

# Ivan Jeliazkov

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## Education

Ph.D., Economics, Washington University in St. Louis (2003).

*Dissertation:* “Essays on Model Selection”.

B.A., Coe College, Iowa, with honors (1996).

*Majors:* Economics and Business Administration.

## Experience

### Academic

Department of Economics, University of California, Irvine

Associate Professor (2010–present).

Assistant Professor (2003–2010).

Department of Statistics, University of California, Irvine

Associate Professor (courtesy appointment, 2011–2018).

Assistant Professor (courtesy appointment, 2009–2010)

### Administrative

Director of Graduate Studies, Department of Economics, University of California, Irvine (2015–2017).

### Visiting Scholar

East China Normal University, Shanghai, China (2011).

Institute for Advanced Studies, Vienna, Austria (2008).

Federal Reserve Bank of Atlanta (2007).

Center for Statistics in the Social Sciences, University of Washington (2007).

Institute of International Education, Korea University (2006).

Federal Reserve Bank of St. Louis (2000–2001).

## Research

**Theoretical:** Bayesian econometrics; model comparison; nonparametric estimation; computation; simulation-based inference; Markov chain Monte Carlo (MCMC); discrete data analysis; latent variable modeling in cross-sectional, time-series, and longitudinal settings.

**Applied:** Interdisciplinary applications in the social and natural sciences, business and marketing, political science, environmental engineering, and transportation.

## Teaching

**Graduate:** Econometrics and Statistics I & III; Discrete Choice Econometrics; Time Series Econometrics; Nonparametric Analysis; Bayesian Model Comparison; Applied Economics Replication and Writing.

**Undergraduate:** Applied Econometrics I & II; Business Forecasting; Data Analysis I & II; Econometrics; Principles of Macroeconomics; Principles of Microeconomics; Intermediate Macroeconomics; Money and Banking; Introduction to Empirical Analysis.

## Advising

### Ph.D. Students

**Committee Chair:** Dillon Flannery (2017–present), Kai Yoshioka (2016–present), Padma Sharma (2016–2019, Federal Reserve Bank of Kansas City), Angela Vossmeier (2012–2015, Claremont McKenna), Mohammad Arshad Rahman (2009–2013, Indian Institute of Technology, Kanpur), Alicia Lloro (2011–2013, Federal Deposit Insurance Corporation), Rui Liu (2010–2013, San Jose State University), Esther Hee Lee (2006–2010, EViews/IHS).

**Committee Member:** Fabrizio Marodin (2018–present), Amaze Lussompa (2017–present), Nikolaos Charalampidis (2015–2019, Laval University), Dhari Alrasheed (Aljutaili) (2015–2018, Kuwait University), Fulya Ozcan (2016–2017, Amazon), Michael Guggisberg (2014–2017, Institute for Defense Analyses), Brent Lutes (2012–2016, Brattle Group), Stephen Cole (2011–2015, Marquette University), David Conway (2011–2015, Gurtin Fixed Income Management, LLC), Deven Kapadia (2011–2014, JP Morgan Chase), Guoxiong Zhang (2009–2013, Shanghai Jiaotong University), Natalia Milovantseva (2011–2012, Fulbright Scholar, European Union), Phillip Li (2009–2012, Office of the Comptroller of the Currency), Ashish Rajbhandari (2009–2012, StataCorp LP), Ofer Mintz (2010–2011, Louisiana State University), Lima Kopitch (2009–2011, TMC), Ana Pesic (2008–2011, PriceWaterhouseCoopers), Neerja Aggarwal (2006–2008, Chapman University), Hao Audrey Fang (2005–2008, Cornerstone Research), Feng Tian (2005–2008, University of Hong Kong), Hao Jia (2005–2008, California State University, Fullerton), Eric Eisenstat (2005–2007, University of Bucharest), Xian Daisy Deng (2005–2006, Picoco, LLC), Manasseh Zechariah (2004–2005, Johnson & Wales University).

## Undergraduate Students

**Honors Theses:** Yuting Shan (2018–2019), Haoran Zheng (2016–2017), Qi Xue (2016–2017), Emily Baba (2013–2014), Kristin Hsu (2013–2014), Josephine Chen (2010–2011), Mike Xiao Ding (2008).

**Undergraduate Research:** Mingjuan Wu (2018–2019); Deepak Gore (2019); Jessie Xie (2019); John Nguyen (2012), Yuliang Zhang (2011–2012), Yilin He (2011–2012), Angela Vossmeier (2008–2010), Michelle Hine (2009), Samir Sachdev (2009), Kyle Hasenstab (2008–2009), Jonathan Hsieh (2009), Brian Truong (2007), Yuuichi Inomata (2004–2005), Summer Mastous (2004–2005), Rebecca Lee (2004–2005), Daria Burns (2004–2005).

## High School Students

**Research Internships:** Michelle Jeliazkov (2018–2019, San Diego State), Clarissa Pickett (2014–2016, UC Berkeley), Alexandra Ivanov (2012–2013, MIT).

# Publications

## Journal Articles & Book Chapters

- [1] “Marginal Likelihood from the Metropolis-Hastings Output,” with Siddhartha Chib, *Journal of the American Statistical Association*, 96, 270–281, 2001.
- [2] “Comment on ‘The Macroeconomic Consequences of Terrorism’,” with Michelle Garfinkel, *Journal of Monetary Economics*, 51, 1033–1037, 2004.
- [3] “The Uncovered Set and the Limits of Legislative Action,” with William T. Bianco and Itai Sened, *Political Analysis*, 12, 256–276, 2004.
- [4] “Accept-Reject Metropolis-Hastings Sampling and Marginal Likelihood Estimation,” with Siddhartha Chib, *Statistica Neerlandica*, 59, 30–44, 2005.
- [5] “Inference in Semiparametric Dynamic Models for Binary Longitudinal Data,” with Siddhartha Chib, *Journal of the American Statistical Association*, 101, 685–700, 2006.
- [6] “Dynamic and Structural Features of Intifada Violence: A Markov Process Approach,” with Dale J. Poirier, *Bayesian Analysis*, 3, 63–78, 2008.
- [7] “Fitting and Comparison of Models for Multivariate Ordinal Outcomes,” with Jennifer Graves and Mark Kutzbach, in *Advances in Econometrics: Bayesian Econometrics*, 23, 115–156, 2008.
- [8] “Estimation of Semiparametric Models in the Presence of Endogeneity and Sample Selection,” with Siddhartha Chib and Edward Greenberg, *Journal of Computational and Graphical Statistics*, 18, 321–348, 2009.
- [9] “MCMC Estimation of Restricted Covariance Matrices,” with Joshua C.C. Chan, *Journal of Computational and Graphical Statistics*, 18, 457–480, 2009.

- [10] “Lysogens and Free Viruses in Fresh, Brackish, and Marine Waters: A Bayesian Analysis,” with Samuel Choi and Sunny Jiang, *FEMS Microbiology Ecology*, 69, 243–254, 2009.
- [11] “Efficient Simulation and Integrated Likelihood Estimation in State Space Models,” with Joshua C.C. Chan, *International Journal of Mathematical Modelling and Numerical Optimisation*, 1, 101–120, 2009.
- [12] “MCMC Perspectives on Simulated Likelihood Estimation,” with Esther Lee, *Advances in Econometrics: Maximum Simulated Likelihood*, 26, 3–39, 2010.
- [13] “A Model-Based Ranking of U.S. Recessions,” with Rui Liu, *Economics Bulletin*, 30, 3, 2289–2296, 2010.
- [14] “Maximum Simulated Likelihood Estimation: Techniques and Applications in Economics,” with Alicia Lloro, *Computational Optimization, Methods and Algorithms*, Xin-She Yang and Slawomir Koziel (Eds.), 85–100, 2011. Berlin: Springer-Verlag.
- [15] “Binary and Ordinal Data Analysis in Economics: Modeling and Estimation,” with Mohammad Arshad Rahman, *Mathematical Modeling with Multidisciplinary Applications*, Xin-She Yang (Editor), 123–150, 2012. New York: John Wiley & Sons, Ltd.
- [16] “Nonparametric Vector Autoregressions: Specification, Estimation, and Inference,” *Advances in Econometrics*, Vol. 32, 327–359, 2013.
- [17] “Information Processing Pattern and Propensity to Buy: An Investigation of Online Point-of-Purchase Behavior,” with Ofer Mintz and Imran S. Currim, *Marketing Science*, 32, 716–732, 2013.
- [18] “From the Great Depression to the Great Recession: A Ranking of U.S. Recessions,” with Rui Liu, in *Bayesian Inference in the Social Sciences*, I. Jeliazkov and X.-S. Yang (Eds.), 177–198, 2014. Hoboken, New Jersey: John Wiley & Sons.
- [19] “Evaluation Set Size and Purchase: Evidence from a Product Search Engine,” with Vidyanand Choudhary, Imran Currim, Sanjeev Dewan, Ofer Mintz, and John Turner, *Journal of Interactive Marketing*, 37, 16–31, 2017.
- [20] “The Impact of Estimation Uncertainty on Covariate Effects in Nonlinear Models,” with Angela Vossmeier, *Statistical Papers*, 59, 1031–1042, 2018.

### Edited Volumes

- [1] “Bayesian Inference in the Social Sciences,” Ivan Jeliazkov and Xin-She Yang (Editors), John Wiley & Sons, Ltd., 2014.
- [2] “Bayesian Inference in Economics,” a Special Issue of the *International Journal of Mathematical Modelling and Numerical Optimisation*, Ivan Jeliazkov (Guest Editor), Vol 5, No. 1/2, 2014.
- [3] *Advances in Econometrics: Bayesian Model Comparison*, Volume 34, Ivan Jeliazkov and Dale J. Poirier (Editors), Emerald Publishing, 2014.

[4] *Advances in Econometrics: Topics in Identification, Limited Dependent Variables, Partial Observability, Experimentation, and Flexible Modeling*, Volumes 40A and 40B, Ivan Jeliazkov and Justin L. Tobias (Editors), Emerald Publishing, 2019.

### Miscellaneous Publications

[1] “Introduction,” with Juan Carlos Escanciano, Thomas B. Fomby, R. Carter Hill, and Eric Hillebrand, *Advances in Econometrics: DSGE Models in Macroeconomics – Estimation, Evaluation, and New Developments*, Volume 28, pp. ix–xii, 2012.

[2] “Why Bayes?” An introduction to the special issue on Bayesian Inference in Economics of the *International Journal of Mathematical Modelling and Numerical Optimisation*, Volume 5, No. 1–2, pp. 1–3, 2014.

[3] Preface, with Xin-She Yang, *Bayesian Inference in the Social Sciences*, xiii–ix, 2014.

[4] Preface, with Dale J. Poirier, *Advances in Econometrics: Bayesian Model Comparison*, Volume 34, pp. ix–xi, 2014.

[5] “An Interview with Dale Poirier,” with Dale J. Poirier and Justin L. Tobias, *Advances in Econometrics*, Volume 40A, pp. 1–16, 2019.

[6] Foreword to Part A, with Justin L. Tobias, *Advances in Econometrics*, Volume 40A, pp. vii–x, 2019.

[7] Foreword to Part B, with Justin L. Tobias, *Advances in Econometrics*, Volume 40B, pp. vii–ix, 2019.

### Work in Progress

“Specification and Inference in Nonparametric Additive Regression”.

“Politics and Macroeconomic Performance in the United States: Cycles and Long-Run Outcomes,” with Audrey Fang.

“Bayesian Analysis of Activity Participation Behavior,” with Mahdiah Allahviranloo.

“Strategic Reorganizations in Stable Environments,” with Marco Castaneda.

“Integrated Analysis of the Life-Cycle Interactions Between Health and Socioeconomic Status,” with Angela Vossmeier.

“Simulated Likelihood Estimation by Markov Chain Monte Carlo,” with Alicia Lloro.

“Likelihood Specification and Inference in Simultaneous Equation Models for Discrete Data,” with Angela Vossmeier.

“Bayesian Model Comparison”.

“Estimation of Nonparametric Functions under Regularity Conditions”. with Eric Eisenstat.

“Dirac Delta Priors”.

“The Quest for Robustness”.

“A Simple Method for Improving GHK Estimation”.

“Treatment Effects and Sample Selection,” with Jiawei Chen and Kai Yoshioka.

“Bayesian Analysis of the Demand for Healthcare,” with Jiawei Chen and Kai Yoshioka.

## Presentations

2019: 18th International Conference on Economy & Business, Burgas, Bulgaria (August).

2018: Melbourne Bayesian Econometrics Workshop, University of Melbourne, Australia (March); International Society for Bayesian Analysis World Meeting, Edinburgh, UK (June); *Joint Statistical Meetings*, Vancouver, Canada (July–August); *California Econometrics Conference*, UC Irvine (September).

2016: International Society for Bayesian Analysis World Meeting, Sardinia, Italy (June); Department of Economics, UC Irvine (November).

2015: Department of Economics, University of Southern California (November).

2014: Department of Economics, UC Davis (April); Department of Economics, UC San Diego (April); *Seminar on Bayesian Inference in Econometrics and Statistics*, University of Chicago (May); *California Econometrics Conference*, Stanford University (September); Department of Economics, UC Riverside (October).

2013: Department of Economics, UC Irvine (May); *Conference on Bayesian Methods in Microeconomic Modeling*, California Institute of Technology (September).

2012: Department of Statistics, UC Irvine (March); Research School of Economics, Australian National University, Canberra, Australia (August); Australian Business School, University of New South Wales, Sydney, Australia (August); *Advances in Econometrics Conference*, Southern Methodist University (November).

2011: Department of Mathematics and Statistics, San Diego State University (September).

2010: Econometric Society Winter Meeting, Atlanta (January); *California Econometrics Conference*, Stanford University (September); Department of Economics, UC San Diego (October).

2009: Department of Economics, Stanford University (April); *Seminar on Bayesian Inference in Econometrics and Statistics*, Washington University (May); *California Econometrics Conference*, UC Riverside (September); Department of Statistics, UC Riverside (October); Econometrics Seminar, UC Irvine (November); *Advances in Econometrics Conference*, Louisiana State University (November).

2008: Federal Reserve Bank of St. Louis (March); *Seminar on Bayesian Inference in Econometrics and Statistics*, University of Chicago (May); Theory, History and Development Seminar, Department of Economics, UC Irvine (June); Department of Economics, UC Davis (November); Institute for Advanced Studies, Vienna, Austria (December).

2007: Department of Economics, University of Montreal (March); *Advances in Econometrics Conference*, Louisiana State University (November); Center for Statistics in the Social Sciences, University of Washington (November); Federal Reserve Bank of Atlanta (December).

2006: *Seminar on Bayesian Inference in Econometrics and Statistics*, University of Iowa (April); *Valencia/ISBA 8th World Meeting on Bayesian Statistics*, Benidorm, Spain (June); Institute for Advanced Studies, Vienna, Austria (August); *Compstat 2006*, Rome, Italy (August); Department of Economics, Indiana University (September); *International Workshop on Bayesian Statistics and Applied Econometrics*, Tohoku University, Sendai, Japan (November).

2005: Department of Statistics, UC Irvine (January); *80th Annual Conference of the Western Economic Association International*, San Francisco (July); *Seminar on Bayesian Inference in Econometrics and Statistics*, Washington University (August); *Joint Statistical Meetings*, Minneapolis (August); Department of Economics, UC Riverside (November).

2004: Department of Economics, Indiana University (March); Department of Economics, UCLA (May); Econometrics Seminar, Department of Economics, UC Irvine (May).

2003: *Annual Meetings of the Midwest Economics Association*, St. Louis (March); *Annual Meeting of the Midwest Econometrics Group*, University of Missouri, Columbia (October).

2002: *Annual Meetings of the Midwest Economics Association*, Chicago (March).

2001: *Joint Statistical Meetings*, Atlanta (August).

2000: *Annual Meeting of the Allied Social Sciences Association – Omicron Delta Epsilon Graduate Student Papers Session*, New York City (January).

## Grants, Honors & Awards

Environmental Institute Research Grant, \$40,500, with Sunny Jiang, Department of Civil & Environmental Engineering, University of California, Irvine (2008–2009).

Multi-Investigator Faculty Research Grant – Academic Senate Council on Research, Computing and Library Resources, \$25,000, with Sunny Jiang, Department of Civil & Environmental Engineering, University of California, Irvine (2008–2009).

Faculty Career Development Award, University of California, Irvine (2006–2007).

Faculty Research & Travel Grant, School of Social Sciences, University of California, Irvine (2003–2007, 2009, 2011–2013, 2016, 2018).

ADVANCE Dependent Care Travel Award, University of California, Irvine (2016, 2018).

Dean's Dissertation Fellowship, Washington University (2001–2002).

Departmental Research Grant, Washington University (1998, 1999).

Washington University Fellowship (1996–1997).

Coe College International Grant (1992–1996).

Knox Scholar, Coe College (1994, 1995).

**Honor Societies:** Phi Kappa Phi, Alpha Beta Delta, Omicron Delta Epsilon, Sigma Beta Delta, Mensa International.

## **Service**

### **Editorial Service**

**Series Editor:** *Advances in Econometrics*, with Thomas B. Fomby, R. Carter Hill, Juan Carlos Escanciano, Eric Hillebrand, Daniel Millimet, David Jacho-Chávez, Rodney Strachan and Alicia Rambaldi (2010–present).

**Associate Editor:** JASA/TAS Reviews, *Journal of the American Statistical Association (JASA)* and *The American Statistician (TAS)*, (2014–2016, 2017–2019).

**Associate Editor:** *International Journal of Mathematical Modelling and Numerical Optimisation* (2010–present).

**Editorial Board Member:** *International Journal of Mathematical Modelling and Numerical Optimisation* (2009–2010).

**Editor:** *Proceedings of the 2nd International Conference on Information Technology & Business Intelligence*, with Xin-She Yang (2010).

**Editorial Review Board:** Scientific Journals International – Mathematics & Statistics, Economics (2007–2010).

### **Professional Service**

**Secretary:** Section on Economics, Finance and Business, International Society for Bayesian Analysis (ISBA), (2017–2019).

**Co-Chair, Program Committee:** *International Conference on Information Technology & Business Intelligence*, Institute of Management Technology, Nagpur, India, with Xin-She Yang (2010).

**Vice-Chair:** Task Force on Business Intelligence & Knowledge Management, IEEE Computational Intelligence Society, (2013–2019).



**Member:** Task Force on Business Intelligence & Knowledge Management, IEEE Computational Intelligence Society, (2010–2013).

**Member:** Scientific Committee, International Consortium for Optimization and Modelling in Science and Industry (iCOMSI), (2013–2015).

**Member, Program Committee:** *International Conference of Mathematical Sciences*, Istanbul, Turkey (2009).

**Session Chair:** Session on Bayesian Modeling in the Physical Sciences & Engineering, Joint Statistical Meetings, Vancouver, Canada (2018); Session on macroeconomics, *Seminar on Bayesian Inference in Econometrics and Statistics*, Washington University (2011); Session on function and density estimation, *Seminar on Bayesian Inference in Econometrics and Statistics*, Washington University (2009); Session on model choice and model assessment, *Seminar on Bayesian Inference in Econometrics and Statistics*, Washington University (2007); Session V, Conference in honor of Kenneth Small, UC Irvine (2006); Session on Causal Inference, *Joint Statistical Meetings*, Minneapolis (2005); Session on Bayesian and Monte Carlo Methods, *Annual Meetings of the Midwest Economics Association*, St. Louis (2003).

**Discussant:** *Western Economic Association* (2005), *Midwest Economics Association* (2002, 2003), *Allied Social Sciences Association – Omicron Delta Epsilon Invited Graduate Student Papers Session* (1999, 2000).

**Academic Program Reviews:** NRC Survey on Program Quality (2005); Faculty of Business and Economics, Thrace University, Stara Zagora, Bulgaria (2010).

**External Thesis Examiner:** Australian National University (2017).

### **University Service**

**Council on Faculty Welfare:** Council Member, University of California, Irvine (September 2009 – August 2012).

**Campuswide Honors Board:** Board Member, University of California, Irvine (September 2016 – August 2019).

**Undergraduate Advisor:** Undergraduate Research Opportunities Program (UROP), University of California, Irvine (2004, 2005, 2006, 2009, 2010).

**Recruiting Committee:** Member, Social Science Methods and Statistics Recruiting Committee (2011–2012).

**Award Committees:** Graduate Dean Dissertation Fellowship Committee (Spring 2016); Fletcher Jones Dissertation Fellowship Committee (Fall 2016).

## Department Service

**Econometrics Seminar Organizer:** Spring 2008; Fall 2008; Fall 2009; Winter 2010; Fall 2010; Winter 2011; Spring 2011; Fall 2011; Fall 2012; Winter 2013; Spring 2013; Fall 2013; Winter 2014; Spring 2014; Fall 2014. Department of Economics, UC Irvine.

**Undergraduate Advisor:** Economics Club, University of California, Irvine (2005–2007).

**Program Accreditation Review:** Member of econometrics review committee for Western Association of Schools and Colleges (WASC) accreditation, Spring 2010.

**Personnel Committees:** Tenure Committee Member (Fall 2011; Winter 2016); Personnel Review Committee Member (Winter 2012; Fall 2012; Fall 2013; Fall 2014).

**Recruiting Committee:** Member, Econometrics Recruiting Committee (2015–2016).

**Undergraduate Curriculum:** Member, Undergraduate Major Restructuring Committee (2018–2019).

## Conference Organization

[1] *Advances in Econometrics* Conference on Bayesian Model Comparison, UC Irvine, February 2014.

[2] *Advances in Econometrics* Conference on Limited Dependent Variables, Partial Observability, Identification, Experimentation, and Flexible Modeling. UC Irvine, June 2018.

## Referee

**Research Articles:** *Advances in Econometrics*; *American Journal of Agricultural Economics*; *Australian & New Zealand Journal of Statistics*; *Bayesian Analysis*; *Biometrics*; *Communications in Statistics – Theory & Methods*; *Computational Statistics and Data Analysis*; *Econometric Reviews*; *Econometric Theory*; *Econometrics Journal*; *Econometrics and Statistics*; *Economic Inquiry*; *Economics Bulletin*; *Economics of Education Review*; *Economics of Governance*; *Foundations and Trends in Econometrics*; *International Economic Review*; *Journal of Applied Econometrics*; *Journal of Business and Economic Statistics*; *Journal of Computational and Graphical Statistics*; *Journal of Econometrics*; *Journal of Economic Dynamics and Control*; *Journal of Financial Econometrics*; *Journal of Productivity Analysis*; *Journal of the American Statistical Association*; *Journal of the Royal Statistical Society – Series A*; *Journal of Urban Economics*; *Macroeconomic Dynamics*; *Marketing Science*; *Psychometrica*; *Regional Science and Urban Economics*; *Review of Economics and Statistics*; *Scientific Journals International*; *Statistical Science*; *Statistics and Computing*.

**Foundations & Agencies:** U.S. National Science Foundation; Social Sciences and Humanities Research Council of Canada; Swiss National Science Foundation; Hong Kong Research Grants Council.

**Book Publishers:** Elsevier; John Wiley & Sons, Ltd.; Palgrave Macmillan; Taylor and Francis Group.

## **Affiliations**

American Economic Association; American Statistical Association (sections: Business & Economic Statistics; Statistical Computing; Bayesian Statistical Science); International Society for Bayesian Analysis (sections: Bayesian Computation; Bayesian Nonparametrics; Economics, Finance & Business); Econometric Society; Midwest Economics Association; Western Economic Association International.

## **Hobbies**

**Sailing:** Certificate of Competency, Ministry of Transportation, National Shipping Inspectorate, Bulgaria (1992); UCI Sailing Association, Newport Beach, CA (2003-2010); S/V *Nevena*, Southern California (2013–present).

**Running:** San Francisco Marathon (2008); Surf City USA Half Marathon, Huntington Beach (2009); Rock ‘n’ Roll Mardi Gras Marathon, New Orleans (2011).

**Taekwondo:** Il-Do Taekwondo Association, Irvine, CA (2009-2013); 1st dan rating (2011).