *Review of Financial Studies*, 22:12, 5027-5067.
- 30. "Large Dimensional Factor Analysis", (2008), Foundations and Trends in Econometrics, 3:2, 89-163.
- 31. "A Simple Test for Non-Stationarity in Mixed Panels", (2008), Journal of Business and Economic Statistics, 26:1, 113-127.
- 32. "Detecting Information Pooling: Evidence from Earnings Forecasts after Brokerage Mergers" (with M. Shum), 2007, BE Journal of Economic Policy (Advances), 7:1, Article 60.

- 33. "Determining the Number of Primitive Shocks in Factor Models" (with J. Bai), (2007), Journal of Business and Economic Statistics. 25:1, p. 52-60.
- 34. "The Empirical Risk-Return Relation: A Factor Analysis Approach" (with S. Ludvigson), (2007) Journal of Financial Economics, 83, 171-222.
- 35. "Confidence Intervals for Diffusion Index Forecasts and Inference for Factor Augmented Regressions", (with J. Bai), (2006), *Econometrica*, 74:4, p. 1133-1150.
- 36. "Testing Cross-Section Correlation using Spacings", (2006), Journal of Business and Economic Statistics, 24:1, 12:23.
- 37. "Evaluating Latent and Observed Factors in Macroeconomics and Finance", (with J. Bai), (2006) Journal of Econometrics, 113:1-2, p. 507-537.
- 38. "Are More Data Always Better for Factor Analysis", (with J. Boivin), (2006), Journal of Econometrics, 132, p. 169-194.
- 39. "Understanding and Comparing Factor Based Macroeconomic Forecasts", (with J. Boivin), (2005) International Journal of Central Banking, 1:3, p.117-152.
- 40. "Aggregation, Heterogeneity, and Non-stationary Demand Systems", (with A. Lewbel), (2005), Review of Economics and Statistics, 87:4, p. 479-494.
- 41. "Tests for Skewness, Kurtosis, and Normality for Time Series Data", (with J. Bai), (2005), Journal of Business and Economic Statistics, 23:1, 49-60.
- 42. "A Note on the Selection of Time Series Models", (with P. Perron), (2005), Oxford Bulletin of Economics and Statistics, 67:1, p. 115-134.
- 43. "Intergenerational Linkages in Consumption Behavior", (with A. Waldkirch and D. Cox), (2004), Journal of Human Resources, 39:2, p. 355-381.
- 44. "A PANIC Attack on Unit Roots and Cointegration", (with J. Bai), (2004), *Econometrica*, 72:4, p. 1127-1177.
- 45. "Intergenerational Time Transfers and Childcare", (with E. Cardia), (2003), Review of Economic Dynamics, 6:2, p.431-454.
- 46. "Can Sticky Prices Account for the Variations and Persistence in Real Exchange Rates?", Journal of International Money and Finance, (2003), 22:1, 65-85.
- 47. "Analysis of Vector Autoregressions in the Presence of Mean Shifts", (with T. J. Vogelsang), (2002), Econometric Reviews, 21:3, p. 353-381.
- 48. "Forecasting Autoregressive Time Series in the Presence of Deterministic Components", (with T. Vogelsang), (2002), *The Econometrics Journal*, Vol 5:1, p. 196-224.
- 49. "PPP May not Hold Afterall: A Further Investigation" (with P. Perron), (2002), Annals of Economics and Finance, 3. 41-64.
- 50. "Determining the Number of Factors in Approximate Factor Models", (with J. Bai), (2002), Econometrica, 70:1, 191-221.

- 51. "Lag Length Selection and the Construction of Unit Root Tests with Good Size and Power ", (with P. Perron), (2001), *Econometrica*, 69:6, 1519-1554.
- 52. "A Test for Conditional Symmetry in Time Series Models", (with J. Bai), (2001), Journal of Econometrics, Vol 103, 1:2, 225-258.
- 53. "A Systematic Framework for Analyzing the Dynamic Effects of Permanent and Transitory Shocks", (with J. Gonzalo), (2001), *Journal of Economic Dynamics and Control*, 25:10, p. 1527-1546.
- 54. "Estimating the Rational Expectations Model of Speculative Storage: A Monte Carlo Comparison of Three Simulation Estimators", (with A. Michaelides), (2000), *Journal of Econometrics*, Vol 96:2, p. 231-266.
- 55. "Testing for ARCH in the Presence of a Possibly Misspecified Mean". (with R. L. Lumsdaine), (1999), Journal of Econometrics, 93:2, p. 257-279.
- 56. "Properties of the Autoregressive Spectral Density Estimator at Frequency Zero in ARIMA Processes". (with P.Perron), (1998), *Econometric Theory*, Vol 14, p. 560-603.
- 57. "A Semi-Parametric Factor Model for Interest Rates and Spreads" (with E. Ghysels), (1998), Review of Economics and Statistics, Vol 80:4, p. 489-502.
- 58. "Parametric and Non-parametric Approaches to Price and Tax Policy Reform" (with A. Deaton), (1998), Journal of the American Statistical Association, Vol 93, p.900-909.
- 59. "Excess Sensitivity and Asymmetries in Consumption" (with A. Lusardi and R. Garcia), (1997), Journal of Money, Credit, and Banking, Vol. 29:2, 154-176.
- 60. "Estimation and Inference in Nearly Unbalanced Nearly Cointegrated Systems" (with P. Perron),(1997) *Journal of Econometrics*, Vol 79, 54-81.
- 61. "Useful Modifications to Unit Root Tests with Dependent Errors and their Local Asymptotic Properties" (with P. Perron). (1996) Review of Economic Studies, Volume 63, 435-464.
- 62. "The Risky Spread, Investment, and Monetary Policy Transmission: Evidence on the Role of Asymmetric Information" (with Huntley Schaller). (1996) Review of Economics and Statistics, Vol. 78, 375-383.
- 63. "Looking for Evidence of Speculative Stockholding in Commodity Markets". (1996) Journal of Economics Dynamics and Control, Volume 20, 123-144.
- 64. "The Exact Error of the Spectral Density at the Origin" (with P. Perron). (1996) Journal of Time Series Analysis, Volume 17, 379-408.
- 65. "Unit Root Tests in ARMA Models with Data Dependent Methods for the Truncation Lag" (with P. Perron) (1995), Journal of the American Statistical Association, Volume 429, 268-281.
- 66. "Testing for Homogeneity in Demand Systems when the Regressors are Non-Stationary", (1995) Journal of Applied Econometrics, Volume 10, 147-164.

67. "Testing for Unit Roots in Flow Data Sampled at Different Frequencies", (1995) Economics Letters, Volume 47, p. 237-242.

Papers in Monographs and Special Issues

- 1. "A Factor Model for Bond Risk Premia", (with S. Ludvigson, 2011), *Handbook of Empirical Economics and Finance*, A. Ullah and D. Giles eds. p. 313-372, Chapman and Hall.
- 2. "A New Look at Panel Testing of Stationarity and the PPP Hypothesis", (with J. Bai) (2004), *Identification and Inference in Econometric Models: Essays in Honor of Thomas J. Rothenberg*, Don Andrews and James Stock (ed), Cambridge University Press.
- 3. "Explaining the Persistence of Commodity Prices" (with F. Ruge-Murcia), (2000), Journal of Computational Economics, Volume 16, 1:2, 149-171.
- 4. "Review of Coint 2.0 by P.C.B. Phillips and S. Ouliaris", (1995) *Journal of Applied Econometrics*, Volume 10, 205-210.

Manuscript in Preparation

- 1. Uncertainty and Business Cycles: Endogenous Impulse or Endogenous Response. NBER Working Paper 21803.
- 2. Shock Restricted Structural Vector-Autoregressions (with Sydney Ludvigson and Sai Ma. NBER Working Paper 23225.
- 3. An Econometrics View of Algorithmic Subsampling (with Simon Lee). In preparation for Annals of Economic Review.
- 4. Factor Analysis with Incomplete Data (with Jushan Bai). Manuscript in preparation.
- 5. Seasonal and Cyclical Sales: A Machine Learning Analysis of Weekly Scanner Data (with Rishab Guha). Chapter in preparation for CWIW conference, March 2019.
- 6. Factor Models. Chapter in preparation for Handbook of Econometrics, 2019.

Service at Columbia University

- Tenure and Review Advisory Committee (TRAC, University level), 2016-
- Promotions and Tenure Committee (Arts and Science), 2012-2016.
- Internal ARC Review Committee Member of Political Science Department, 2014
- ISERP director search committee, 2008
- Presidential Teaching Award, 2010, 2011
- Recruitment Committee, Statistics Department, 2010, 2015.

Other Professional Services

- Program Committee, Winter Meeting of Econometrics Society, 2008, 2016
- Program Committee, Summer Meeting of Econometrics Society, 2012
- Program Committee, Asian Meeting of Econometrics Society, 2013
- Program Committee, Society of Financial Econometrics, 2012, 2014, 2015
- Program Committee, World Congress 2015
- Program Committee, IAEE, 2013-2017
- Program Committee, CFE 2014, 2015, 2016
- Nobel Prize in Economics, nominating member since 2012
- Co-Organizer: NBER-NSF Time series conference, 2016-
- Zellner Thesis Award, selection Committee, 2000, 2001, 2005, 2007, 2008, 2009
- Rae Prize for outstanding Canadian economist, selection committee (2006)
- American Statistical Association Publication Committee, 2007, 2008, 2009
- Advisory Board, Pacific Economic Review, 2003-
- Chair of Search Committee for JBES Editor, 2012
- Nominee, Executive committee of American Economic Association: 2012
- Tenure Review: various universities

Invited/Keynote Talks

- Invited student participant, UC Berkeley Semiparametric Conference, 1993.
- Visiting Scholar, INSEE, Paris October-November 1993
- Time Series Conference, Yale University: October 1999, Discussant.
- CEPR/Bank of Italy Conference on Business Cycles, invited speaker, September 2001.
- Canada-US Economic and Monetary Integration, Harvard University, May 2002, Discussant.
- Common Features Conference, Rio de Janeiro, July 2002, invited speaker
- ISI Bernoulli Society Conference, invited speaker, August 2003.
- Empirical Methods in Macroeconomics and Finance (Bocconi), invited speaker, October 2004
- International Conference on Panel Data, invited speaker, June 2004
- Board of Governors, Visiting Scholar May 2004
- Conference in Honor of Robert Engle's Nobel, Sept. 2004, invited discussant
- CEPR/ECB Forecasting Conference, November 2004, invited discussant
- 25-th Anniversary of Beveridge-Nelson decomposition, March 2006, invited speaker.
- European meeting of the Econometric Society, 2007, invited lecture
- Society of Computational Economics, 2007, plenary speaker
- Camp Econometrics, 2007, invited speaker
- New York Fed Monetary Policy Conference, invited speaker, November 2007
- ECB Workshop on Forecasting Techniques, invited speaker, Dec 2007
- Site (Stanford) Conference, invited speaker, July 2008
- Econometric Society European Meeting, invited speaker, August 2008,
- EC2 Conference, Aarhus, invited speaker, December 2009.
- SETA Conference (Singapore), invited speaker, May 2010
- International Panel data Conference, invited speaker, July 2010.

- Econometrics Society Australian Meeting, invited speaker, 2013
- State of the Art Lecture, Canadian Economics Association, invited speaker, 2013
- High Dimensional Time Series in Macroeconomics and Finance, Vienna, invited speaker, 2013
- Society for Nonlinear Dynamics and Econometrics, New York, keynote speaker, 2014
- Netherlands Econometric Study Group, Tilburg, keynote speaker, 2014
- Econometric Society World Congress, invited spekaer, August 2015
- Society of Financial Econometrics Annual Meeting (SOFIE), June 2015
- Econometric Society European Meeting, Geneva, invited speaker, August 2016
- Microsoft Digital Economy Conference, invited speaker, September 2016
- Machine Learning: What's it for Economics, Becker-Friedman Institute, University of Chicago, invited speaker, September 2016
- Canadian Econometrics Study Group, keynote speaker, October 2016
- JME-SNB-SCG Conference, Gerzensee, invited speaker, October 2016
- Data, Dollars, and Algorithms: the Computational Economy, Harvard University, invited speaker, January 2017
- SQA Fuzzy Data, Keynote Speaker, May 2017.
- Big Data Conference, UPenn, 2017.
- Martha and Jonathan Cohen Distinguished Visitor, UPenn, 2017.
- ECB: Workshop of Forecasting Techniques (Frankfurt), June 2018. Keynote speaker.
- Optimization and Machine Learning (UCL), March 2018.
- International Association of Applied Econometrics (Montreal), June 2018. Keynote speaker.
- Brookings Papers on Economic Activity, 2018 Conference. Discussant.
- Big Data Conference, Monash University, December 2018 (scheduled)
- Tinbergen Invited Lectures (Erasmus University), June 2019 (scheduled).
- Big Data Conference, University of Chicago, September 2019 (scheduled)

Presentation at Annual Conferences

- Winter Meetings of the Econometric Society: On program as author, discussant, or chairperson: January 1994-98, 2000-03, 2007, 2008, 2010, 2010-16.
- Winter Meetings of the American Economics Association: On program: 1999, 2002, 2008, 2009, 2010, 2013, 2014, 15.
- Summer Meetings of the Econometric Society Presentations: June 1993, 1996.
- Canadian Econometrics Study Group Presentations: September 1993, 1996; Discussant: 1994.
- Canadian Macro Study Group: Discussant: 1995.
- CIREQ (Montreal) Time Series Conference, May 2009
- Canadian Economics Association Meeting: Session chair, May 1995
- NBER Empirical Methods and Forecasting: 1994-2011
- NBER Economic Fluctuations Research Meeting: 2016
- NBER Forecasting Meeting, April, 1995
- NBER Summer Institute: July 1994, 1997, 2000, 2009, 2012, 2016, 2018
- NBER/NSF Time Series Conference: 1995, 1998, 2000, 2002

Seminar Presentations

- 1993: Western Ontario, Queen's, Wilfrid Laurier;
- 1994: University of Quebec at Montreal;
- 1995: Boston College, UBC, Toronto, York;
- 1996: Johns Hopkins;
- 1997: M.I.T., Cornell, BU, Brown;
- 1998: Ohio State, UConn;
- 1999: Northwestern, Cornell, FRB Kansas City, Maryland, Houston;
- 2000: Toronto, Rochester, Vanderbilt, GSB Chicago;
- 2001: UC Davis, Johns Hopkins, Princeton;
- 2002: Maryland, UVA, Toronto, Michigan, Board of Governors, NYU, Georgetown, LSE;
- 2003: MSU, Kansas, Emory;
- 2004: Ohio State, Rutgers, Board of Governors (visiting scholar), University of Michigan (Statistics);
- 2005: UCLA, CIREQ, Atlanta Fed (visiting scholar), University of Chicago;
- 2006: Indiana, Atlanta Fed, Michigan, Duke, Yale, Columbia, Queen's;
- 2007: Montreal, UCSD, UCR, Wisconsin, BU, Harvard/MIT, NY Fed, ECB;
- 2008: Penn, Brown, Berkeley;
- 2009: Columbia, Stanford, Harvard/MIT;
- 2010: NYU, Princeton, Duke, Columbia, Cemfi/Carlos III;
- 2011: LSE, UCL, Cyprus, Fordham, Rochester;
- 2012: Montreal, Cambridge;
- 2013: Georgetown, Rutgers, IMF, Bank of Canada;
- 2014: UCSC, Federal Reserve of San Francisco, USC;
- 2015: Harvard/MIT, Princeton, Wisconsin, UC Riverside;
- 2016: Board of Governors, U.C. Davis, CIREQ Conference, NBER-EFG
- 2017: Harvard, Toronto
- 2018: Northwestern, Chicago, USC, UCLA.

Awards and Fellowships

- Who's Who in Economics, 4th Edition, Edward Elgar Publishing
- Bradley Fellowship (Princeton)
- Social Science Humanities and Research Council Dissertation Fellowship (Princeton)
- Princeton Fellowship (Princeton)
- Mackenzie King Traveling Scholarship
- Graduate Admission Scholarship (U.W.O.)
- Special University Scholarship (U.W.O)
- Edward Blake Scholarship in Economics (U.W.O.)
- Three Year Continuing Scholarship (U.W.O.)
- Ontario Scholar (Havergal College)

Departmental Services

- Michigan: Graduate committee, recruiting committee, graduate curriculum reform committee, computer committee, various search committees.
- Columbia: Governance, junior and senior recruitment, computer committee.

Teaching

Columbia University

- Econometrics II (6412, graduate), 2008-2012
- Advanced Econometrics (4412, undergraduate), 2008-2016
- Time Series Econometrics (6429, graduate), 2009, 2013
- Advanced Econometrics (6428, graduate), 2010, 2012.
- Econometric Methods (6427, graduate), 2010, 2013
- Econometrics III (6417, graduate), 2012-14
- Macroeconometrics (6413, graduate), 2013-2016
- Undergraduate Seminar (4419, undergraduate), 2017

University of Michigan

- Econometrics (graduate 672)
- Macroeconometrics (graduate, 676)
- Advanced Econometrics (679, graduate)

Johns Hopkins University:

• Maroeconometrics I and II (607, 608, graduate)

Boston College

- Monetary Theory (861, graduate)
- Macroeconomics (751, graduate)
- Time Series (821, graduate)
- Econometrics (760, graduate)
- Advanced Econometrics (803, graduate)
- Econometrics (228, undergraduate)
- Advanced Econometrics (327, undergraduate)

University of Montreal Monetary Theory (graduate) Time Series (graduate)

Undergraduate Advising

Klye Juardo 2009 Gregory Cox 2011 Jason So 2013 Joo Woo Park 2014 Evan Munro 2014 (best thesis award).

Graduate Advising

Phd Students

Nicholay Gospodinov 2000 (chair)

Antonio Menezes 2000

Maurizio Zandardi 2001

Rachida Ouysse 2002 (chair) Tiziana Brancaccio 2002

Chiang-Ching Lin 2006 (chair)

David Greenstreet 2006

Yuri Gorodinichenko 2007

Zhou Yang 2007

Nicholay Iskrev 2008 (chair)

Matias Busso 2008

Dan Cooper 2009

Li Song 2010 (statistics)

Wilfredo Lim 2012

Sebastian Rondeau 2012 Pengfei Zang (statistics) 2012

Kyle Jurado 2015

Yu Liu 2015

Daniel Villar 2016

Kerem Tuzcuolgu 2017 (chair)

Lina Liu 2017

Jean-Jacques Forneron 2018 (chair)

Yousuf Kashif (statistics), in progress

<u>Placement</u>

Concordia University

Bocconi post-doc fellowship

University of Glasgow

University of New South Wales

University College, Dublin

Academia Sinica (Taiwan)

Oxford University (post doc)

U.C. Berkeley

Virginia Tech

Bank of Portugal

Development Bank

Boston Fed

Goldman Sachs

Mathematica

Merrill Lynch

Knight Rider

Duke

Citadel

Board of Governors

Bank of Canada

Boston Fed

Boston University

Languages: English, French, Cantonese