# Curriculum Vitae March 8, 2024 **Tao Zha**

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# Homepage

https://tzha.co

https://economics.emory.edu/people/faculty/biography/zha-tao.html

https://www.atlantafed.org/research/economists/zha-tao

# Personal Information

Married U.S. citizen

### Education

Yale University, September 1990–September 1992 (Doctoral Studies)

University of Minnesota, Ph.D., Economics, December 1992

Washington State University, M.A., Economics, May 1988

Florida State University, January–May 1986 (School Work)

Southwestern University of Economics and Finance (China),

M.A., Statistics (High Honors), June 1985

Chengdu University of Technology (China), B.S., Mathematics, June 1982

## Major Fields of Ph.D. Study

Macroeconomics Financial Economics Econometrics

# **Doctoral Dissertation**

"Business Cycles, Asymmetric Information, and Bankruptcy Law". Thesis committee members: Edward Green (Chair), Hidehiko Ichimura, Ravi Jagannathan, Christopher Sims, and Neil Wallace.

#### Areas of Recent Research Interest

Macroeconomics; Financial Economics; the Chinese Economy; Econometrics; Learning Dynamics.

### **Current Positions**

Executive Director, Center for Quantitative Economic Research (CQER), Federal Reserve Bank of Atlanta, January 2014—.

Samuel Candler Dobbs Professor of Economics, **Emory University**, September 2014–.

### **Past Positions**

Inaugural Distinguished Professor, Schwarzman College, Tsinghua University, June 2016–May 2017.

Director, Center for Quantitative Economic Research, Federal Reserve Bank of Atlanta, October 2008–December 2013.

Professor of Economics, Emory University, September 2009–August 2014.

Visiting Distinguished Professor, Economics Department, Emory University, September 2008–August 2009.

Adjunct Professor, Economics Department, Emory University, September 2007–August 2008.

Senior Policy Adviser, Research Department, Federal Reserve Bank of Atlanta, May 2006–September 2008.

Policy Adviser, Research Department, Federal Reserve Bank of Atlanta, September 2002–April 2006.

Assistant Vice President, Research Department, Federal Reserve Bank of Atlanta, January 2000–August 2002.

Senior Economist, Research Department, Federal Reserve Bank of Atlanta, January 1999–December 1999.

Economist II, Research Department, Federal Reserve Bank of Atlanta, July 1995—December 1998.

Assistant Professor of Economics, University of Saskatchewan, September 1992–June 1995.

Visiting Researcher, Department of Economics, Yale University, September 1990–August 1992.

Research Assistant, Institute for Empirical Macroeconomics, Research Department, Federal Reserve Bank of Minneapolis, September 1989–August 1990.

Intern Economist, Asian Department, International Monetary Fund, July-August 1987.

Staff Member, Head Office, People's Bank of China, September 1985–January 1986.

## Distinctions and Awards

Elected Fellow, International Association for Applied Econometrics, 2019–Present.

Elected Fellow, **Econometric Society**, 2017–Present.

Research Associate, Economic Fluctuations and Growth Program, National Bureau of Economic Research (NBER), 2012—Present.

Research Associate, Monetary Economics Program, National Bureau of Economic Research (NBER), 2011—Present.

Excellent Teaching Recognition, **Phi Beta Kappa Society**, Emory University, Spring 2021.

National Science Foundation Grant SES-1558486 through the NBER, August 2016–July 2019.

National Natural Science Foundation of China Grant 71473168, January 2015–December 2020.

National Science Foundation Grant SES-1127665, August 2011–July 2015.

The article "Four Stylized Facts about Covid-19" peer reviewed and published in Rapid Reviews: COVID-19, an *open access medical journal* that is a collaboration between UC Berkeley and the MIT Press https://rrid.mitpress.mit.edu/pub/pidrbp07/release/1.

The article "Aggregate and Distributional Impacts of LTV Policy: Evidence from China's Micro Data" featured on the 11 February 2021 *National Bureau of Economic Research* (NBER) home page.

The article "The Nexus of Monetary Policy and Shadow Banking in China" featured in

the 4 February 2019 *American Economic Association*'s *Chart of the Week* series (https://www.aeaweb.org/research/charts/chinese-monetary-shadow-banking).

Best paper prize for 2018 China International Conference in Macroeconomics, "Impacts of Monetary Stimulus on Credit Allocation and Macroeconomy: Evidence From China" (co-authored with Kaiji Chen, Pat Higgins, and Dan Waggoner), Tsinghua University, March 2018.

Wim Duisenberg Research Fellowship, European Central Bank, 2012.

Works cited by the **2011 Nobel Economic Sciences Prize Committee**: (1) "Vector Autoregressions," The New Palgrave Dictionary of Economics 2nd Edition (eds S.N. Durlauf and L.E. Blume); (2) "Were There Regime Switches in U.S. Monetary Policy?" (coauthored with Christopher Sims), American Economic Review 2006; (3) "Shocks and Government Beliefs: The Rise and Fall of American Inflation" (coauthored with Thomas Sargent and Noah Williams), American Economic Review 2006.

Second prize for best papers in the "The Phillips Curve and the Natural Rate of Unemployment," conference at the **Kiel Institute for the World Economy**, "Asymmetric Expectation Effects of Regime Switches in Monetary Policy" (coauthored with Zheng Liu and Daniel F. Waggoner), June 2007.

Abramson Scrolls Prize for Outstanding Articles in Business Economics, "Evaluating Wall Street Journal Survey Forecasters: A Multivariate Approach" (Coauthored with Robert A. Eisenbeis and Daniel F. Waggoner), *National Association of Business Economists (NABE)*, 2002.

Walter Helen Fellowship for Public Policy, University of Minnesota, September 1991–August 1992.

#### Professional Service

Board of Editors, Journal of Economic Literature, January 2020-.

Advisory Board, the James M. and Cathleen D. Stone Center for Research on Wealth Inequality and Mobility, University of Chicago, February 2023–December 2027.

Advisory Committee of *Dynare*, CEPREMAP, Center for Economic Research and its Applications, France, August 2005–.

Co-Editor, Quantitative Economics, July 2018–June 2022.

Board of Editors, American Economic Journal: Macroeconomics, May 2014–April 2023.

Associate Editor, Econometrica, July 2012–July 2015.

Associate Editor, Journal of Econometrics, January 2007–June 2018.

Associate Editor, *Macroeconomic Dynamics*, January 2007–October 2012.

Associate Editor, Journal of Applied Econometrics, May 2004–November 2013.

Member, Diversity, Equity, and Inclusion (DEI) Organizing Committee, Research Division, Federal Reserve Bank of Atlanta, January 2023—December 2023.

Econometric Society Program Committee, 2023 Asia Meeting, Tsinghua University, Beijing, China, 2023.

Econometric Society Program Committee, 2022 Asian Meeting, Chinese University of Hong Kong, Shenzhen, China, June 22-24, 2022.

Econometric Society Program Committee on Macroeconomics, 2020 North American Winter Meeting, San Diego, CA, January 3-5, 2020.

Econometric Society Program Committee on Econometrics, 2020 North American Winter Meeting, San Diego, CA, January 3-5, 2020.

Scientific Committee (Lead Member), *EC-squared (EC)2, Florence 2011*, Econometrics for Policy Analysis: After the Crisis and Beyond, European University Institute and Universita degli Studi di Firenze, Florence, Italy, December 15-17, 2011.

Econometric Society Program Committee on Macroeconomics, 2009 North American Winter Meeting, San Francisco, CA, January 3-5, 2009.

Program Committee, 14th International Conference on Computing in Economics and Finance, University La Sorbonne, Paris, France, June 26-29, 2008.

Referee for NSF, SSHRC, and various academic journals.

# University Service

Member, Named Chairs Selection Committee, Emory College of Arts and Sciences, Spring Semester, 2023.

Member, Named Chairs Selection Committee, Emory College of Arts and Sciences, Spring Semester, 2022.

Chair, Recruiting Committees, Federal Reserve Bank of Atlanta and Emory University (example recruits: Melvin Ayogu, David McMillon, Alexis Toda, Juan Rubio-

Ramirez, Vivian Yue, Toni Braun, and Veronika Penciakova), 2014–2024.

Member, Emory College Tenure and Promotion Committee, Emory University, Fall Semester, 2021.

Member, Named Chairs Selection Committee, Emory College of Arts and Sciences, Spring Semester, 2017.

Member, Named Chairs Selection Committee, Emory College of Arts and Sciences, Spring Semester, 2016.

Director of Graduate Studies, Department of Economics, Emory University, September 2013–August 2016.

# Selected Research Activities

Visiting Scholar, Research Department, International Monetary Fund, Washington D.C., March 11-15, 2024.

Visiting Scholar, Research Department, International Monetary Fund, Washington D.C., October 23-27, 2023.

Member, Program Committee for China International Conference in Finance (CICF, http://cicfconf.org/cicf-home) with keynote speaker Christopher A. Sims, Shanghai, China, July 6-9, 2023.

Visiting Scholar, Research Department, International Monetary Fund, Washington D.C., April 24-28, 2023.

Invited Speaker, Monetary Stimulus Amidst the Infrastructure Investment Spree: Evidence from China's Loan-Level Data, 2023 Chinese Economists Society North American Conference, University of Oklahoma, Norman, Oklahoma, March 31-April 2, 2023.

Invited Presentation (Remote), Inflation, Aggregate Demand, and Aggregate Supply, the Virtual Meeting of the Network on Monetary Policy Frameworks, Bank for International Settlements, February 15-16, 2023.

Visiting Scholar (Remote), Research Department, International Monetary Fund, Washington D.C., October 25-28, 2021.

Invited Lectures (Remote), Monetary and Fiscal Policy Analysis with DSGE Models: Advanced Workshop: Virtual Course, China-IMF Capacity Development Center, International Monetary Fund, August 23-September 3, 2021.

Visiting Scholar (Remote), Research Department, International Monetary Fund, Washington D.C., September 17-October 12, 2020.

Invited Lectures, Monetary and Fiscal Policy Analysis with DSGE Models: Advanced Workshop, China-IMF Capacity Development Center, International Monetary Fund, Dalian, China, September 2-6, 2019.

Invited Lectures, DSGE Modeling with Applications to the Chinese Economy, International Monetary Fund, Washington D.C., January 9-11, 2019.

Keynote Speech, The Nexus of Monetary Policy and Shadow Banking in China, Workshop on Nonlinear Models in Macroeconomics and Finance for an Unstable World, Norges Bank and CAMP/BI Norwegian Business School, Oslo, Norway, 26-27 January 2018.

Keynote Speech, Discount-Rate Shock, Price-Rent Ratio, and the Business Cycle, the 5th Workshop in Macro Banking and Finance, Università Cattolica del Sacro Cuore, Unicredit & Foscolo Foundation, Milan, Italy, 14-15 September 2017.

Invited Lectures, DSGE Analysis and Optimal Monetary Policy for China, International Monetary Fund, Beijing, China, 7-10 November 2016.

Invited Lectures, Markov-Switching Models for Policy Analysis, International Monetary Fund, Washington D.C., 9-10 September 2015.

Invited Speech, Assessing the Macroeconomic Impact of Bank Intermediation Shocks: A Structural Approach, Directorate General Research, European Central Bank, Frankfurt, Germany, 13 July 2015.

Keynote Speech, Identification in Macroeconomics, Narodowy Bank Polski Workshop, Warsaw, Poland, 17-18 December 2014.

Visiting Scholar, Becker Friedman Institute for Research in Economics, University of Chicago, Chicago, November 2014.

Invited Speech, Trends and Cycles in China's Macroeconomy, the 29th Annual Congress of the European Economic Association and 68th European Meeting of the Econometric Society (EEA-ESEM 2014), Toulouse School of Economics, Toulouse, France, 25-29 August 2014.

Research Fellowship, Hong Kong Institute for Monetary Research, Hong Kong, June 2014.

Keynote Speech, Liquidity Premia, Price-Rent Dynamics, and Business Cycles, the 4th Annual SKBI Conference on Economic Forecasting, Singapore Management Uni-

versity, Singapore, 29 April 2014.

Lectures, Markov-Switching Models, European Central Bank, Frankfurt, Germany, 24-27 September 2013.

Invited Speech, Estimating the Effects of Monetary Policy at the Zero Lower Bound, Directorate General Research, European Central Bank, Frankfurt, Germany, 23 September 2013.

Lectures, Markov-Switching Models, Budapest School for Central Bank Studies, Budapest, Hungary, 22-26 July 2013.

Lectures, Markov-Switching Models, Dynare Summer School 2013, Banque de France, Paris, France, 25-26 June 2013.

Invited Special Guest, Head Table, American Economic Association Nobel Luncheon Reception Honoring Thomas J. Sargent and Christopher A. Sims, ASSA meetings at San Diego, 5 January 2013.

Invited Speech, Estimating the Effects of Monetary Policy at the Zero Lower Bound, Conference in Honor of 2011 Nobel Laureate Christopher A Sims's Contribution to Econometrics and Macroeconomics, University of Chicago and Princeton University, 19-20 October 2012.

Invited Speech, Northwestern-Tsinghua Macro Conference on "Financial Frictions, Sentiments, and Aggregate Fluctuations," Northwestern University and Tsinghua University, Beijing, China, 21-22 August 2012.

Invited Dinner Remarks, "Fiscal Imbalance" Conference Dinner in Honor of the 2011 Nobel prize winners Thomas J. Sargent and Christopher A. Sims, Becker Friedman Institute for Research in Economics, University of Chicago, 18 November 2011.

Keynote Speech, Overview of Nonlinearity in Macroeconomics: Why Do We Need to Go Beyond Gaussianity in Structural Modeling? European Central Bank's WGEM Workshop "The Role of Non-Linear Methods in Empirical Macroeconomics and Forecasting," Frankfurt, Germany, 1 September 2011.

CIDE Lectures, Econometrics Summer School, Italian Center for Econometrics, Bertinoro, Italy, June 2011.

Craig Miemstra Memorial Lecture, Confronting Misspecification in Macroeconomics, 19th Annual Symposium on "Nonlinear Aspects of the Financial Crisis: Theoretical and Empirical Analysis," the Society of Nonlinear Dynamics and Econometrics (SNDE), Institute for International Economic Policy, Elliott School of International Affairs, George Washington University, Washington D.C., 17-18 March 2011.

Invited Speech, 1st European Conference on Bayesian Econometrics, Econometric and Tinbergen Institutes, Erasmus University Rotterdam, Rotterdam, Netherlands, 5-6 November 2010.

Keynote Speech, 2010 Shanghai Macroeconomics Workshop, School of Economics, Shanghai University of Finance and Economics, China, June 25-26, 2010.

Invited Lecture, Hong Kong Institute for Monetary Research, Hong Kong Monetary Authority, Hong Kong, June 21-23, 2010.

Keynote Speech, Why Do We Need to Go Beyond Gaussianity in Structural Modeling, Second International Conference in memory of Carlo Giannini, Banca d'Italia, Rome, Italy, January 19-20, 2010.

Invited Speech, Do Credit Constraints Amplify Macroeconomic Fluctuations?, European Central Bank, Frankfurt, Germany, January 18, 2010.

Invited Speech, Land-Price Dynamics and Macroeconomic Fluctuations, Conference to Mark Twenty Years of Inflation Targeting, Sponsored by the Reserve Bank of New Zealand and the Center for International Economics and Development, Reserve Bank of New Zealand, Wellington, New Zealand, December 17-18, 2009.

Invited Speech, Monetary Policy and Learning Dynamics, Workshop on Monetary Policies in Open Economies, Reserve Bank of Australia, Sydney, Australia, December 14-15, 2009.

Keynote Speech, Monetary Policy and Learning Dynamics, the 5th annual DYNARE Conference on "Monetary Policy, DSGE Modeling, and Computational Methods," Norges Bank, Norway, August 31-September 1, 2009.

Invited Speech and Visiting Scholar, Bank of Korea, May 21-25, 2008.

Invited Lectures, Advanced Graduate Courses, Department of Economics, UCLA, November 26-30, 2007.

Visiting Scholar, Reserve Bank of New Zealand, July 2007.

Invited Lectures, Bank of Israel, May 7-9, 2007.

Visiting Scholar, European Central Bank, October 2006.

Invited Lectures, Dynare Workshop on Learning and Monetary Policy, Paris, October 2005.

Invited Speech, European Central Bank, February 2005.

Invited Speech, Conference on "Monetary Policy and VAR Analysis," Sveriges Riksbank, September 2002.

Visiting Scholar, Congressional Budget Office, Washington D.C., December 2000.

Visiting Scholar, Reserve Bank of Australia, Sydney, February-March 2000.

Visiting Scholar, Federal Reserve Bank of Chicago, February 1997.

## **Seminar Presentations**

University of Pennsylvania, University of Michigan, Beijing University, Shanghai Advanced Institute of Finance, Southwestern University of Economics and Finance, Shanghai University of Finance and Economics, Sichuan University, Tsinghua University, Beijing University, Zhejiang University, George Washington University, University of Toronto, Vanderbilt University, Michigan State University, University of Missouri, BI Norwegian Business School, Hong Kong University of Science and Technology, Singapore Management University, University of Virginia, University of Iowa, Iowa State University, Georgia State University, Indiana University, University of Kansas, University of Georgia, UCLA, UC Berkeley, UC San Diego, UC Riverside, UC Irvine, University of Maryland, Washington University in St. Louis, University of Wisconsin-Madison, Federal Reserve Banks of Chicago, New York, Philadelphia, San Francesco, Cleveland, and St. Louis, Board of Governors of the Federal Reserve, Hong Kong Monetary Authority, People's Bank of China, International Monetary Fund, Boston University, Columbia University, Duke University, National Bureau of Economic Research, University of Chicago, Princeton University.

# Computer Programs

All my computer code, solving and estimating BVAR, DSGE, Markov-switching, and learning models, can be downloaded from https://sites.google.com/tzha.net/tzhomepage/data-and-computer-code

RATS code for Cushman and Zha (1997)'s "Identifying Monetary Policy in a Small Open Economy under Flexible Exchange Rates" can be downloaded from http://www.estima.com/forum/viewtopic.php?f=8&t=1857

### Revise and Resubmit Research Articles

"China's Macroeconomic Development: The Role of Gradualist Reforms," Revise and Resubmit, *Journal of Economic Literature*. With Kaiji Chen.

### **Published Research Articles**

"Constructing Quarterly Chinese Time Series Usable for Macroeconomic Analysis," *Journal of International Money and Finance*, forthcoming. With Kaiji Chen and Patrick Higgins.

"Four Stylized Facts about COVID-19," *International Economic Review*, 2024 (February), volume 65, issue 1, pages 3-43, https://doi.org/10.1111/iere.12660. With Andrew Atkeson and Karen A. Kopecky. Lead article.

"Monetary Stimulus Amidst the Infrastructure Investment Spree: Evidence from China's Loan-Level Data," *Journal of Finance*, 2023 (April), volume 78, number 2, pages 1147–1204. With Kaiji Chen, Haoyu Gao, Patrick Higgins, and Daniel F. Waggoner.

"A Theory of Housing Demand Shocks," *Journal of Economic Theory*, 2022 (July), volume 203, pages 1–32 (105484). With Ding Dong, Zheng Liu, and Pengfei Wang.

"Does Fiscal Policy Matter for Stock-Bond Return Correlation?" *Journal of Monetary Economics*, 2022 (May), volume 128, pages 20–34. With Erica Li, Ji Zhang, and Hao Zhou.

"Cyclical Lending Standards: A Structural Analysis," *Review of Economic Dynamics*, 2021 (October), volume 42, pages 283-306. With Kaiji Chen and Patrick Higgins.

"Behavior and the Transmission of COVID-19," *American Economic Association Papers and Proceedings*, 2021 (May), volume 111, pages 356-360. With Andrew G. Atkeson and Karen Kopecky.

"Macroeconomic Effects of China's Financial Policies," in *Handbook of China's Financial System*, 2020 (November), edited by Marlene Amstad, Guofeng Shen, and Wei Xiong, Princeton University Press. With Kaiji Chen.

"Discount Shock, Price-Rent Dynamics, and the Business Cycle," *International Economic Review*, 2020 (August), volume 61 (3), pages 1229-1252. With Jianjun Miao and Pengfei Wang.

"The Nexus of Monetary Policy and Shadow Banking in China," *American Economic Review*, 2018, volume 108(12), pages 3891–3936. With Kaiji Chen and Jue Ren.

"Land Prices and Unemployment," *Journal of Monetary Economics*, 2016, volume 80, pages 86-105. With Zheng Liu and Jianjun Miao.

"Perturbation Methods for Markov-Switching DSGE Models," *Quantitative Economics*, 2016, volume 7, pages 637-669. With Andrew Foerster, Juan Rubio-Ramirez, and Daniel Waggoner.

"Dynamic Striated Metropolis-Hastings Sampler for High-Dimensional Models,"  $\boldsymbol{Jour-}$ 

nal of Econometrics, 2016 (June), volume 192, issue 2, pages 406-420. With Daniel F. Waggoner and Hongwei Wu.

"Trends and Cycles in China's Macroeconomy," **NBER Macroeconomics Annual**, 2016, volume 30, pages 1-84. With Chun Chang, Kaiji Chen, and Daniel F. Waggoner. Lead article.

"Forecasting Chinas Economic Growth and Inflation," *China Economic Review*, 2016, volume 41, pages 46-61. With Patrick Higgins and Wenna Zhong.

"Land-Price Dynamics and Macroeconomic Fluctuations," *Econometrica*, 2013 (May), volume 81, issue 3, pages 1147-1184. With Zheng Liu and Pengfei Wang.

"Confronting Model Misspecification in Macroeconomics," *Journal of Econometrics*, 2012 (December), volume 171, issue 2, pages 167-184. With Daniel F. Waggoner.

"Minimal State Variable Solutions to Markov-Switching Rational Expectations Models," *Journal of Economic Dynamics and Control*, 2011, volume 35, number 12, pages 2150-2166. With Roger E.A. Farmer and Daniel F. Waggoner.

"Sources of Macroeconomic Fluctuations: A Regime-Switching DSGE Approach," *Quantitative Economics*, 2011, volume 2, pages 251-301. With Zheng Liu and Daniel F. Waggoner.

"Structural Vector Autoregressions: Theory of Identification and Algorithms for Inference," *Review of Economic Studies*, 2010, volume 77, pages 665-696. With Juan Rubio-Ramirez and Daniel F. Waggoner.

"Generalizing the Taylor Principle: Comment," *American Economic Review*, 2010 (March), volume 100, issue 1, pages 608-617. With Roger E.A. Farmer and Daniel F. Waggoner.

"Understanding Markov-Switching Rational Expectations Models," *Journal of Economic Theory*, 2009 (November), volume 144, issue 6, pages 1849-1867. With Roger E.A. Farmer and Daniel F. Waggoner. Lead article.

"The Conquest of South American Inflation," *Journal of Political Economy*, 2009 (April), volume 117, number 2, pages 211-256. With Thomas J. Sargent and Noah Williams.

"Asymmetric Expectation Effects of Regime Switches in Monetary Policy," *Review of Economic Dynamics*, 2009 (April), volume 12, number 2, pages 284-303. With Zheng Liu and Daniel F. Waggoner.

"Learning, Adaptive Expectations, and Technology Shocks," *Economic Journal*, 2009 (March), volume 119, issue 536, pages 377-405. With Kevin X.D. Huang and Zheng Liu.

"Indeterminacy in a Forward Looking Regime Switching Model," *International Journal of Economic Theory*, 2009 (March), volume 5, pages 69-84. With Roger E.A. Farmer and Daniel F. Waggoner.

"Methods for Inference in Large Multiple-Equation Markov-Switching Models," *Journal of Econometrics*, 2008, volume 146, issue 2, pages 255-274. With Christopher A. Sims and Daniel F. Waggoner.

"Normalization in Econometrics," *Econometric Reviews*, 2007, volume 26, numbers 2-4, pages 221-252. Special issue on "Bayesian Dynamic Econometrics." With James D. Hamilton and Daniel F. Waggoner.

"Shocks and Government Beliefs: The Rise and Fall of American Inflation," *American Economic Review*, 2006 (September), volume 96, number 4, pages 1193-1224. With Thomas J. Sargent and Noah Williams.

"Does Monetary Policy Generate Recessions?," *Macroeconomic Dynamics*, 2006 (April), volume 10, number 2, pages 231-272. With Christopher A. Sims.

"Were There Regime Switches in US Monetary Policy?," *American Economic Review*, 2006 (March), volume 96, number 1, pages 54-81. With Christopher A. Sims.

"Modest Policy Interventions," *Journal of Monetary Economics*, 2003 (November), volume 50, issue 8, pages 1673-1700. With Eric M. Leeper.

"A Gibbs Sampler for Structural Vector Autoregressions," *Journal of Economic Dynamics and Control*, 2003 (November), volume 28, issues 2, pages 349-366. With Daniel F. Waggoner.

"Likelihood Preserving Normalization in Multiple Equation Models," *Journal of Econometrics*, 2003 (June), volume 114, issue 2, pages 329-347. With Daniel F. Waggoner.

"Evaluating Wall Street Journal Survey Forecasters: A Multivariate Approach," **Business Economics**, 2002 (July), volume 37, issue 3, pages 11-21. With Robert A. Eisenbeis and Daniel F. Waggoner.

"Quantifying the Uncertainty about the Half-Life of Deviations from PPP," *Journal* of *Applied Econometrics*, 2002 (March-April), volume 17, issue 2, pages 107-125. With Lutz Kilian.

"Bankruptcy Law, Capital Allocation, and Aggregate Effects: A Dynamic Heterogeneous Agent Model with Incomplete Markets," *Annals of Economics and Finance*, 2001 (November), volume 2, issue 2, pages 379-400.

"Assessing Simple Policy Rules: A View from a Complete Macroeconomic Model," Federal Reserve Bank of St. Louis *Review* (the symposium on monetary policy rules sponsored by Federal Reserve Bank of St. Louis and Stanford University), 2001 (July-August), volume 83, issue 4, pages 83-110. With Eric M. Leeper.

"Conditional Forecasts in Dynamic Multivariate Models," **Review of Economics and Statistics**, 1999 (November), volume 81, issue 4, pages 639-651. With Daniel F. Waggoner.

"Error Bands for Impulse Responses," *Econometrica*, 1999 (September), volume 67, issue 5, pages 1113-1155. With Christopher A. Sims.

"Block Recursion and Structural Vector Autoregressions," *Journal of Econometrics*, 1999 (June), volume 90, issue 2, page 291-316.

"Trends in Velocity and Policy Expectations," *Carnegie-Rochester Conference Series on Public Policy*, 1998 (December), volume 49, pages 265-304. With David B. Gordon and Eric M. Leeper.

"Bayesian Methods for Dynamic Multivariate Models," *International Economic Review*, 1998 (November), volume 39, issue 4, pages 949-968. With Christopher A. Sims.

"Identifying Monetary Policy in a Small Open Economy under Flexible Exchange Rates," *Journal of Monetary Economics*, 1997 (August), volume 39, issue 3, pages 433-448. with David O. Cushman.

"What Does Monetary Policy Do?," *Brookings Papers on Economic Activity*, 1996, issue 2, pages 1-63. With Eric M. Leeper and Christopher A. Sims.

### Other Publications

"Unintended Consequences of Monetary and Regulatory Policies on Banks' Risk-taking Behaviour: a Closer Examination of China's Shadow Banking," VOX CEPR's Policy Portal, March 24, 2016

(http://www.voxeu.org/article/causes-and-consequences-china-s-shadow-banking).

"Trends and Cycles in China's Macroeconomy," VOX CEPR's Policy Portal, August 1, 2015

(http://www.voxeu.org/article/trends-and-cycles-china-s-macroeconomy).

"Vector Autoregressions," New Palgrave Dictionary of Economics, September 2008, 2nd edition, eds. Steven N. Durlauf and Lawrence E. Blume. Palgrave Macmillan (http://www.dictionaryofeconomics.com/article?id=pde2008\_V000066)

"Normalization," International Encyclopedia of the Social Sciences, 2008, 2nd edition, volume 5, pages 533-534, ed. William A. Darity, Jr. Macmillan Reference/Thomson Publishing, Detroit, USA.

"Comment on An and Schorfheide's Bayesian Analysis of DSGE Models," *Econometric Review*, 2007, volume 26, numbers 2-4, pages 205-210. Special issue on "Bayesian Dynamic Econometrics."

"Transparency, Expectations, and Forecasts," Federal Reserve Bank of Atlanta *Economic Review*, First Quarter 2006, volume 91, number 1, pages 1-25. With Andy Bauer, Robert A. Eisenbeis, and Daniel F. Waggoner.

"Introduction: Monetary Policy and Learning," Review of Economic Dynamics, April 2005, volume 8, number 2, pages 257-261. With Lee E. Ohanian and Marco Del Negro.

"Forecast evaluation with cross-sectional data: The Blue Chip Surveys," Federal Reserve Bank of Atlanta *Economic Review*, 2003, issue Q2, pages 17-31. With Andy Bauer, Robert Eisenbeis, and Daniel Waggoner.

"Monetary Policy and Racial Unemployment Rates," Federal Reserve Bank of Atlanta *Economic Review*, 4th Quarter 2000, volume 85, issue 4, pages 1-16. With Madeline Zavodny.

"Evaluating the Effects of Monetary Policy with Economic Models," Federal Reserve Bank of Atlanta *Economic Review*, 4th Quarter 1999, volume 84, issue 4, pages 4-15.

"A Dynamic Multivariate Model for Use in Formulating Policy," Federal Reserve Bank of Atlanta *Economic Review*, 1st Quarter 1998, volume 83, issue 1, pages 16-29.

"Identifying Monetary Policy: A Primer," Federal Reserve Bank of Atlanta *Economic Review*, 2nd Quarter 1997, volume 82, issue 2, pages 26-43.

# Unpublished Papers, Notes, Slides

"Understanding the New-Keynesian Model When Monetary Policy Switches Regimes," *NBER Working Paper* 12965, 2007. With Roger Farmer and Dan Waggoner.

"Markov-Switching Structural Vector Autoregressions: Theory And Application," Federal Reserve Bank of Atlanta Working Paper 2005-27, December 2005. With Juan Rubio-Ramirez and Dan Waggoner.

"Bayesian Econometrics of Learning Models," Lecture Notes for the October 2005 Dynare Workshop on Learning and Monetary Policy.

"MCMC Method for Markov Mixture Simultaneous-Equation Models: A Note," October 2004. With Christopher A. Sims.

"Identification Issues in Vector Autoregressions," 1997. With Daniel F. Waggoner.

# Conferences Organized by FRB Atlanta CQER

International Conference on "Unconventional Monetary Policy: Lessons Learned." Jointly sponsored by the Hong Kong Monetary Authority, Federal Reserve Board, and Federal Reserve Bank of Atlanta. October 12-13, 2017. Hosted by Hong Kong Monetar Authority, Hong Kong.

Second IMF-FRBA Research Workshop on China's Economy. It brought together experts from around the world to discuss a number of pressing issues facing China: financial reforms, saving behavior, political and social factors, innovations, and growth. Sponsored by the International Monetary Fund and the Federal Reserve Bank of Atlanta. May 18-19, 2017. Hosted by the Federal Reserve Bank of Atlanta, Georgia. https://frbatlanta.org/news/conferences-and-events/conferences/2017/0518-second-research-workshop-chinas-economy.

Conference on "Business Cycles, Financial Markets, and Monetary Policy With Special Applications to China." It features the most recent research of leading scholars on financial markets with special applications to the Chinese Economy. Sponsored by European Central Bank, Tsinghua University, Federal Reserve Bank of San Francisco, Shanghai Advanced Institute of Finance, Northwestern University, and Federal Reserve Bank of Atlanta. August 30-September 1, 2016. Hosted by Shanghai Advanced Institute of Finance, Beijing, China.

First IMF-Atlanta Fed Workshop on the Chinese Economy. It features the most recent research of leading scholars on the Chinese Economy. Sponsored by the International Monetary Fund and the Federal Reserve Bank of Atlanta. April 28-29, 2016. Hosted by the International Monetary Fund, Washington D.C.

International Conference on "Nonlinearities in Macroeconomics and Finance in Light of Crises." It features the work of leading scholars. Sponsored by the European Central Bank, the Euro Area Business Cycle Network, and the Federal Reserve Bank of Atlanta. December 15-16, 2014. Hosted by the European Central Bank, Frankfurt, Germany. http://www.cepr.org/event/1835.

International Conference on "Macroeconomic Policy and Business Cycles." It features the work of leading scholars in this area and recent work on China's economy. Sponsored by Northwestern University, the Federal Reserve Bank of Atlanta, the

Bank of Canada, Shanghai Advanced Institute of Finance, and Tsinghua University. March 24-25, 2014. Hosted by Shanghai Advanced Institute of Finance, Shanghai, China. http://en.cafr.cn/Events/Details.aspx?id=107.

The 9th Dynare Conference. It features the work of leading scholars in dynamic macroeconomic modeling. Plenary speakers: Christopher A. Sims (Princeton University) and Oreste Tristani (European Central Bank). Sponsored by Shanghai University of Finance and Economics, Banque de France, DSGE-net, CEPREMAP, and the Federal Reserve Bank of Atlanta. October 29-30, 2013. Hosted by Shanghai University of Finance and Economics, Shanghai, China. http://www.dynare.org/events/9th-dynare-conference.

International Conference on "Macroeconomic Modeling in Times of Crisis" in Honor of Lawrence Christiano. Sponsored by Banque de France, Cepremap, FRB Atlanta CQER, and Centre d'analyse Strateglique. October, 25-26, 2012. Hosted by Banque de France, Paris, France.

Conference in Honor of 2011 Nobel Laureate Christopher A. Sims. Sponsored by Princeton University, University of Chicago, and the Federal Reserve Bank of Atlanta. October 19-20, 2012. Hosted by Princeton University, Princeton, New Jersey.

Workshop on "Methods and Applications for Dynamic Stochastic General Equilibrium." Sponsored by the NBER and the Federal Reserve Bank of Atlanta. Hosted by the Federal Reserve Bank of Atlanta, October 12-13, 2012, Atlanta, Georgia.

The 7th Dynare Conference. It features the work of leading scholars in dynamic macroeconomic modeling. Plenary speakers: Lars Peter Hansen (University of Chicago) and Giorgio Primiceri (Northwestern University). Sponsored by FRB Atlanta CQER, Banque de France, DSGE-net, and CEPREMAP. September 9-10, 2011. Hosted by the Federal Reserve Bank of Atlanta, Atlanta, Georgia.

New Approaches to Fiscal Policy. Sponsored by the Federal Reserve Bank of Atlanta and Northwestern University. January 8-9, 2010. Hosted by the Federal Reserve Bank of Atlanta, Atlanta, Georgia.

http://www.frbatlanta.org/news/conferences/10fiscal\_policy.cfm.